

M A R C H 2 0 0 3

REPORT TO THE CONGRESS

Medicare Payment Policy

MEDPAC Medicare
Payment Advisory
Commission



The Medicare Payment Advisory Commission (MedPAC) is an independent federal body established by the Balanced Budget Act of 1997 (P.L. 105–33) to advise the U.S. Congress on issues affecting the Medicare program. In addition to advising the Congress on payments to health plans participating in the Medicare+Choice program and providers in Medicare’s traditional fee-for-service program, MedPAC is also tasked with analyzing access to care, quality of care, and other issues affecting Medicare.

The Commission’s 17 members bring diverse expertise in the financing and delivery of health care services. Commissioners are appointed to three-year terms (subject to renewal) by the Comptroller General and serve part time. Appointments are staggered; the terms of five or six Commissioners expire each year. The Commission is supported by an executive director and a staff of analysts, who typically have backgrounds in economics, health policy, public health, or medicine.

MedPAC meets publicly to discuss policy issues and formulate its recommendations to the Congress. In the course of these meetings, Commissioners consider the results of staff research, presentations by policy experts, and comments from interested parties. (Meeting transcripts are available at www.medpac.gov.) Commission members and staff also seek input on Medicare issues through frequent meetings with individuals interested in the program, including staff from congressional committees and the Centers for Medicare & Medicaid Services (CMS), health care researchers, health care providers, and beneficiary advocates.

Two reports—issued in March and June each year—are the primary outlet for Commission recommendations. This volume fulfills MedPAC’s requirement to submit an annual report on Medicare payment policy. In addition to annual reports and occasional reports on subjects requested by the Congress, MedPAC advises the Congress through other avenues, including comments on reports and proposed regulations issued by the Secretary of the Department of Health and Human Services, testimony, and briefings for congressional staff.

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Glenn M. Hackbarth, J.D., Chairman
Robert D. Reischauer, Ph.D., Vice Chairman
Mark E. Miller, Ph.D., Executive Director

February 27, 2003

The Honorable Richard B. Cheney
President of the Senate
U.S. Capitol
Washington, DC 20510

Dear Mr. Vice President:

I am pleased to submit a copy of the Medicare Payment Advisory Commission's March 2003 *Report to the Congress: Medicare Payment Policy*. This report fulfills MedPAC's legislative mandate to evaluate Medicare payment issues and make specific recommendations to the Congress.

This report includes two new features. The report begins by examining Medicare spending trends and by comparing Medicare spending to the size of the Federal budget, the U.S. economy, and the amount spent by other public and private purchasers of health care. In addition, each recommendation includes an estimate of its impact on program expenditures.

The report also assesses:

- the adequacy of Medicare payments and makes update recommendations for all of the major providers serving Medicare beneficiaries;
- beneficiary access to care;
- Medicare's methods of paying for new technology; and
- beneficiary health insurance choices.

Sincerely,

A handwritten signature in black ink, appearing to read "Glenn M. Hackbarth", written in a cursive style.

Glenn M. Hackbarth, J.D.
Chairman

Enclosure



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Robert D. Reischauer, Ph.D., Vice Chairman
Mark E. Miller, Ph.D., Executive Director

February 27, 2003

The Honorable J. Dennis Hastert
Speaker of the House of Representatives
U. S. House of Representatives
H232 Capitol Building
Washington, DC 20515

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Glenn M. Hackbarth, J.D.
Chairman

Enclosure

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Table of contents

Acknowledgments	v
Tables	xi
Figures	xv

Executive summary	xix
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Chapters

1 Context for Medicare spending	3
Medicare spending trends	4
Medicare spending compared with other indicators of health spending	7
Implications of Medicare spending given limited resources	13
Spending and other implications of MedPAC’s recommendations	17
2 Assessing payment adequacy and updating payments in fee-for-service Medicare	27
2A Hospital inpatient and outpatient services	35
Background	36
Assessing payment adequacy	37
Policies affecting the distribution of payments	43
Update for inpatient services	62
Update for outpatient services	63
2B Physician services	71
Assessing payment adequacy	72
Accounting for cost changes in the coming year	79
Update recommendation	80
2C Skilled nursing facility services	85
Background	86
Assessing payment adequacy	87
Accounting for cost changes in the coming year	95
Update recommendations	95
2D Home health services	103
Background	104
Assessing payment adequacy	106
Accounting for providers’ cost changes in the coming year	114
Update recommendation	115

2E	Outpatient dialysis services	121
	Assessing payment adequacy	123
	Accounting for cost changes in the coming year	131
	Update recommendation	131
2F	Ambulatory surgical center services	135
	Background	136
	Collecting recent ASC cost data	140
	Assessing payment adequacy	140
	Accounting for cost changes in the coming year	141
	Update recommendation	142
	Variations in payment for ambulatory surgical procedures by setting	143
3	Access to care in the Medicare program	153
	Evaluating access to care: an overview	154
	The capacity of the health system to meet beneficiaries' needs	155
	Beneficiaries' ability to obtain care	163
	Beneficiaries' ability to obtain appropriate care	168
	Conclusion	170
4	Payment for new technologies in Medicare's prospective payment systems	177
	Payment for new technologies in prospective payment systems: an overview	178
	Hospital inpatient services	180
	Hospital outpatient services	181
	Lessons from other health care purchasers	184
5	Health insurance choices for Medicare beneficiaries	193
	What health insurance options do Medicare beneficiaries have?	194
	Medicare beneficiaries and health plans in the marketplace	204
	When supply and demand meet in the marketplace	210

Appendixes

A	How Medicare pays for services: an overview	219
	Key structural elements of Medicare’s prospective payment systems	220
	Acute inpatient services	222
	Ambulatory care	228
	Post-acute care	233
	Services for special populations	238
	Other services	239
	Medicare+Choice plans	242
B	An introduction to how Medicare makes coverage decisions	245
	The national coverage determination process	246
	Local medical review process	247
	Coverage policies implemented in program manuals	248
	Medicare’s coding process	248
	Appeals process	248
C	Inpatient payments for rural hospitals	253
	Implementing a low-volume adjustment	253
	Reevaluating the labor share used in geographic adjustment	255
	Eliminating the base rate differential	256
	Raising the cap on disproportionate share payments	257
	Impact of recommendations	259
D	A data book on hospital financial performance	265
E	Commissioners’ voting on recommendations	283
	Acronyms	289
 More about MedPAC		
	Commission members	295
	Commissioners’ biographies	297
	Commission staff	303

Tables

1	Context for Medicare spending	3
1-1	Annual change in Medicare spending, selected settings, 1993–2002	6
1-2	Medicare HI trust fund solvency projections	15
1-3	Dollar ranges for one- and five-year spending estimates	18
2	Assessing payment adequacy and updating payments in fee-for-service Medicare	27
2A	Hospital inpatient and outpatient services	35
2A-1	Trend in hospital total margin, 1998–2002	38
2A-2	Overall Medicare margin and margin by major service line, 1999–2000	40
2A-3	Overall Medicare margin by hospital group, 1999–2003	41
2A-4	Hospital cases under Medicare’s inpatient transfer payment policy currently and under proposed expansion	45
2A-5	Medicare hospital discharges to post-acute care providers, 1991–2001	47
2A-6	Use of post-acute care providers and cases affected by expansion of transfer policy to all DRGs	49
2A-7	Share of cases discharged to post-acute settings for selected DRGs, by hospital group	50
2A-8	Use of post-acute care, transfers, and length of stay by region, 2001	51
2A-9	Use of post-acute care, Medicare inpatient operating margins, and length of stay, 2001	51
2A-10	Distribution of hospital cases under the transfer policy, 2001	52
2A-11	Characteristics of hospital cases under the transfer policy, 2001	53
2A-12	Change in inpatient payments from expanded transfer policy, 2001	54
2A-13	Percent increase in inpatient payment rates under alternative levels of the indirect medical education adjustment	56
2A-14	Medicare inpatient margin in fiscal year 2000 and at alternative indirect medical education adjustment levels	57
2A-15	Overall Medicare margin in fiscal year 2000 and at alternative indirect medical education adjustment levels	58
2A-16	One- and two-year impacts on Medicare inpatient payments of recommendations to improve payments to rural hospitals	62
2A-17	Impact on Medicare inpatient payments of update and distributional recommendations	64
2B	Physician services	71
2B-1	Physicians billing traditional Medicare, 1995–2001	73
2B-2	Change in per capita use of physician services by beneficiaries in traditional Medicare, by selected type of service, 1999–2002	78

2B-3	Medicare Economic Index weights and forecast of input price changes for 2004	79
2C	Skilled nursing facility services	85
2C-1	Medicare margins for skilled nursing facilities, 2000 and estimated 2003	87
2C-2	Change in the number of certified skilled nursing facilities, by type, 1998–2002	92
2C-3	Payment and use of skilled nursing facilities, 1996–2000	92
2D	Home health services	103
2D-1	Freestanding home health Medicare margin, by agency group, 2001 and estimated 2003	107
2D-2	Ratio of payments to charges, by type of home health episode, 2001 and 2002	108
2D-3	Use of home health after the PPS	109
2D-4	Share of visits per home health episode, by type of visit	110
2E	Outpatient dialysis services	121
2E-1	Payment-to-cost ratios for composite rate services and separately billable drugs for freestanding dialysis facilities, 1996 and 2001	124
2E-2	Indicators to assess changes in services furnished during in-center hemodialysis treatments, 1997 and 2001	127
2E-3	Characteristics of dialysis facilities, 1993–2001	129
2E-4	Clinical performance indicators, 1994–2000	130
2F	Ambulatory surgical center services	135
2F-1	Characteristics of Medicare-certified ambulatory surgical centers, 1991–2001	136
2F-2	Most common categories of procedures provided to Medicare beneficiaries in ASCs, 2001	138
2F-3	Hospital outpatient department and ASC payment rates for ambulatory surgery services, 2003	143
2F-4	Average risk scores for Medicare beneficiaries receiving surgical procedures in ASCs and outpatient departments, 1999	145
2F-5	Average total Medicare payments for all services for beneficiaries receiving surgical procedures in ASCs and outpatient departments, 1999	146
2F-6	Estimated impact of limiting ASC payment rates to hospital outpatient rates, by procedure category	147
2F-7	Distribution of ambulatory surgical centers by specialty type, 2001	148
3	Access to care in the Medicare program	153
3-1	Share of physicians accepting all new Medicare patients, 1997–2002	157

3-2	Acceptance of all or some new patients, by type of patient: MedPAC physician survey results, 1999 and 2002	157
3-3	Characteristics of the noninstitutionalized aged Medicare population, 1996–1999	165
3-4	Aged Medicare population reporting access to care problems, by beneficiary characteristics, 1996–1999	166
3-5	Share of beneficiaries using selected clinically necessary services, by supplemental coverage	169
4	Payment for new technologies in Medicare’s prospective payment systems	177
4-1	Design of the hospital inpatient and outpatient new technology payment mechanisms	181
4-2	Outpatient PPS payments by service type and hospital group, 2001	185
5	Health insurance choices for Medicare beneficiaries	193
5-1	Availability of alternatives to the traditional Medicare fee-for-service program, 2003	198
5-2	Benefits, enrollment, and average premiums in standardized Medigap plans, 2001	201
5-3	Sources of additional coverage by selected beneficiary characteristics, 2000	206
5-4	Consumer Assessment of Health Plans ratings of Medicare FFS and Medicare+Choice plans	208
A	How Medicare pays for services: an overview	219
A-1	Summary of Medicare’s current payment systems by setting	222
C	Inpatient payments for rural hospitals	253
C-1	Medicare inpatient margin, by discharge volume, 1999	254
C-2	Components of national labor share for inpatient care	255
C-3	Medicare inpatient margin, by location, 2000	257
C-4	One-year impact on Medicare inpatient payments of four recommendations to improve payments for rural hospitals	259
C-5	Two-year impact on Medicare inpatient payments of four recommendations to improve payments for rural hospitals	260
D	A data book on hospital financial performance	265
D-1	Change in hospital payment, cost, and length of stay indicators, 1991–2001	266
D-2	Change in Medicare inpatient costs per discharge, 1991–2000	267
D-3	Change in Medicare inpatient length of stay, 1991–2000	268
D-4	Medicare inpatient margins excluding payments for direct graduate medical education, by hospital group, 1991–2000	269
D-5	Distribution of Medicare inpatient margins excluding payments for direct graduate medical education, by hospital group, 2000	270

D-6	Medicare outpatient margins excluding payments for direct graduate medical education, by hospital group, 1996–2000	271
D-7	Distribution of Medicare outpatient margins excluding payments for direct graduate medical education, by hospital group, 2000	272
D-8	Hospital-based Medicare skilled nursing facility margins excluding graduate medical education, by hospital group, 1996–2000	273
D-9	Hospital-based Medicare home health agency margins excluding graduate medical education, by hospital group, 1996–2000	274
D-10	Hospital Medicare PPS-exempt unit margins excluding graduate medical education, by hospital group, 1996–2000	275
D-11	Overall Medicare margins including payments for direct graduate medical education, by hospital group, 1996–2000	276
D-12	Distribution of overall Medicare margins including payments for direct graduate medical education, by hospital group, 2000	277
D-13	Hospital payment-to-cost ratios, by source of revenue, 1991–2001	278
D-14	Gains or losses as a percent of total hospital costs, by source of revenue, 1991–2000	278
D-15	Hospital total margins, by hospital group, 1991–2000	279
D-16	Distribution of hospital total margins, by hospital group, 2000	280

Figures

1	Context for Medicare spending	3
1-1	Change in distribution of Medicare spending by setting, fiscal years 1992–2002	5
1-2	Distribution of Medicare spending among beneficiaries, 1997	6
1-3	Total Medicare spending, 1980–2012	7
1-4	National spending for personal health care, by payment source, 2001	8
1-5	National spending for personal health care, by setting and payment source, 2001	9
1-6	Medicare share of national spending for personal health care, 1980–2011	10
1-7	Real change in spending per enrollee, Medicare and PHI, 1968–2000	11
1-8	Change in spending per enrollee, Medicare and other purchasers, selected years	12
1-9	Medicare spending as share of the federal budget, 1980–2012	14
1-10	Medicare spending as share of GDP, 1980–2030	16
1-11	Composition of out-of-pocket spending, by out-of-pocket spending level, 2000	18
2	Assessing payment adequacy and updating payments in fee-for-service Medicare	27
2-1	Approach for assessing payment adequacy and updating payment rates	28
2-2	Steps and factors in assessing payment adequacy	29
2A	Hospital inpatient and outpatient services	35
2A-1	Medicare hospital payments by major service line, 2000	36
2A-2	Payments to Medicare providers for all hospital inpatient and outpatient services, fiscal years 1992–2001	37
2A-3	Hospital payment-to-cost ratios for Medicare, Medicaid, and private payers, 1991–2001	39
2A-4	Trend in hospital total margin, 1990–2000	39
2A-5	Trend in Medicare inpatient and overall Medicare margin, 1990–2000	41
2A-6	Length of stay distribution for stroke (DRG 14)	47
2A-7	Payment-to-cost ratios for transfer cases before and after transfer policy, respiratory infections (DRG 79)	48
2A-8	Change in Medicare inpatient margins, by teaching status, 1990–2000	58
2A-9	Uncompensated care costs as a percentage of total hospital costs, by hospital group, 2000	59
2A-10	Spending on all hospital outpatient services, 1991–2001	65

2B	Physician services	71
2B-1	Physician services program spending and payment updates, 2001–2006	73
2B-2	Physician participation rates, 1997–2002	74
2B-3	Quarterly changes in professional liability insurance premiums, 1990–2002	80
2C	Skilled nursing facility services	85
2C-1	Medicare spending for skilled nursing facility services, 1992–2002	87
2C-2	Skilled nursing facility payments and minutes of therapy for rehabilitation patients, 2003	91
2D	Home health services	103
2D-1	Estimated spending for home health, 1992–2002	106
2D-2	Certified home health agencies, 1996–2002	112
2E	Outpatient dialysis services	121
2E-1	Medicare spending for outpatient dialysis services furnished by freestanding dialysis facilities, 1991–2001	122
2E-2	Aggregate payment-to-cost ratios for dialysis services, adjusted and unadjusted, 1997–2001	125
2F	Ambulatory surgical center services	135
2F-1	States with the most Medicare-certified ASCs, 2001	137
2F-2	Growth in total Medicare payments for ASC services, 1991–2001 ..	139
2F-3	Growth in the number of ASCs and volume of procedures provided to Medicare beneficiaries in ASCs, 1996–2001	142
3	Access to care in the Medicare program	153
3-1	Supply and demand projections for full-time equivalent registered nurses, 2000–2020	160
3-2	Per capita Medicare spending for beneficiaries ages 65–69 and 85 and over, selected services, 1998	161
B	An introduction to how Medicare makes coverage decisions	245
B-1	Medicare’s process for appeals of Part A and Part B claims	249
C	Inpatient payments for rural hospitals	253
C-1	Hospital discharge volume and hospital cost per case, 1997	254
C-2	Rural hospitals’ shares of low-income patient costs and disproportionate share payments	258

Executive summary

Executive summary

The Congress has charged the Medicare Payment Advisory Commission with reviewing and making recommendations concerning Medicare payment policies. The Commission's recommendations aim to ensure that Medicare's payment systems set rates that cover the costs efficient providers would incur in furnishing care to beneficiaries. If payments are set too low, providers may not want to participate in the program and Medicare beneficiaries may not have access to quality care. If payments are set too high, taxpayers and beneficiaries will bear too large a burden.

In this report, we review Medicare prospective payment systems (PPSs) for seven sectors: hospital inpatient, hospital outpatient, physician, skilled nursing, home health, outpatient dialysis, and ambulatory surgical center services. We also discuss several broader issues related to Medicare payments:

- considering the context for Medicare payment recommendations (e.g. how does the growth of Medicare expenditures compare to that of the economy, the federal budget, and the amount paid by other payers; how to characterize the spending impact of our recommendations);
- assessing Medicare beneficiaries' access to care;
- deciding how Medicare should deal with payments for new technologies; and
- examining what health insurance choices are available to Medicare beneficiaries and what characteristics of insurance markets determine those choices.

At the beginning of each chapter, we list the recommendations contained in that chapter. In Appendix E, we present a list of all recommendations and the votes by Commissioners.

Context

Understanding the overall context for Medicare payment policies is important for policymakers. Therefore, we have included in Chapter 1 spending trends not just for Medicare but also for private sector payers and other federal health care programs. Over the long term, the rate of increase in per capita spending for Medicare beneficiaries has been similar to that for members of private sector health insurance plans and several government-sponsored plans. Year to year, there are different patterns and fluctuations, but the factors driving health care costs appear to operate similarly for all payers. We also report trends in Medicare's share of health care spending in the United States and of the federal budget, and the share overall health care spending represents of gross domestic product (GDP). Over the next few decades Medicare will constitute a greater proportion of economic output. Similarly, it will create greater pressure within the federal budget and increased cost sharing may stress beneficiary resources. For these reasons, pressures to restrain Medicare's rate of spending growth will likely increase.

When considering a policy direction, policymakers need a clear understanding of how recommendations will affect spending. Therefore, we introduce a taxonomy for estimating the fiscal implications of each of our recommendations. Specifically, estimates of spending changes are presented as ranges over one- and five-year periods; the implications for beneficiaries and providers are highlighted. These spending estimates cannot simply be added together to compute an overall estimate. Unlike official budget estimates, they do not take into account the complete package of policy recommendations, the interactions among them, or assumptions about changes in provider behavior.

Assessing payment adequacy and updating payments

In Chapter 2 we recommend payment adjustments for seven different Medicare prospective payment systems. For each system, we assess whether payments are adequate to cover the cost of efficient providers by using indicators such as providers' financial performance under Medicare, changes in the volume of services, the quality of and access to care, providers' access to capital, and market entry or exit. We then address the likely change in efficient providers' costs in 2004. We estimate input price inflation (as measured by a "market basket" index for each sector), allow for technological changes that both improve quality and significantly increase costs, and determine a reasonable expectation for productivity gains. For expected productivity gains, we use the 10-year average change in multifactor productivity in the general economy. Our update recommendations combine these judgments for each payment system. When appropriate, we also make recommendations to improve the distribution of payments among providers within each payment system.

Hospital inpatient and outpatient services

In the hospital sector we make both update and distributional recommendations. These recommendations should be considered jointly as a package because they are so closely interrelated and because some distributional recommendations would help certain hospitals—such as some rural hospitals—that are particularly vulnerable.

We find that overall Medicare payments for hospital services are adequate as of fiscal year 2003. Using a margin calculation that encompasses nearly all Medicare payments to the hospitals, and thus is not influenced by cost accounting differences, we estimate a margin for hospital services in 2003 of 3.9 percent (adjusted for changes legislated for fiscal year 2004 that will reduce payments). Other broad indicators, such as trends in volume and access to capital, are also generally consistent with a conclusion of adequate payments. This conclusion, together with consideration of other factors that are likely to affect costs in the coming year—including input price inflation, technological advances, and productivity—support an update for 2004 of market basket minus 0.4 percent for inpatient services. Because significant technological advances that affect outpatient services are accounted for through new technology provisions in that payment system, we recommend an outpatient update of market basket minus 0.9 percent for productivity improvement.

In addition, five policy changes are needed to improve the distribution of inpatient payments:

- expanding the current transfer policy for patients in certain diagnosis related groups (DRGs) who are discharged to post-acute settings;
- implementing a low-volume adjustment;
- reevaluating the labor share used for geographic adjustment of rates;
- eliminating the differential in base rates for hospitals in rural and small urban areas; and
- increasing the cap on disproportionate share payments that applies to most rural hospitals.

We recommend expanding the post acute care transfer policy to additional DRGs to better allow payments to follow patient care and to prevent hospitals that cannot discharge patients to post-acute care from being disadvantaged. We have recommended the other four policy changes in previous reports and reiterate them now as part of the comprehensive package that, taken together with the update recommendation, will help

maintain the financial viability of the hospital sector. A final important issue is the current indirect medical education adjustment to inpatient payments. That adjustment provides payments above the level justified by the empirical evidence on the relation between teaching activity and hospitals' Medicare costs. The Commission is not satisfied with the current policy, because there is no accountability for the use of the payments above the empirical level. We will explore ways to better target those payments to advance specific Medicare policy objectives through increased accountability.

Physician services

Medicare payment rates for physician services are based on a fee schedule and are updated annually based on the so-called sustainable growth rate system, which ties updates to growth in the national economy and other factors. Under this system, the update for 2003 is a minus 4.4 percent.

In assessing payment adequacy we find a mixed picture. The number of physicians billing Medicare has increased and national indicators of access are still good. There are, however, anecdotal reports of access problems in some geographic markets and specialties. A national survey of physicians suggests that physicians are becoming more selective about accepting new Medicare patients—but that is true for private HMO and Medicaid patients as well. Finally, Medicare payment rates have fallen somewhat relative to payment rates in the private sector, although they are still above levels seen in the mid-1990s.

From this assessment, the Commission concludes that payments would be adequate this year if the Congress were to change current law and require a modest, positive update for 2003 instead of the 4.4 percent payment reduction. Therefore, if the Congress acts, we recommend an update for 2004 that equals the estimated change in input prices for physician services less an adjustment for productivity growth. If the Congress does not require a positive update for 2003, a higher update will be necessary in 2004.

Skilled nursing facility services

Aggregate Medicare payments for skilled nursing facilities (SNFs) are at least adequate for fiscal year 2003. For freestanding SNFs—about 90 percent of providers in this sector—we estimate aggregate Medicare margins to be 11 percent in 2003. Including the 10 percent of SNFs that are hospital-based brings the aggregate SNF margin to about 5 percent. The high margin for freestanding SNFs reflects a decline in costs in recent years in response to incentives in the skilled nursing facility prospective payment system following high cost growth prior to its introduction. Preliminary evidence indicates that the decline in costs has not resulted in a lower quality of care. Because the prospective payment system for skilled nursing facilities is still relatively new, we expect this cost trend to continue into 2004, offsetting increases in input prices and other factors. Therefore, we recommend that the Congress not update payment rates for SNFs for fiscal year 2004.

Because of weaknesses in the current classification system for care in SNFs, however, payments are not distributed appropriately to account for the expected resource needs of different types of Medicare beneficiaries. Resources should be reallocated until the classification system is improved or replaced. As a start, we recommend that the Congress give the Secretary authority to reallocate money currently used as a payment add-on for rehabilitation classification groups to other classification groups so that payment more closely follows patient costs. This reallocation will benefit hospital-based SNFs to the extent that they serve patients with conditions more complex than those of patients in freestanding SNFs; therefore, no separate update for hospital-based SNFs is recommended. However, if this reallocation does not occur in a timely manner, the Congress should provide a market basket update less productivity adjustment of 0.9 percent for hospital-based SNFs only.

Home health services

Current aggregate Medicare payments for home health services are more than adequate relative to costs. For the first time, we now have cost data showing how home health agencies are performing under the PPS. We estimate that the Medicare margin for home health services in fiscal year 2003 will be 23.3 percent, even after accounting for the so-called 15 percent payment reduction and the expiration of the current 10 percent rural add-on. Providers have responded to the new PPS by changing the home health product and the cost of providing an episode of home health services is lower as a result. Other broad indicators also suggest that payments are adequate: access to care is generally good, the rate of decline in the number of users has decreased, and the entry and exit of agencies has remained stable for the third year in a row.

In the past, we have recommended updates that emphasized stability for this sector because we lacked data on agencies' financial performance and also wanted to give providers time to adapt to the new payment system. Home health agencies have adapted, and we expect them to continue to adapt during the coming year, further reducing the costs of providing an episode of care. Therefore, we recommend that the Congress not update payment rates for home health services for fiscal year 2004. Because of potential challenges that providers may face in rural areas, we also recommend that the Congress extend for one year, at a rate of 5 percent, add-on payments for home health services provided to Medicare beneficiaries who live in rural areas.

Outpatient dialysis services

Current aggregate Medicare payments for outpatient dialysis services for beneficiaries with end-stage renal disease appear to be adequate. Together, payments for composite rate services and injectable drugs—the two main components of payment to providers of outpatient dialysis services—exceeded providers' costs by about four percent in 2001. In addition, other indicators—such as continued entry of for-profit freestanding providers, increases in the volume of services provided, lack of evidence of beneficiaries facing systematic problems in accessing care, continued improvements in the quality of dialysis care, and providers enjoying adequate access to capital—together support the conclusion that Medicare's outpatient dialysis payments are adequate relative to efficient providers' costs. To account for changes in providers' costs in the coming year, the Congress should update the composite rate for outpatient dialysis services for calendar year 2004 by the change in input prices less a 0.9 percent adjustment for productivity gains.

Ambulatory surgical center services

An ambulatory surgical center (ASC) is a distinct entity that exclusively furnishes outpatient surgical services. The current payment rates for ASC services are based on a cost survey conducted in 1986. Because of the age of the data, our first recommendation in this sector is that the Secretary expedite the collection of recent ASC charge and cost data for the purpose of analyzing and revising the ASC payment system. Because there are no recent data on the cost of providing ASC services to Medicare beneficiaries, we looked at market factors and concluded that current payments for ASC services are more than adequate. There has been rapid growth in the number of ASCs; between 1997 and 2001, the number of Medicare-certified ASCs more than doubled. The volume of procedures provided by ASCs to beneficiaries increased by over 60 percent between 1997 and 2001. In addition, as indicated by their rapid growth, ASCs have sufficient access to capital. Current Medicare payments for ASC services are at least adequate to cover next year's expected increase in ASCs' costs. Therefore, we recommend that the Congress not update the payment rates for ASC services for fiscal year 2004.

In addition, although costs in ASCs should be lower than in hospital outpatient departments because ASCs have less regulatory burden and serve less medically complex patients, the ASC rate is currently higher than the outpatient hospital rate for several high-volume procedures. Therefore, we recommend the Congress should ensure that payment rates for ASC procedures do not exceed hospital outpatient PPS rates for those same procedures after accounting for differences in the bundle of services covered.

Access to care

A basic goal of Medicare is to ensure that elderly and disabled Americans have access to appropriate, quality health care. Therefore, we plan each year to monitor beneficiaries' access to Medicare-covered services along three dimensions: (1) the health system's capacity; (2) beneficiaries' ability to obtain care; and (3) access to appropriate care. In Chapter 3, we present our analysis for this year and do not find widespread problems in beneficiaries' access to care. Although more selective about accepting patients from a number of payers than in the past, the vast majority of physicians are accepting at least some new Medicare beneficiaries. Post-acute services are generally available, although it has become more difficult to place the most complex patients in skilled nursing facilities. Nonetheless, some issues will require careful monitoring. As in other populations, certain beneficiaries—those in poor health, with low incomes, and without supplemental insurance—report more difficulty than others in accessing appropriate services. Other beneficiaries, even though reporting good access, may not be receiving appropriate services. In addition, shortages of nurses could affect the availability or timeliness of certain services, and demographic trends raise concerns about the capacity of the health system over time.

Payment for new technologies

Medicare has the dual responsibility to pay enough for beneficial new technologies to ensure beneficiaries' access to care, while also being a prudent purchaser of new technologies. In Chapter 4 we examine how this dual role is addressed in the inpatient and outpatient prospective payment systems and how those systems might be improved. The incentives built into prospective payment systems promote the use of new technologies that reduce costs, but they may also slow adoption of new technologies that increase costs. To offset that tendency, the inpatient and outpatient prospective payment systems currently incorporate the costs of new technologies through special payment mechanisms for specific new technologies as well as through an annual review of payment rates. To ensure fair treatment across technologies and payment systems, MedPAC recommends that the clinical criteria currently applied to all new technology applicants under the inpatient PPS, and to new medical device applicants under the outpatient PPS, be extended to new drugs and biologicals applicants under the outpatient PPS.

Health insurance choices for Medicare beneficiaries

Depending on where they live, Medicare beneficiaries may have a wide array of insurance options beyond traditional fee-for-service Medicare available to them. Those options may include Medicare+Choice comprehensive care plans and private fee-for-service plans, cost contract plans, preferred provider plans, and varying forms of supplemental coverage. What options are available, and how and when beneficiaries choose among them, depends on specific market conditions and the circumstances of individual beneficiaries. The determinants of market conditions are both local and national. Although Medicare is a national program, it is only at the local level that medical care is delivered, beneficiaries choose insurance options and delivery systems, and insurers make decisions to enter the insurance market. In Chapter 5 we review the entire spectrum of insurance choices, as a first step in MedPAC's effort to better understand beneficiaries' choices and market conditions. ■



The Medicare Payment Advisory Commission (MedPAC) is an independent federal body established by the Balanced Budget Act of 1997 (P.L. 105–33) to advise the U.S. Congress on issues affecting the Medicare program. In addition to advising the Congress on payments to health plans participating in the Medicare+Choice program and providers in Medicare’s traditional fee-for-service program, MedPAC is also tasked with analyzing access to care, quality of care, and other issues affecting Medicare.

The Commission’s 17 members bring diverse expertise in the financing and delivery of health care services. Commissioners are appointed to three-year terms (subject to renewal) by the Comptroller General and serve part time. Appointments are staggered; the terms of five or six Commissioners expire each year. The Commission is supported by an executive director and a staff of analysts, who typically have backgrounds in economics, health policy, public health, or medicine.

MedPAC meets publicly to discuss policy issues and formulate its recommendations to the Congress. In the course of these meetings, Commissioners consider the results of staff research, presentations by policy experts, and comments from interested parties. (Meeting transcripts are available at www.medpac.gov.) Commission members and staff also seek input on Medicare issues through frequent meetings with individuals interested in the program, including staff from congressional committees and the Centers for Medicare & Medicaid Services (CMS), health care researchers, health care providers, and beneficiary advocates.

Two reports—issued in March and June each year—are the primary outlet for Commission recommendations. This volume fulfills MedPAC’s requirement to submit an annual report on Medicare payment policy. In addition to annual reports and occasional reports on subjects requested by the Congress, MedPAC advises the Congress through other avenues, including comments on reports and proposed regulations issued by the Secretary of the Department of Health and Human Services, testimony, and briefings for congressional staff.

CHAPTER

1

**Context for
Medicare spending**

Context for Medicare spending

Medicare spending increased by an annual average of 9.6 percent per beneficiary between 1968 and 2000. Although slightly lower than the growth rate of health care spending by private insurers, increases of this magnitude have unique implications given limited federal budget, trust fund, and beneficiary resources. Moreover, because the growth in Medicare spending has exceeded growth of the gross domestic product—as has *all* health care spending—an increasing portion of the nation’s economic resources are devoted to health care services. Medicare’s spending growth is a concern because it requires policymakers to weigh competing priorities and ultimately to make trade-offs in allocating limited resources.

This chapter explores trends in Medicare spending, compares Medicare growth to that of other health spending indicators, and examines the implications of spending increases given limited resources.

In this chapter

- Medicare spending trends
 - Medicare spending compared with other indicators of health spending
 - Implications of Medicare spending given limited resources
 - Spending and other implications of MedPAC’s recommendations
-

The Congress has charged MedPAC with assessing the design and implementation of Medicare payment policy and making recommendations to the Congress and the Secretary of the Department of Health and Human Services to address any problems identified. In carrying out these responsibilities, MedPAC examines whether Medicare's payment policy supports the ultimate goal of the program: ensuring that its beneficiaries have access to medically necessary acute care of high quality in the most appropriate clinical setting, without imposing undue financial burdens on beneficiaries and taxpayers. This examination requires that we evaluate not only the technical aspects of payment policy as they affect access to care, but also the implications for beneficiaries and taxpayers of rising Medicare and health care spending.

This chapter shows that after a few anomalous years of low rates of growth, Medicare spending has resumed its more typical trajectory, growing an average of 7.7 percent between 2001 and 2002. To provide a context in which to assess this growth rate, the chapter compares Medicare's growth to that of other types of national health care spending. The data suggest that while growth rates diverge at certain points, over the long run Medicare's growth is roughly comparable to that of other purchasers.

The chapter also identifies resource constraints that ought to be considered when evaluating both the short-term payment policy recommendations in this report and the need for longer-range Medicare reforms. Medicare is absorbing a growing proportion of the nation's budget and economic resources; the Medicare Hospital Insurance trust fund insolvency date looms; and beneficiaries are spending a growing percentage of their resources on health care, which for some means painful trade-offs between getting medical care and purchasing other essentials of living. This chapter does not go so far as to recommend solutions to

these problems, but MedPAC will analyze and report on innovations in health care financing and delivery that may hold promise for addressing them.

Given Medicare's limited resources, MedPAC makes its recommendations with—and policymakers should consider them with—an understanding of their consequences on spending as well as on beneficiaries and providers. To further this goal, MedPAC is making the implications of its recommendations more explicit by summarizing the implications below each recommendation and providing an estimate of the change in spending, when possible.

This chapter first presents background information on Medicare spending trends. Then it discusses overall national health spending and other health care spending that may serve as a benchmark against which to assess Medicare's scope and growth. Third, the chapter identifies the resource constraints associated with the federal budget, Medicare trust funds, the economy, and beneficiaries. Finally, given these trends and constraints, the chapter discusses how MedPAC assesses and presents the implications of its recommendations.

Medicare spending trends

Understanding how much Medicare spends for which services and for which beneficiaries, and also how fast this spending is expected to grow, is essential to assessing the performance and financial sustainability of the program. Information on spending trends lays the foundation for comparing Medicare's spending growth with that of other payers and for considering various spending constraints, such as the federal budget and Medicare trust funds. In addition, this information provides a sense of scale for assessing the impact of various policy options. For example, an option that is estimated to

increase hospital payments by 1 percent is far more costly than an option increasing hospice payments by 1 percent.

Spending levels and distribution

The amount of Medicare spending can be expressed in many different ways that are useful for different purposes. For a general understanding, perhaps the best way to consider Medicare spending is to include all the money the Medicare program pays for benefits. In 2002, Medicare spent about \$250 billion, or \$6,200 per enrollee.¹ In the same year beneficiaries, often through a supplemental insurer, also paid an additional \$38 billion in Medicare coinsurance and deductibles to their providers.

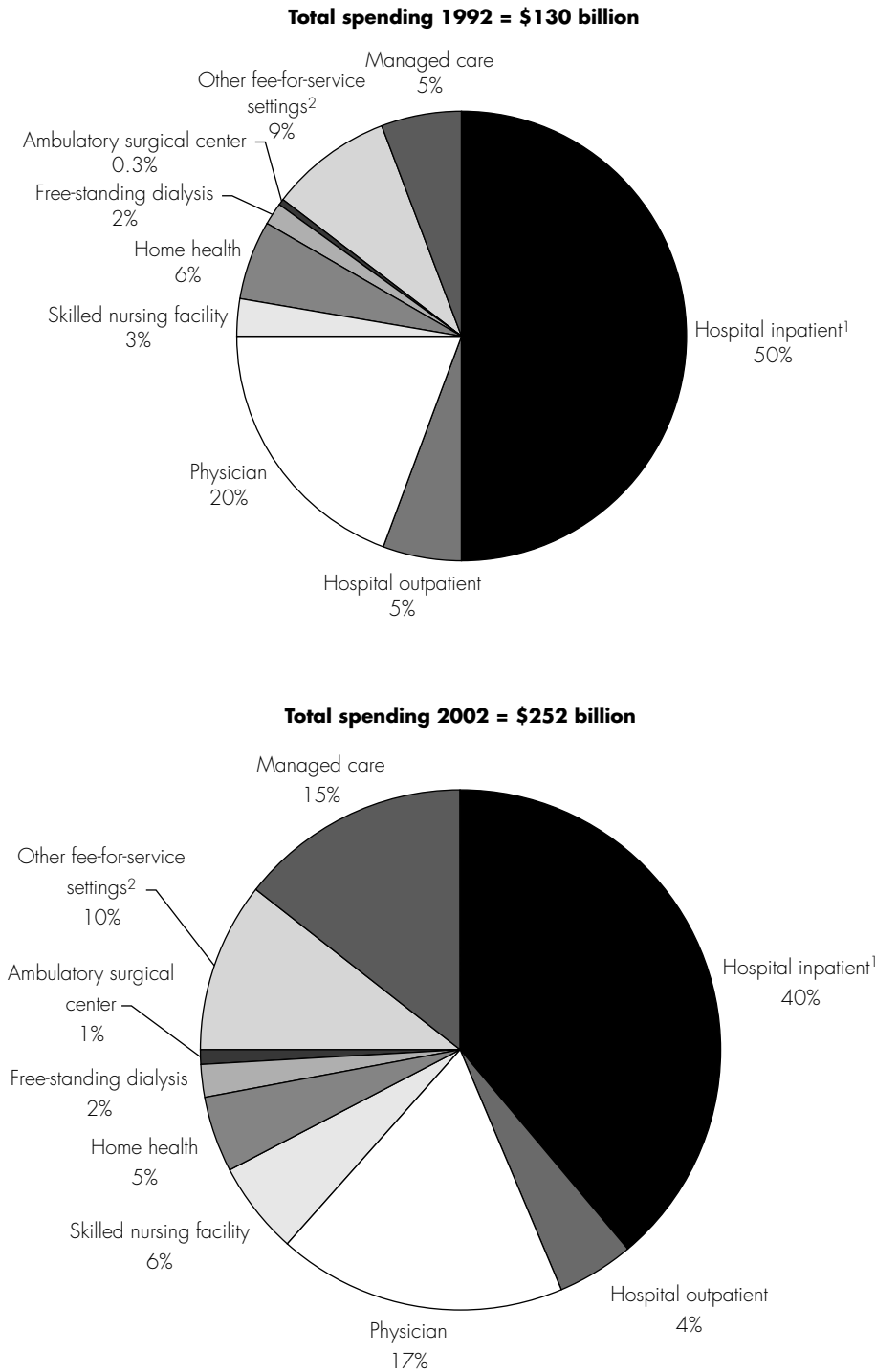
Medicare spending is concentrated on certain services, beneficiaries, and geographic areas. Inpatient hospital services were by far the largest spending category (40 percent), followed by physicians (17 percent), skilled nursing facilities (6 percent), and home health (5 percent). Spending for beneficiaries enrolled in the Medicare+Choice program accounted for 15 percent of the total. This distribution has changed over time, particularly as enrollment in the Medicare+Choice program has fluctuated and major changes in payment policy have affected spending levels of individual sectors. For example, although inpatient hospital spending has grown 53 percent from 1992 to 2002, it has shrunk as a percentage of Medicare's spending, falling from 51 percent to 40 percent (Figure 1-1).

Like private insurance spending, Medicare spending is concentrated in a small percentage of beneficiaries. In 1997, half of Medicare spending was for the costliest 5 percent of beneficiaries, and 90 percent was for the costliest 25 percent of beneficiaries. By contrast, the least costly 50 percent of beneficiaries consumed only 2 percent of all Medicare spending in

1 For the purposes of this chapter, unless otherwise noted, spending numbers are presented as gross outlays, meaning that they include spending financed by beneficiary premiums but do not include spending by beneficiaries (or on their behalf) for cost-sharing associated with Medicare-covered services. In general, they are reported on a fiscal year, incurred basis and do not include spending on program administration.

FIGURE 1-1

Change in distribution of Medicare spending by setting, fiscal years 1992-2002



1997 (Figure 1-2, p. 6).² When examined over a five-year period, the concentration is less dramatic: roughly 75 percent of spending between 1993 and 1997 was for the costliest 25 percent of beneficiaries.

Focusing on the characteristics of costly beneficiaries is illuminating, but the implications of these characteristics must be considered carefully. Costly beneficiaries in one year are more likely than other beneficiaries to have high costs in the following years. Of the high-cost beneficiaries who were alive at the end of 1993, over half remained in the highest quartile of spending in the next calendar year—a rate twice as high as would be expected by chance (Crippen 2002a).

Costly beneficiaries are also likely to have multiple chronic conditions. One analysis found that beneficiaries with three or more conditions (46 percent of beneficiaries) account for almost 90 percent of total Medicare spending, while those with no chronic conditions account for less than 1 percent (Anderson 2002). Because this analysis measured all spending for each type of beneficiary regardless of whether the spending was associated with the beneficiaries' chronic conditions, it is unclear to what extent the costly acute-care episodes were attributable to chronic conditions. It is known, however, that costly beneficiaries tend to use a lot of inpatient hospital care. More than half of Medicare spending on the most expensive 5 percent of beneficiaries was for inpatient hospital services in 1997 (Crippen 2002a).

Costly beneficiaries often include those in the last year of life. About 25 percent of Medicare outlays are spent on the last year of life for the 4.7 percent of beneficiaries who die each year. It is important to remember, however, that because the year or time of death is not predictable, this figure shows the cost of caring for severely ill individuals with unknown life expectancy, not the cost of care delivered in anticipation of impending death (MedPAC 2000).

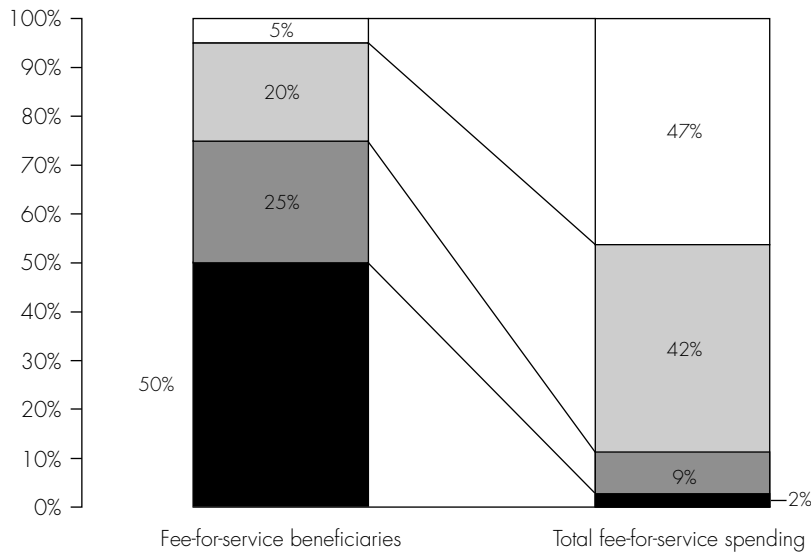
Note: Includes program outlays only. Totals may not add to 100 due to rounding.
¹Includes all hospitals, those paid under the prospective payment system (PPS), and PPS-exempt hospitals.
²Includes hospice; outpatient laboratory; durable medical equipment; Part B drugs, ambulance services, and supplies; and Rural Health Clinics, Federally Qualified Health Centers, and outpatient rehabilitation facilities.

Source: CMS, Office of the Actuary, 2002.

2 This data is based on a Congressional Budget Office analysis of claims data for fee-for-service beneficiaries. The five-year analysis includes only beneficiaries enrolled in Medicare since 1993.

FIGURE 1-2

Distribution of Medicare spending among beneficiaries, 1997



Source: Congressional Budget Office, 2002.

In addition, beneficiaries in some areas of the country are more costly, on average, than beneficiaries in other areas of the country. Some of this variation is due to deliberate payment adjustments to reflect differences in input prices, such as wages and rent, and to support other missions, such as payments for medical education and provision of uncompensated care. An additional part of the geographic variation is due to beneficiaries receiving different amounts of medical services, which is influenced by differences in providers' practice patterns and beneficiaries' propensity to seek care, which in turn are influenced by factors such as their health status, income, culture, and presence of supplemental coverage.

Spending growth

Prior to 1997, Medicare spending had been increasing rapidly, averaging 11.1 percent annually between 1981 and 1997.³ This rate of increase declined sharply

between 1998 and 2000 to 1.7 percent, as the effects of provider payment reductions in the Balanced Budget Act of 1997 (BBA) and enhanced efforts to deter fraud and abuse were felt. For 2001 and 2002, however, the rates of increase in spending resumed more typical trajectories of about 9 percent and 5.6 percent, respectively.

This general growth pattern was observed in virtually every service sector, but several specific trends are worth highlighting (Table 1-1):

- Leading up to the passage of the BBA, home health and skilled nursing facility (SNF) spending were growing at double-digit rates, peaking at 34 percent and 43 percent, respectively. Between 1997 and 2000, however, home health and SNF spending levels decreased. By 2001 and 2002, annual growth rates for each sector were again positive, and in the double digits.
- Inpatient hospital growth rates have not shown the same volatility as those for post-acute care, but because inpatient hospital care represents a large portion of Medicare spending, its growth greatly influences Medicare's overall growth. Between 1993 and 1997, inpatient hospital spending grew 6.1 percent annually, on average. Growth dipped to just 0.1 percent between 1998 and 2000 (after the BBA), before resuming a 6.7 percent annual growth rate between 2001 and 2002.
- Managed care spending grew nearly 30 percent annually, on average, between 1993 and 1997, as enrollment more than doubled. After

TABLE 1-1

Annual change in Medicare spending, selected settings, 1993-2002

Setting	1993-1997	1998-2000	2001-2002
Hospital inpatient	6.1%	0.1%	6.7%
Physician	4.3	4.7	8.6
Skilled nursing facility	27.6	-4.8	15.8
Home health	19.7	-21.8	22.8

Source: CMS, Office of the Actuary, 2002. Hospital inpatient includes all hospitals, those under the prospective payment system (PPS), and PPS-exempt hospitals. Includes program outlays only, gross mandatory, fiscal year, incurred.

³ In calculating average annual growth rates over a span of years, growth for the first year is calculated as the difference in spending from the prior year (1980, in this case) to spending in the year noted (1981, in this case). This convention is followed throughout the report.

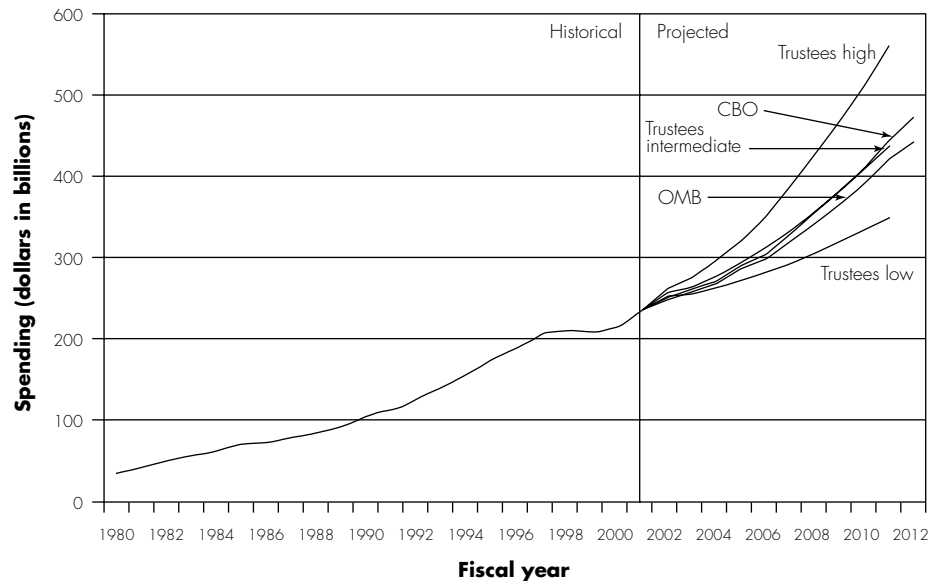
the passage of the BBA, a number of plans withdrew from the program or reduced their service area and enrollment declined, resulting in annual growth rates that averaged 16.4 percent between 1998–2000 and –4.2 percent between 2001–2002.

Projections of future growth suggest that Medicare will continue to grow at about 6 percent annually, on average, until the retirement of the baby boom generation, when growth will accelerate significantly. Forecasts of future Medicare spending are inherently uncertain but need to be considered in order to evaluate whether the program is financially sustainable. Several entities project future Medicare spending, including the Congressional Budget Office (CBO), the Office of Management and Budget (OMB), and the Medicare Trustees (Figure 1-3). Among the factors contributing to the uncertainty of their estimates is that they assume no change in current law, despite the fact that Congress regularly intervenes to adjust payment policies and occasionally changes coverage policies. Another source of uncertainty is difficulty predicting changes in the volume and intensity of services to be delivered to Medicare beneficiaries and, in particular, how new technology will influence these factors.

With these caveats in mind, we note that CBO projects that mandatory spending for Medicare will grow at an annual average rate of 6.5 percent over the 2003–2012 period (3.9 percent real growth). CBO’s estimate of cumulative spending over the first 5 years of the projection window is 7.7 percent higher than the estimates of the Office of Management and Budget; it is 10.2 percent higher than OMB’s estimates over the 10-year window.⁴ The Medicare Trustees’ intermediate projection for 2003–2011 assumes 6.1 percent average annual growth (3.5 percent real growth).

FIGURE 1-3

Total Medicare spending, 1980–2012



Note: CBO (Congressional Budget Office), OMB (Office of Management and Budget), Trustees (2002 annual report of the Boards of Trustees of the Medicare trust funds). All data are nominal, gross mandatory program outlays. Trustees and OMB projections include administrative spending, and Trustees projections are presented on a calendar year basis ending in year 2011.

Source: CMS, Office of the Actuary 2002 (historical spending). 2002 annual report of the Boards of Trustees of the Medicare trust funds, CBO 2002, OMB 2002 (projections).

Medicare spending compared with other indicators of health spending

As policymakers debate how to improve Medicare’s ability to be a prudent purchaser and whether policy changes are needed to change the projected trajectory of Medicare spending, it may be helpful to compare Medicare spending with total health spending and spending by other payers. This comparison provides a benchmark, albeit an imperfect one, that helps policymakers understand the size of Medicare in the marketplace and, in turn, its potential influence in the market.

To give a better sense of how Medicare spending compares with other health care spending, this section first discusses the comparative scope of Medicare, then compares Medicare’s growth rates to those of other private and public health spending, and finally explores the factors driving growth in health care spending. This discussion draws heavily from the national health expenditure (NHE) data compiled by the CMS Office of the Actuary, which disaggregates total spending by source of funding and service.⁵

Comparative scope of Medicare

In 2001, the Medicare program spent \$235 billion (about \$5,900 per beneficiary) and accounted for 19 percent of total national

4 The differences between CBO’s and OMB’s estimates are attributable to different assumptions about annual updates for provider payment rates, administrative actions on outpatient drug payment, managed care enrollment, and the rate of increase in the volume and mix of services in the fee-for-service sector (Crippen 2002b).

5 NHE’s Medicare estimates are derived from the Medicare Trustees reports. Its latest year of actual data is 2001.

spending on personal health care services.⁶ As such, Medicare is the single largest payer for health services in the marketplace. Of the \$1.24 trillion (about \$4,400 per person) spent on personal health care services in the United States in 2001, about 35 percent was private insurance payments from a wide array of payers and 17 percent was consumer out-of-pocket spending. Medicare, Medicaid, the State Children's Health Insurance Program (SCHIP), and all other public spending combined accounted for about 43 percent (Figure 1-4).

The level and distribution of Medicare spending differ somewhat from those of other payers largely because Medicare covers an older, sicker population and does not cover most prescription drugs or

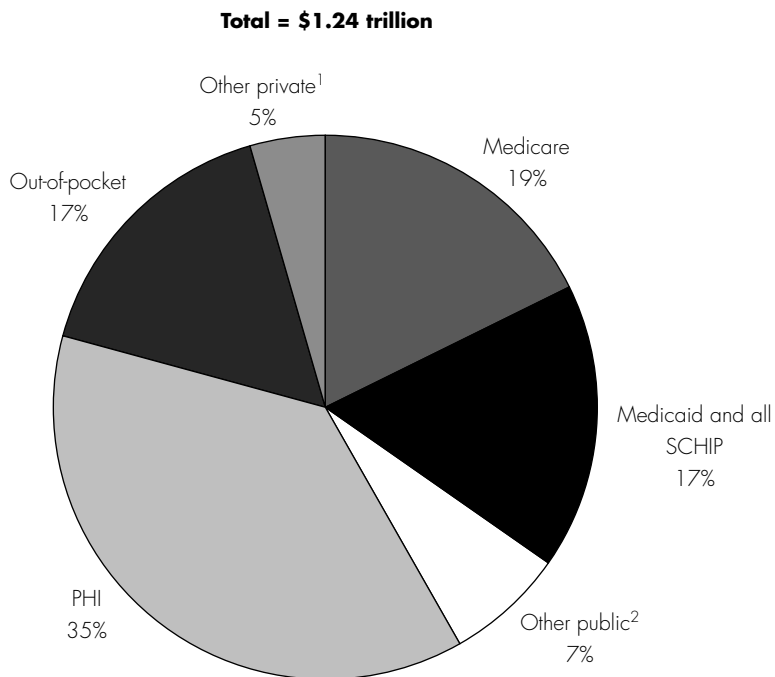
dental care. Accordingly, a greater percentage of Medicare's total spending is devoted to hospital and home health services compared with that of private insurers. Medicare is the single largest purchaser of these services. In 2001, it paid for 30 percent of both hospital and home health services. However, Medicare paid for only 2 percent of prescription drugs and 12 percent of nursing home care (Figure 1-5). For some types of providers, including certain hospitals and physician specialties, Medicare accounts for more than half of their revenue. As such, Medicare's payment and coverage policies can be a strong influence on the health care delivery system.

Comparing growth in spending

In this section, we compare the growth in Medicare spending with total spending on personal health care, private insurance spending on benefits, and premium growth of other government insurance programs. Although comparing Medicare's per enrollee growth rate with other payers' growth rates may be informative, it must be undertaken with an appreciation for the limits of the comparison. First, Medicare and other purchasers do not buy the same mix of services. So, for example, Medicare is largely unaffected by the rapid growth in spending for outpatient prescription drugs, one of the main drivers of other purchasers' spending increases. In addition, Medicare covers an older

National spending for personal health care, by payment source, 2001

FIGURE 1-4



Note: PHI (Private Health Insurance), SCHIP (State Children's Health Insurance Program). Out-of-pocket spending includes cost-sharing for both privately and publicly insured individuals. Personal health spending includes spending for clinical and professional services received by patients. It excludes administrative costs and profits.

¹Includes industrial in-plant, privately funded construction, and nonpatient revenues including philanthropy.

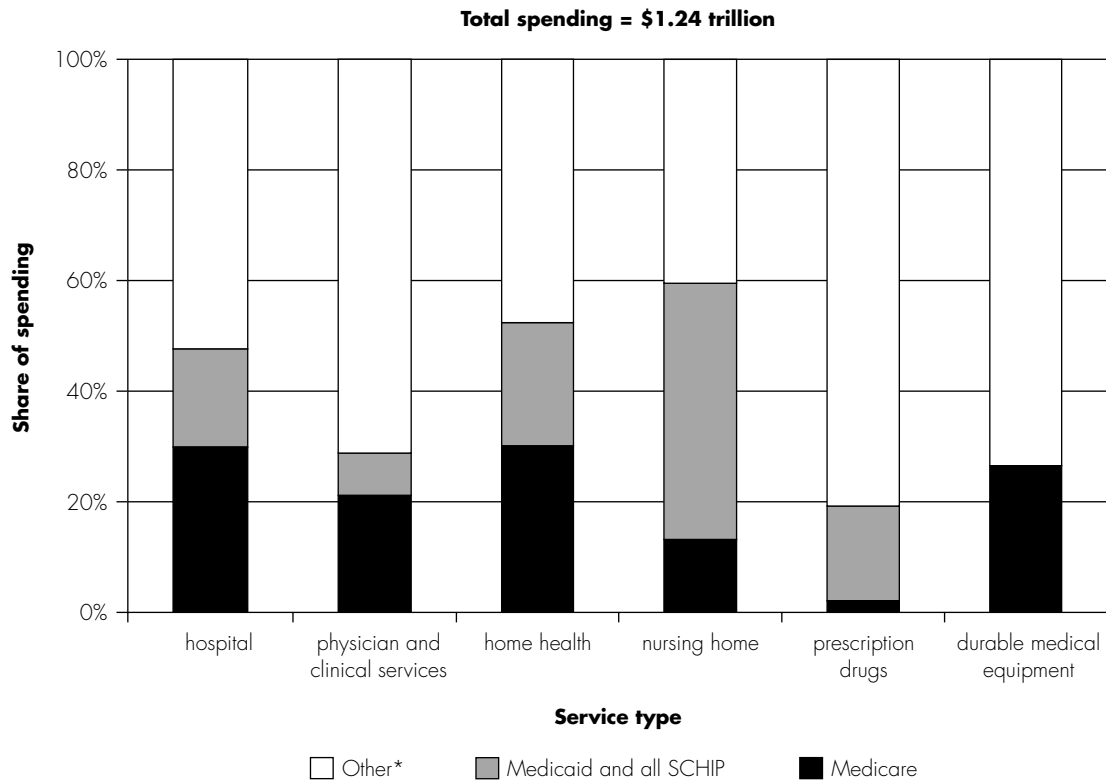
²Includes programs such as workers' compensation, public health activity, Department of Defense, Department of Veterans Affairs, Indian Health Service, and state and local government hospital subsidies and school health.

Source: CMS, Office of the Actuary, National Health Accounts, 2003.

⁶ Medicare spending does not include beneficiary spending on cost sharing for Medicare benefits. Personal health care spending excludes spending for such categories as research, construction, public health, and administrative costs.

**FIGURE
1-5**

National spending for personal health care, by setting and payment source, 2001



Note: SCHIP (State Children's Health Insurance Program). Personal health spending includes spending for clinical and professional services received by patients. It excludes administrative costs and profits.
*Other includes private health insurance, out-of-pocket, and other private and public spending.

Source: CMS, Office of the Actuary, National Health Accounts, 2003.

population that tends to be more costly and may use expensive technology at a faster pace than younger people (Moon 1999). This comparison is also complicated because the NHE includes in its private insurance spending supplemental insurers' spending for Medicare beneficiaries.

Another concern about comparing private payers' spending with Medicare spending is that these measures do not isolate changes in cost-sharing for covered services. Because changes in the level of

enrollee cost-sharing can either increase or decrease spending by payers, examining changes in the spending by payers can be misleading about their ability to contain overall health care costs. In previous decades, private insurers tended to reduce cost-sharing. Recently, however, evidence from employer surveys and focus groups suggests that enrollees are facing higher cost-sharing as private-sector purchasers seek to inject greater cost-consciousness among enrollees and slow the growth in the use of health care services (Robinson

2002).⁷ This shift of health care costs from the premium to cost-sharing may be equivalent to a 2 to 3 percent increase in premiums (Strunk 2002).⁸

Comparing personal health care spending and Medicare spending

To see how Medicare's growth compares with growth in national spending on health care services, we examined NHE measurements of personal health spending, which include consumer out-of-pocket spending as well as spending by a

7 One survey found that, between 2001 and 2002, preferred provider organizations (PPOs) increased their deductibles 37 percent and that the percentage of workers in health maintenance organizations (HMOs) facing a \$20 copayment for outpatient physician services rose from 2 percent to 11 percent (Kaiser-HRET 2002).

8 Ideally, our analysis would tease out this shifting of costs between insurers' spending and beneficiary cost-sharing to ensure the most accurate comparison. However, the data on out-of-pocket spending do not specify the extent to which such spending has been associated with benefits covered by Medicare as opposed to private insurance, or the extent to which spending has been related to uncovered services.

multitude of payers, including Medicare, insurance companies, and employers. Between 1991 and 1997, Medicare's spending growth generally outpaced the average growth of all other components of personal health spending (e.g., private insurance, Medicaid, and out-of-pocket spending) combined. However, Medicare's growth slowed dramatically after 1997, while other components of personal health care spending continued growing at a faster rate. Medicare represented 19 percent of personal health care spending in 2001, down from 21 percent in 1997. The actuaries who develop the NHE data project that this proportion will decline further to 18 percent by 2003 and remain relatively steady through the remainder of the

projection window (Figure 1-6), which ends just before the retirement of the baby boom generation.

Comparing Medicare spending and private insurance spending

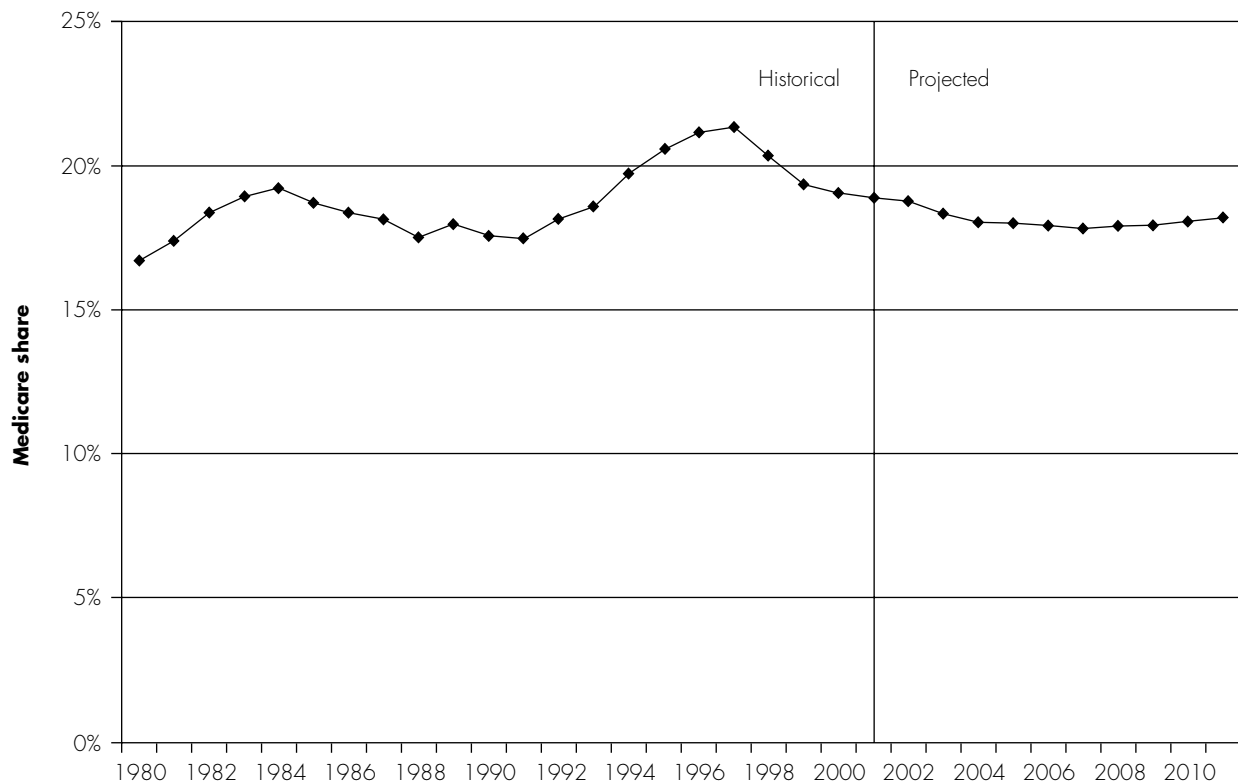
Two of the major sources of personal health care spending are Medicare and private insurance.⁹ Over a 33-year period, despite some fluctuation, the per enrollee average growth rates in Medicare and private insurance have been roughly comparable, with Medicare growing slightly more slowly (see Figure 1-7). After adjusting spending levels for differences in age and gender, unpublished CMS data show that real per enrollee Medicare growth over this period was 3.1 percent compared to 4.4 percent for private health insurance. When estimated spending on outpatient

prescription drugs is subtracted from private health insurance and Medicare spending, the growth rates of Medicare and private health insurance are even more comparable (3.1 percent for Medicare vs. 4.0 percent for private health insurance). Over shorter periods within this time frame, the growth rates of the two sectors have diverged as each tried different cost-containment strategies (Figure 1-8, p. 12).

Projections of future growth rates are highly uncertain and usually fail to anticipate the timing of peaks and valleys in spending growth rates. Nevertheless, they are useful for gaining a sense of the likely direction of the spending trajectory and the relationship between payers. Assuming current law, Medicare per enrollee spending is expected to grow

FIGURE 1-6

Medicare share of national spending for personal health care, 1980–2011

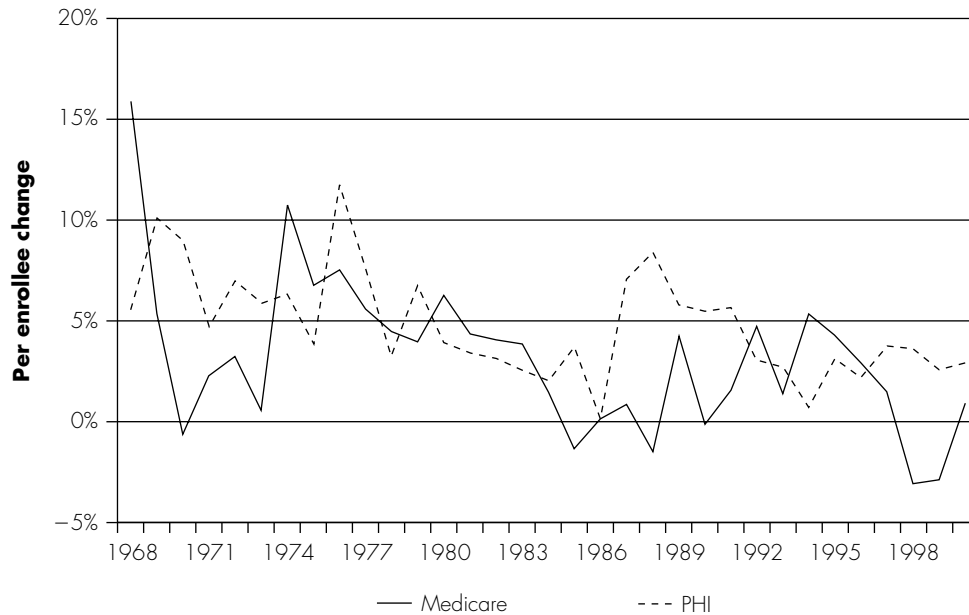


Note: Personal health spending includes spending for clinical and professional services received by patients. It excludes spending on research, construction, public health and administrative costs.

⁹ Recall that private insurance includes spending by private insurers for Medicare beneficiaries, so these measures are not entirely independent.

**FIGURE
1-7**

Real change in spending per enrollee, Medicare and PHI, 1968–2000



Note: PHI (private health insurance). Age and gender adjusted. Private health insurance spending includes spending for clinical and professional services received by patients. It excludes administrative costs and profits.

Source: CMS, Office of the Actuary, 2002.

more slowly than private health insurance spending through 2011. However, if Congress intervenes and raises payment rates to Medicare providers, the slower out-year growth may not be realistic.

The accuracy of the estimates for near-term private insurance growth (10.4 percent increase in premiums for 2002) is also uncertain. Surveys suggest higher private premium increases in the short-term—between 12 and 16 percent in 2002, and more than 15 or 16 percent in 2003 (Mercer 2002, Kaiser Family Foundation 2002, Hewitt Associates 2002, Towers Perrin 2002).

Comparing Medicare to other government health purchasers

Comparing Medicare's growth to that of other large public purchasers, each of which has a different approach to containing costs,

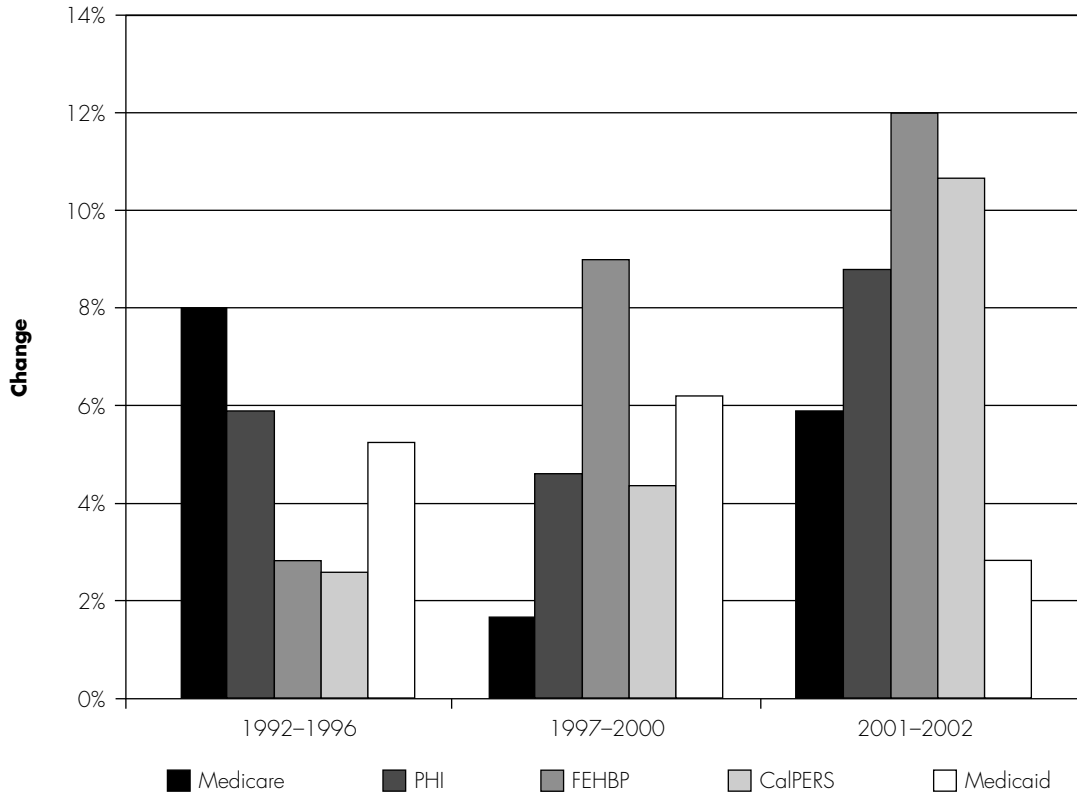
tells a similar story: While growth rates differ over selected periods, over the long-term they tend to be similar.

The Federal Employees Health Benefits Program (FEHBP) and California Public Employees' Retirement System (CalPERS) are two examples of public entities that use a market-oriented approach to contract with private insurance plans for employee health coverage. While the strategies these public entities use to contain costs offer some insight into potential payment alternatives for Medicare, policymakers must recognize important differences between these purchasers and Medicare. For example, in contrast to Medicare, both FEHBP and CalPERS serve current workers as well as retirees; CalPERS enrollees are concentrated in California and FEHBP annuitants are largely concentrated in urban areas, which

enables greater competition among contracting plans; and both programs have far fewer beneficiaries than Medicare does. Also, CalPERS and FEHBP provide coverage for outpatient drugs, whereas, as mentioned above, Medicare does not.

- FEHBP is the health benefit program run by the federal government for its civilian employees. It contracts with 188 plans each year to cover about 9 million lives, of which approximately 31 percent are annuitants (Quayle 2003). FEHBP requires annual bid submissions from plans and negotiates with plans to determine premiums and benefit packages. Over the last 10 years, FEHBP's average growth was slightly higher than Medicare's, although for different periods within that time frame, growth rates differed (Figure 1-8, next page).¹⁰

10 FEHBP annual increases are a weighted average of the premiums of all individual and family contracts (including of both active workers and annuitants) calculated at the end of the annual open season.

**FIGURE
1-8****Change in spending per enrollee, Medicare and other purchasers, selected years**

Note: PHI (private health insurance), FEHBP (Federal Employees Health Benefits Program), CalPERS (California Public Employees' Retirement System). Changes in spending are nominal. Private health insurance spending excludes profits and spending on administration.

Source: CMS, Office of the Actuary 2002, Medicare, PHI, and Medicaid (not including SCHIP) spending; FEHBP 2003, FEHBP premium increases; CalPERS 2002, CalPERS premium increases.

- CalPERS is a public agency that contracts annually for health benefits coverage on behalf of 1,100 member state and local public agencies in California. Many public agencies in lower cost markets choose not to join CalPERS. Approximately 1 million California public employees, retirees, and dependents were in CalPERS plans in 1997, 20 percent of them retirees. The rate of growth of CalPERS' premiums was lower than Medicare's over the last 10 years but higher over the last 12 years.¹¹

A comparison between Medicare and Medicaid growth is of limited utility given the myriad eligibility and payment policy issues that are unique to Medicaid and have greatly influenced its growth rate. For example, Medicaid's growth has been influenced by increases in enrollment across all eligibility categories in the early 1990s; state use of financing mechanisms, such as provider taxes and disproportionate share payments; escalating prescription drug costs; and fluctuations in the economy that affect eligibility. In addition, there is wide variation in the amount of resources used by Medicaid enrollees, depending on age

and eligibility category. On a per-enrollee basis, Medicaid spending grew at roughly the same pace as Medicare between 1987 and 2001, and has grown at a slower pace than Medicare recently.

Comparisons with the Department of Veterans Affairs (VA) and the Department of Defense (DoD), significant public purchasers of health care services, are also not particularly apt. The VA differs from Medicare in that it owns and manages its own hospitals and clinics and operates within a capped budget. DoD also owns and operates some facilities, although it relies increasingly on TRICARE—a managed care entity that

¹¹ CalPERS' increases are a weighted average of the premiums of all individual and family policies calculated at the beginning of the annual open enrollment period for all enrollees except Medicare beneficiaries. CalPERS has a separate benefit design and associated premium for its retirees who are eligible for Medicare.

employs private-sector contractors—to deliver care to its Medicare beneficiaries, and operates within a capped budget (see Chapter 5 for further discussion).

Factors affecting Medicare and other health spending growth

Growth in aggregate public and private spending for health care are influenced by many of the same underlying factors, but some dynamics affect one sector differently than the other. The most significant underlying factors that the two sectors share are inflation and increases in the volume and intensity of services delivered. Increases in volume and intensity (that is, shifts in the composition of services toward those that are more resource intensive) are due to technological developments and consumer demand, among other factors.

New technologies tend to increase costs, on balance, because they often mean that more services can be performed and more people can benefit from them.¹² As a result, total spending increases even though the unit cost of services may decline. New technologies may also replace less expensive technologies. Because these costlier technologies may offer only marginal improvement in patient outcomes, the increased spending is not necessarily offset by reduced spending on subsequent care. Of course, some new technologies may yield some savings. In particular, some suggest that new technologies that improve the process of health care delivery, such as electronic medical records and physician order entry technology, are likely to result in savings. However, because they have start-up costs and have not been widely implemented, their savings potential has not been fully tested.

Increases in consumer demand for services also lead to increases in volume and intensity. Because individuals are

shielded from much of the cost of their care, they tend to use more than they would otherwise. Similarly, physicians, who often direct beneficiaries' care, may be insensitive to costs when making treatment decisions. Second, increases in income, as experienced in the 1990s, tend to increase demand for health care services. A third factor is beneficiaries' changing expectations about their health status as they age. Beneficiaries do not view illness and debilitation as a necessary part of the aging process anymore. Instead, beneficiaries expect that medical services should enable them to retain their health and mobility, and even agility, as they age (Alliance for Aging Research 2001).

The aging of the population and impact of increased managed care enrollment are examples of dynamics that can affect the two sectors differently. While growth in the nation's population has been a steady and comparatively small factor driving overall health care spending for the population under 65 years of age (Ginsburg 2002), the looming retirement of the baby boom generation is certain to dramatically affect Medicare's spending. Medicare spending is greatly influenced by both the number of people over 65 and the increased longevity of those people. Accordingly, with the leading edge of the baby boom generation becoming eligible for Medicare in 2011 and life expectancy at age 65 projected to increase by 20–25 percent between now and 2075, Medicare spending is expected to increase significantly over the long term. In fact, as a result of these demographic shifts, the proportion of the nation's population over 65 is expected to nearly double by 2075 (from 12 percent to 23 percent by 2075) (CBO 2002b).

Throughout the 1990s, the private sector (and other public purchasers) turned to managed care as a way of controlling

spending growth. In a market characterized by excess capacity among providers, managed care plans were able to negotiate lower prices per service and, to a lesser extent, reduce the number of services provided. In contrast, Medicare's payment method for managed care services prevented the Medicare program from capturing any direct savings from managed care.¹³ In fact, increases in managed care enrollment led to increased Medicare spending because of Medicare's inability to appropriately adjust payments to reflect the relative health status of managed care enrollees.

Implications of Medicare spending given limited resources

Assessing the implications of spending growth requires an understanding of the nature of resource constraints and of accompanying pressures on policymakers to make choices in allocating resources. Among the resource constraints affecting Medicare spending are the federal budget, the Medicare trust funds, the size of the economy, and beneficiaries' ability to afford to pay the costs of their care.

The federal budget

Medicare is an increasingly large portion of the federal budget, leaving fewer resources available for other spending priorities. Current and anticipated annual budget deficits tend to increase pressure on policymakers to make choices about spending and find sources of budget savings. Because Medicare is such a large part of the budget, policymakers often look to savings from Medicare to reduce budget deficits.

Throughout the 1980s, Medicare program outlays accounted for between 6 and 8 percent of total federal spending. Over the

12 For example, cataract procedures rose from 334,000 performed on an inpatient basis in 1980 to 1,487,000 performed either in hospital outpatient departments or in ambulatory surgical centers in 1996 (Moon 1999).

13 Indirect fee-for-service savings may have resulted from increased managed care enrollment overall to the extent managed care plans induced providers to adopt more conservative practice styles in caring for all their patients, including Medicare beneficiaries. This indirect savings is called the "spillover effect" (Baker 1997).

course of the 1990s, Medicare's share increased sharply to 13 percent in 1997, dipping 1 percent in the period following the BBA, then returning to 13 percent by 2001 (Figure 1-9).

According to the CBO, Medicare spending is projected to remain at about 13 percent of federal spending until 2007, when it is expected to grow faster than overall spending, reaching 16 percent of total spending by 2012. While projections of Medicare spending as a percentage of total federal spending provide a sense of the direction of the trend, they are inherently uncertain and may change if current law changes.

The Medicare trust funds

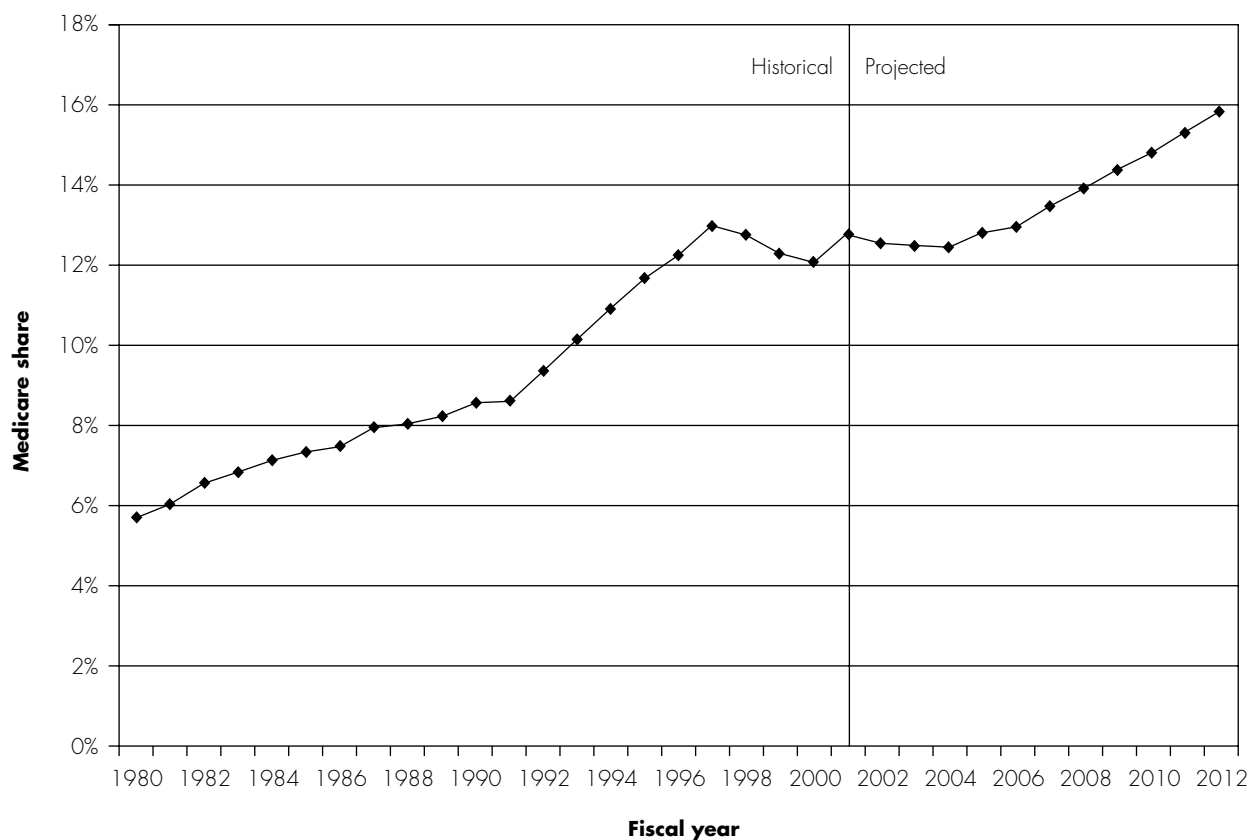
The Medicare program is financed through two trust funds: the Hospital Insurance (HI) trust fund for Part A services and the Supplementary Medical Insurance (SMI) trust fund for Part B services. Unlike the SMI trust fund, the HI trust fund can be exhausted if spending exceeds revenue plus reserves.¹⁴ Once the HI trust fund is exhausted, Medicare stops paying its bills for Part A services. The pending insolvency date therefore exerts pressure on policymakers to balance trust fund revenue and spending to ensure continued operation of much of the program.

In recognition of the uncertainty of projections, the Medicare Trustees, who are responsible for reporting on the status of the Medicare trust funds, make a low-cost, high-cost, and intermediate projection. Solvency dates are reassessed annually and are subject to substantive change from year to year. Economic and legislative changes can quickly alter projections of solvency, in much the same way that they alter total annual federal budgetary surplus or deficit projections.

The HI fund is projected to become insolvent in 2030 under the Trustee's intermediate estimate. Costs are projected to begin exceeding tax revenues in 2016,

FIGURE 1-9

Medicare spending as share of the federal budget, 1980–2012



Note: Federal budget includes spending on Social Security.

Source: Congressional Budget Office, 2002.

¹⁴ The HI fund's receipts come primarily from current payroll taxes (87 percent in 2001) and interest earnings on assets held by the trust fund (8 percent in 2001), with the remainder from beneficiary premiums, income taxes on Social Security benefits, and other sources (approximately 5 percent in 2001).

requiring the fund to use interest income to pay some costs. In 2021, projected costs would exceed all HI income, so trust fund assets would need to be spent to meet costs. Finally, the HI fund assets are projected to be exhausted in 2030. Under the Trustees' low estimate, the HI fund would remain solvent throughout the 75-year projection window (ending in 2076). Under the high-cost estimate, however, it would be exhausted in the year 2018 (Table 1-2).

In contrast to the HI fund, the SMI fund, financed primarily by federal general revenues and beneficiary premiums, is designed to remain solvent indefinitely. Current law automatically sets annual financing to cover SMI's expected costs for the upcoming year plus a "contingency reserve." However, as Medicare's beneficiary population grows with the retirement of the baby boom generation, and as health care costs continue to rise, the SMI fund is expected to require increasing amounts of general revenue and substantial increases in beneficiary premiums.

In addition, the trust fund financing structure affects the distributional impact of any policy and may encourage certain types of policy decisions. For example, if extending the solvency date of the HI trust fund is paramount, either spending reductions on Part A services or changes in the 2.9 percent payroll tax on worker wages (half of which is paid by employers and half of which is paid by employees) that finances the HI trust fund must be pursued. On the other hand, if the goal is to reduce beneficiary premiums, changes in Part B spending are needed. From a budgetary perspective, changes to Part B result in relatively smaller changes to the budget, because 25 percent of the change would be offset by premium changes.

The economy

Medicare spending is growing as a percentage of the nation's economy, as measured by the gross domestic product (GDP). Depending on one's point of view,

TABLE 1-2

Medicare HI trust fund solvency projections

	Year outgo exceeds income from payroll taxes	Year HI trust fund assets exhausted
Estimate		
High	2008	2018
Intermediate	2016	2030
Low	*	*

Note: HI (Hospital Insurance). *Not exhausted within the 75-year projection period (ending 2076).

Source: 2002 annual report of the Boards of Trustees of the Medicare trust funds; CMS, Office of the Actuary, 2002.

Medicare's growth may signal the nation's collective preferences, a program growing out of control, or something in between. Regardless of one's point of view, however, this growing portion highlights the need to improve the value gained from increased spending.

For the historical period 1980 to 2001, Medicare's share of GDP rose from 1.2 percent in 1980 to a high of 2.5 percent in 1997 (Figure 1-10, p. 16). As a result of spending reduction provisions in the BBA, increased fraud and abuse scrutiny, and strong economic growth, Medicare spending declined slightly as a share of GDP to 2.2 percent in 2000. However, after passage of legislation that tempered previously enacted payment reductions, it has since risen to 2.4 percent in 2001 and is projected to increase steadily to 2.8 percent by 2012. It is estimated that by 2030 Medicare will climb to 5.4 percent of GDP. When the three big entitlement programs—Medicare, Social Security, and Medicaid—are taken as a whole, they will account for 14.7 percent of GDP by 2030 (Crippen 2002b). Because these figures exclude spending by beneficiaries, or on behalf of beneficiaries by Medicaid or private insurers, for coinsurance and deductibles associated with the Medicare benefit package, the total share of GDP related to Medicare-covered services would be even higher.

Medicare growth of this magnitude raises questions about how these costs will be borne by taxpayers and beneficiaries in

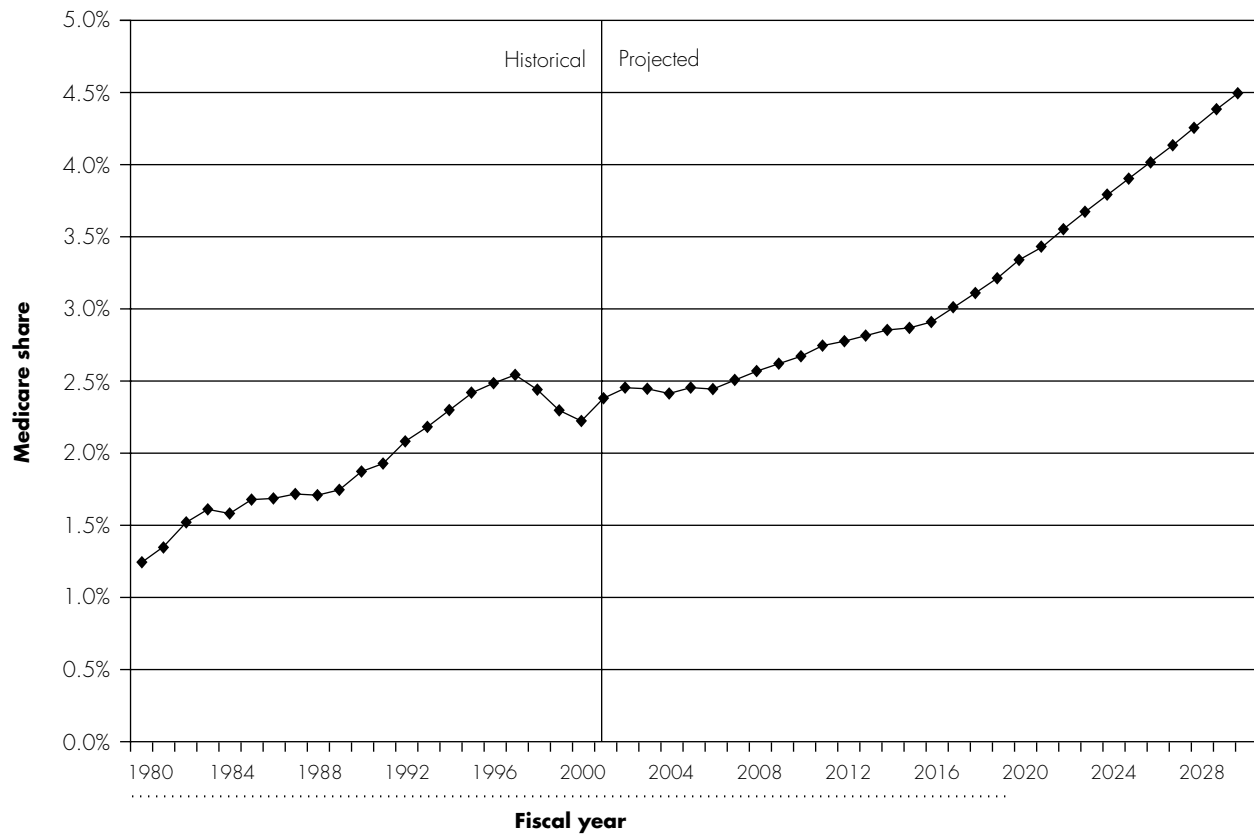
the future. If Medicare's spending were financed by raising taxes or increasing beneficiary contributions, less disposable income would be available for consumption or investment. Raising payroll taxes affects all workers, but particularly affects low-income workers because the payroll tax is not graduated; raising income taxes would likely affect income groups more progressively because income taxes are calculated as a graduated percentage; and raising premiums affects beneficiaries exclusively and would have different distributional effects depending on whether the increase were adjusted by income. Alternatively, Medicare's growth could be financed by more borrowing. In that case, more capital would be invested in government-issued debt and less would be available for private investment, which in turn could slow economic growth.

Beneficiaries' ability to absorb health care costs

Like other people, many beneficiaries have limited ability to absorb rising health care costs. Although beneficiaries 65 years of age and older have lower poverty rates than younger people, most elderly households—56 percent in 1999—have incomes below \$20,000. On average, these households spend 25 percent of their income on health care (CMS 2002). Beneficiary out-of-pocket spending on health care includes direct spending on uncovered services, cost-sharing for

**FIGURE
1-10**

Medicare spending as share of GDP, 1980–2030



Note: GDP (gross domestic product).

Source: Congressional Budget Office, 2002; years 2020 to 2030 are from 2002 annual report of the Boards of Trustees of the Medicare trust funds, and are presented on a calendar year basis.

Medicare-covered services, payments for Medicare Part B premiums, and payments for supplemental insurance premiums. Because there is a potential for high out-of-pocket spending, the vast majority of beneficiaries have supplemental insurance coverage (see Chapter 5 for further discussion).

Beneficiaries' resource constraints are important to keep in mind when assessing the level and distribution of out-of-pocket spending and evaluating policy options. Changes in the scope of Medicare's coverage and levels of cost-sharing affect beneficiaries' out-of-pocket spending. In addition, beneficiaries' out-of-pocket spending is directly affected by changes in payment for Part B services because coinsurance for Part B services is

calculated, in general, as 20 percent of payment and Part B premiums are calculated as 25 percent of total Part B spending.

Extent of Medicare coverage

Medicare provides considerable financial protection to its enrollees, but beneficiaries are at risk for substantial out-of-pocket costs. For all beneficiaries, including the institutionalized and those in Medicare+Choice (M+C), Medicare covered 52 percent of total costs, or \$9,573, in 2000. On average, beneficiaries who were in the traditional fee-for-service program and living in the community consumed \$8,200 in health care services in 2000, of which Medicare covered 57 percent.

While the proportion of beneficiaries' health care costs covered by Medicare has remained largely unchanged since 1993 for institutionalized beneficiaries and those in managed care, the proportion for fee-for-service beneficiaries living in the community has declined from 63.2 percent in 1993. This decline may result from several factors, including an increase in the working aged, for whom Medicare is the secondary insurer, and an increase in the proportion of the disabled, for whom Medicare pays a smaller proportion of total costs than for the aged. However, much of this change is attributable to growth in out-of-pocket spending on prescription drugs—a trend that can be expected to continue absent legislative change. CBO estimates that spending per

Medicare beneficiary for prescription drugs will increase from \$2,439 in 2003 to \$5,816 in 2012, an average annual change of 10.1 percent (CBO 2002a).

According to a MedPAC analysis of Medicare Current Beneficiary Survey (MCBS) data, growth in out-of-pocket costs for fee-for-service beneficiaries living in the community has outpaced growth in their income and the largest source of out-of-pocket growth has been for noncovered services. Between 1993 and 2000, growth in beneficiaries' out-of-pocket spending was slightly faster (5.4 percent on average) than their growth in income (3.8 percent on average). More than three-quarters of growth in out-of-pocket spending in this time period was due to increased spending on noncovered services and supplemental insurance premiums.

On average, beneficiaries spend about 20 percent of their income on health care services, but it is perhaps more useful to consider the distribution of spending by income. Households with incomes less than \$10,000 in 2000 spent 29 percent of their income on health care, and households with incomes between \$10,000 and \$19,000 spent 22 percent of their income on health. In contrast, households with incomes greater than \$70,000 spent 5 percent of their income on health care (CMS 2002).

Entities that subsidize supplemental coverage also find it difficult to keep up with rapidly growing health care costs. Medicaid provides assistance to certain low-income beneficiaries by providing coverage for benefits that Medicare does not cover and paying for beneficiaries' Medicare premiums and/or cost-sharing for Medicare-covered benefits, depending on beneficiaries' income and state eligibility income thresholds. Growth in these costs has contributed to recent state budget strains and deficits. Employers are also affected to the extent that they offer supplemental coverage for their retirees. Recent surveys indicate that they are considering reducing this coverage or eliminating it for new employees (Kaiser Family Foundation 2002).

Assessing the implications

Because beneficiaries differ in their use of services, access to supplemental insurance coverage, and ability to afford their care, the current burden of out-of-pocket liability and spending varies. Any policy changes would have different implications for different types of beneficiaries. To assess the distributional implications of growth in beneficiary out-of-pocket spending, policymakers must consider these characteristics and their interrelationships.

Out-of-pocket spending is concentrated among a minority of beneficiaries, though less so than Medicare spending. In 2000, 5 percent of all beneficiaries account for 20 percent of total out-of-pocket spending. The highest levels of out-of-pocket spending are related to higher levels of spending for noncovered services. Spending for noncovered services accounted for nearly 46 percent of out-of-pocket spending for beneficiaries in the highest quartile, while out-of-pocket spending for noncovered services hovered around 30–35 percent of total out-of-pocket spending for all other beneficiaries (Figure 1-11, p. 18).

In general, MCBS data show that Medicare beneficiaries who have low out-of-pocket spending fit one of two profiles. The first group includes relatively young and healthy people, between ages 65 and 74, for instance, and disabled beneficiaries who have stable conditions and use few services. Within this group are people who have only Medicare coverage and those who have additional coverage but do not pay the associated premiums. The second group includes people with comprehensive supplemental coverage, including beneficiaries eligible for Medicaid, and relatively high-income people with good employer-sponsored coverage who pay a small or no portion of the premium.

In contrast, people who have high out-of-pocket spending pay more for supplemental coverage and noncovered services. They tend to be older, use many services, and have relatively high

incomes, and they are more likely to have supplemental coverage, primarily Medigap that does not pay much of their noncovered services. Accordingly, to the extent that employers reduce the supplemental coverage they offer, affected beneficiaries may buy Medigap coverage, but between higher premiums and less comprehensive coverage, they will pay more out-of-pocket.

Spending and other implications of MedPAC's recommendations

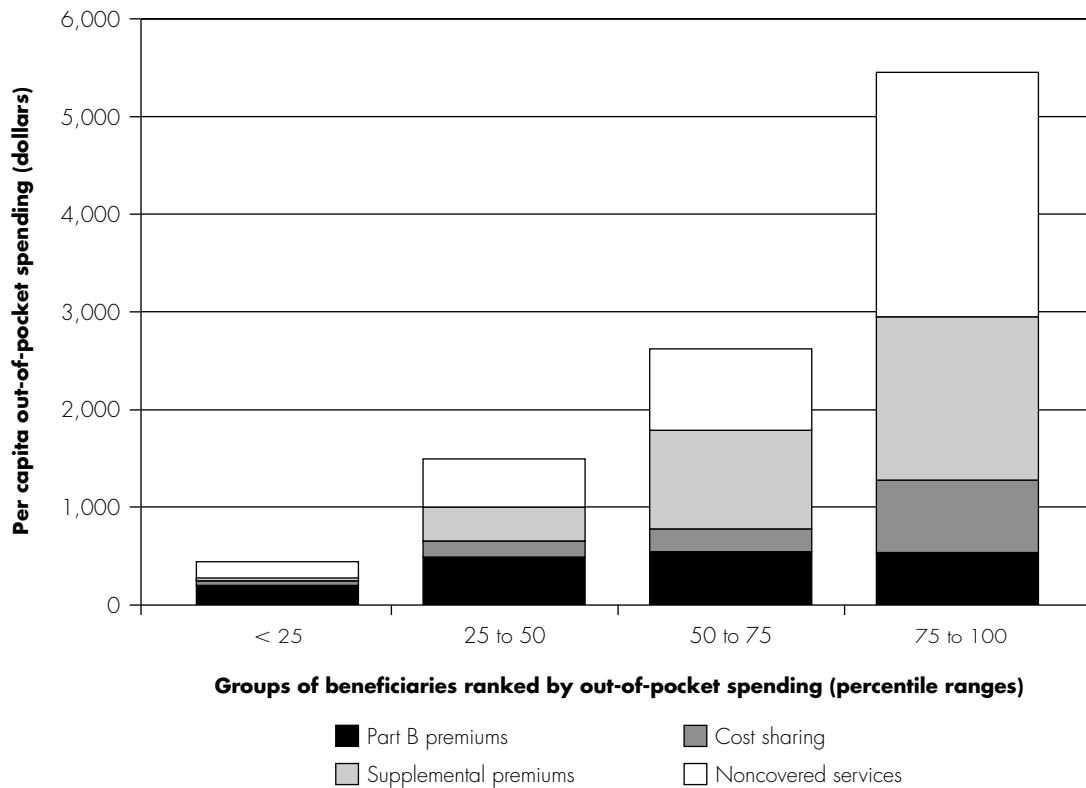
Given limited budgetary, economic, and beneficiary resources, MedPAC's recommendations should be made and considered by policymakers with an understanding of their consequences for spending as well as for beneficiaries and providers. Accordingly, a few changes from previous MedPAC reports will be evident in the pages that follow. First, in this report, we will make the implications of MedPAC's policy recommendations prominent in the text.

Second, where applicable, MedPAC will provide one- and five-year estimates of spending change for its recommendations, expressed as being within one of several predetermined dollar ranges (Table 1-3, p. 18). In the past, our estimates of spending impact were often expressed as a percentage increase in baseline spending or were discussed in general terms. This new approach is intended to give readers a better and more direct sense of the potential spending impact of a given policy recommendation.

MedPAC recognizes that other organizations, including CBO, CMS' Office of the Actuary (OACT), OMB, and the Medicare Trustees, specialize in and have a legislated role in forecasting Medicare spending and estimating the impact of policy options. MedPAC's estimates are intended only to aid readers in considering the implications and scale of a given recommendation. They are not formal budget or trust fund estimates. MedPAC will consult, or work in tandem,

**FIGURE
1-11**

Composition of out-of-pocket spending, by out-of-pocket spending level, 2000



Note: Sample of 9,577 includes community-dwelling beneficiaries who participated in traditional Medicare in 2000. Out-of-pocket spending includes beneficiaries' direct spending in four categories: the Part B premium, cost sharing for covered services, supplemental premiums, and noncovered services. The vertical bars represent per enrollee out-of-pocket spending, divided into the four categories, for each group. For example, the < 25 group illustrates per enrollee out-of-pocket spending for beneficiaries with the 25 percent smallest values (the lowest quartile). Likewise, the 75 to 100 group illustrates per enrollee out-of-pocket spending for beneficiaries with the 25 percent largest values (the highest quartile).

Source: MedPAC analysis of Medicare Current Beneficiary Survey, Cost and Use file, 2000.

**TABLE
1-3**

Dollar ranges for one- and five-year spending estimates

1-year estimates	5-year estimates
No spending	No spending
< \$50 million	< \$250 million
\$50–\$200 million	\$250 million–\$1 billion
\$200–\$600 million	\$1 billion–\$5 billion
\$600–\$1.5 billion	\$5 billion–\$10 billion
Over \$1.5 billion	over \$10 billion

with CBO and the OACT to inform the estimates and reduce the likelihood of widely different estimates for the same policies. Nevertheless, separately produced CBO or OACT estimates are in no way constrained by MedPAC estimates.

We have elected to express our estimates of spending changes in terms of a one- and five-year dollar range. One-year estimates may be particularly relevant for our payment update recommendations, where we fully expect to revisit the recommendations for the following year. Five-year estimates may be more helpful for more long-term policy recommendations, particularly those that

include a phased-in approach that delays realization of the full spending impact beyond the first year.

We are presenting a range for each estimate, rather than a point estimate, for several reasons. First, because MedPAC's estimates are intended to give readers only a sense of scale, ranges are more realistic indications of impact than point estimates (see text box). Second, many of our recommendations are not sufficiently detailed to produce a point estimate. Third, we hope that by presenting a range, we reduce any possible confusion between our estimates and those of CBO or the OACT.

Why spending estimates may change

Spending estimates may change because of the considerable uncertainty in projecting future spending and the complex technical aspects of such projections. For this reason, the Commission is providing some background information on estimating Medicare spending.

First, spending estimates depend on assumptions about Medicare spending absent any new policy changes. These spending assumptions define the current law baseline (also referred to simply as the baseline). Three versions of the current law baseline are produced separately by CBO, the Office of the Actuary for OMB, and the Medicare Trustees, and each is updated at least once a year to incorporate new assumptions about spending or the impact of recent legislative or regulatory changes to the program.

Sometimes the baseline will change significantly based on new

information about the use and/or mix of services or the prices paid for services. Accordingly, an estimate that was based on a baseline including one set of assumptions may be very different if the underlying assumptions change. For example, baseline assumptions about M+C enrollment have changed dramatically. A policy change to M+C payments will have different implications now than it would have in 1998 when enrollment in M+C was higher than its current level.

Second, estimating the behavioral response of providers and beneficiaries to a policy proposal is highly imprecise. Different estimates are likely based on different assumptions about whether the policy will, for example, increase or decrease the volume of services delivered. Differences in these assumptions can result in major changes in the spending estimate for the policy. ■

Three other caveats should also be considered. First, the spending implications for each recommendation have been developed as if the policy were the sole change. If other policy changes were to be made simultaneously, there could be interactions that would influence the spending implications. Accordingly, we caution against attempts to add up the spending implications across recommendations. Second, our estimates do not reflect the impact on spending for other programs, such as Medicaid, VA, or DoD, and as such do not approximate formal budget estimates. Third, differences may arise between what is intuitively thought to affect spending and what is considered “scorable” for purposes of budget laws. For example, CBO generally scores changes in law, not changes in administrative policy. ■

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C H A P T E R

2

**Assessing payment adequacy
and updating payments in
fee-for-service Medicare**

R E C O M M E N D A T I O N S

Section A: Hospital inpatient and outpatient services

2A-1 The Secretary should add 13 DRGs to the post-acute transfer policy in fiscal year 2004 and then evaluate the effects on hospitals and beneficiaries before proposing further expansions.

.....
***YES: 15 • NO: 1 • NOT VOTING: 1 • ABSENT: 0**

2A-2 The Congress should enact a low-volume adjustment to the rates used in the inpatient PPS. This adjustment should apply only to hospitals that are more than 15 miles from another facility offering acute inpatient care.

.....
YES: 17 • NO: 0 • NOT VOTING: 0 • ABSENT: 0

2A-3 The Secretary should reevaluate the labor share used in the wage index system that geographically adjusts rates in the inpatient PPS, with any resulting change phased in over two years.

.....
YES: 16 • NO: 0 • NOT VOTING: 1 • ABSENT: 0

2A-4 The Congress should raise the inpatient base rate for hospitals in rural and other urban areas to the level of the rate for those in large urban areas, phased in over two years.

.....
YES: 17 • NO: 0 • NOT VOTING: 0 • ABSENT: 0

2A-5 The Congress should raise the cap on the disproportionate share add-on a hospital can receive in the inpatient PPS from 5.25 percent to 10 percent, phased in over two years.

.....
YES: 15 • NO: 1 • NOT VOTING: 1 • ABSENT: 0

2A-6 The Congress should increase payment rates for the inpatient PPS by the rate of increase in the hospital market basket, less 0.4 percent, for fiscal year 2004.

.....
YES: 17 • NO: 0 • NOT VOTING: 0 • ABSENT: 0

2A-7 The Congress should increase payment rates for the outpatient PPS by the rate of increase in the hospital market basket, less 0.9 percent, for calendar year 2004.

.....
YES: 17 • NO: 0 • NOT VOTING: 0 • ABSENT: 0

Section B: Physician services

- 2B** The Congress should update payments for physician services by the projected change in input prices, less an adjustment for productivity growth of 0.9 percent, for 2004.

YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

.....

Section C: Skilled nursing facility services

- 2C-1** The Secretary should continue a series of nationally representative studies on access to skilled nursing facility services (similar to studies previously conducted by the Department of Health and Human Services' Office of Inspector General).

YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

.....

- 2C-2** The Congress should eliminate the update to payment rates for skilled nursing facility services for fiscal year 2004.

YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

.....

- 2C-3A** Consistent with previous MedPAC recommendations, the Secretary should develop a new classification system for care in skilled nursing facilities.

Because it may take time to develop this system, the Secretary should draw on new and existing research to reallocate payments to achieve a better balance of available resources between the rehabilitation and nonrehabilitation groups.

To allow for immediate reallocation of resources, the Congress should give the Secretary the authority to:

- ▶ remove some or all of the 6.7 percent payment add-on currently applied to the rehabilitation RUG–III groups.
- ▶ reallocate money to the nonrehabilitation RUG–III groups to achieve a better balance of resources among all of the RUG–III groups.

- 2C-3B** If necessary action does not occur within a timely manner, the Congress should provide for a market basket update, less an adjustment for productivity growth of 0.9 percent, for hospital-based skilled nursing facilities to be effective October 1, 2003.

YES: 17 • NO: 0 • NOT VOTING: 0 • ABSENT: 0

*COMMISSIONERS' VOTING RESULTS

Section D: Home health services

2D-1 The Secretary should continue a series of nationally representative studies on access to home health services (similar to studies previously conducted by the Department of Health and Human Services' Office of Inspector General).
*YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

.....
2D-2 The Congress should extend for one year add-on payments at 5 percent for home health services provided to Medicare beneficiaries who live in rural areas.
YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

.....
2D-3 The Congress should eliminate the update to payment rates for home health services for fiscal year 2004.
YES: 15 • NO: 0 • NOT VOTING: 1 • ABSENT: 1

Section E: Outpatient dialysis services

2E The Congress should update the composite rate payment by the projected change in input prices, less 0.9 percent, for calendar year 2004.
YES: 15 • NO: 0 • NOT VOTING: 1 • ABSENT: 1

Section F: Ambulatory surgical center services

2F-1 The Secretary should expedite collection of recent ASC charge and cost data for the purpose of analyzing and revising the ASC payment system.
YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

.....
2F-2 The Congress should eliminate the update to payment rates for ASC services for fiscal year 2004.
YES: 15 • NO: 0 • NOT VOTING: 1 • ABSENT: 1

.....
2F-3 Until the Secretary implements a revised ASC payment system, the Congress should ensure that payment rates for ASC procedures do not exceed hospital outpatient PPS rates for those procedures, after accounting for differences in the bundle of services covered.
YES: 15 • NO: 0 • NOT VOTING: 1 • ABSENT: 1

Assessing payment adequacy and updating payments in fee-for-service Medicare

In this chapter

- Hospital inpatient and outpatient services
 - Physician services
 - Skilled nursing facility services
 - Home health services
 - Outpatient dialysis services
 - Ambulatory surgical center services
-

The law requires MedPAC to develop payment update recommendations for each major service sector in fee-for-service Medicare. While the process of setting updates is inherently imperfect, we have developed a framework to help us formulate our recommendations in the most thoughtful and consistent way possible. Our model breaks the process into two parts: assessing the adequacy of current Medicare payments and accounting for the increase in efficient providers' costs in the coming year. We also take current law into account. We applied our updating model to services in seven sectors: hospital inpatient, hospital outpatient, physician, skilled nursing facility, home health, outpatient dialysis, and, for the first time, ambulatory surgical center. Generally we found that current payments are at least adequate—and in some cases more than adequate—in these sectors. For physician payments, however, our finding of adequate payments is linked to Congressional action to provide a modest increase in payments for 2003.

The goal of Medicare payment policy is to align payments with efficient providers' marginal costs of furnishing health care, and in so doing to help ensure beneficiaries' access to high-quality services. Achieving this goal involves setting the base payment rate (for services of average complexity) at the right level, developing payment adjustments to accurately reflect cost differences among types of services and for varying market conditions, and then annually considering the need for a payment update.

MedPAC's general approach to payment policy attempts to:

- make enough funding available for paying providers to preserve Medicare beneficiaries' access to high-quality care, and
- distribute payments accurately across services and among providers in different health care markets.

The Commission's annual update decisions address the first of these objectives. Other recommendations address distributional issues. Often these will coincide with the updating process because policy changes affecting the distribution of payments can also affect the overall amount of payments.

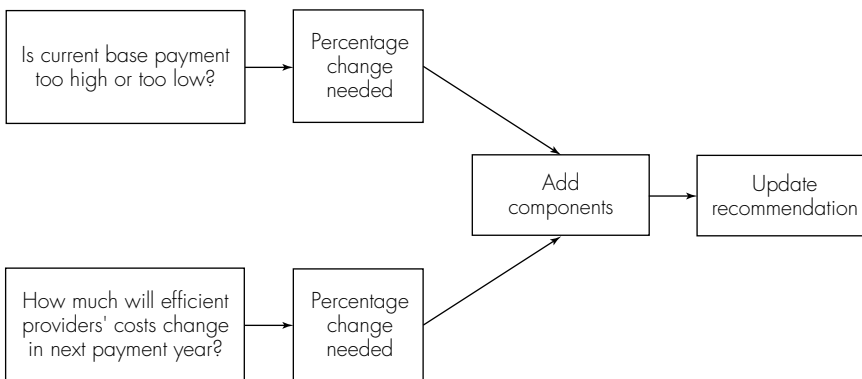
In practice, we have no way of measuring providers' marginal costs or determining the costs associated with efficient operation. But the law nonetheless requires MedPAC to develop payment update recommendations for each major service sector in fee-for-service Medicare. Consequently, we have developed a framework to guide our update decision making, so as to carry out this inherently imperfect process in the most thoughtful and consistent way possible.

In our model, we sequentially address two questions that together determine the appropriate level of aggregate funding for a given payment system:

- Is the current base payment rate too high or too low?

FIGURE 2-1

Approach for assessing payment adequacy and updating payment rates



- How much will efficient providers' costs change in the next payment year?

As shown in Figure 2-1, if the current base rate is too high or too low, we will recommend a compensating percentage change factor, and we recommend a second percentage change factor to account for cost changes expected during the forthcoming year. The two are then summed to produce our recommended update. As a practical matter, the Commission may not publish these percentage factors separately, but we consider both questions in arriving at our final update recommendation.

This section of the chapter begins by reviewing the basics of our two-part system and then discusses two special issues in updating payments:

- taking current law into account, and
- considering the impact of new technology pass-through payments.

The chapter then proceeds through the Commission's analysis of payment adequacy and development of update and other recommendations for hospital inpatient and outpatient, physician, skilled nursing facility, home health, outpatient dialysis, and ambulatory surgery services.

Model for assessing payment adequacy and updating payments

Our model attempts to separate assessing the adequacy of current payments from projecting likely changes in efficient providers' costs for the coming year because commingling these processes has caused confusion in the past. For example, one of the factors the Commission believed was responsible for hospital payments being too high in the 1990s was unbundling of the payment unit. Hospitals shifted care at the end of patients' acute inpatient stays to other settings, such as rehabilitation or skilled nursing facilities, which reduced hospitals' costs. The Commission's decision to recommend reduced updates in response to this phenomenon brought charges that the updates would not adequately cover hospital cost inflation. Publishing the reduction as a response to current payments being too high—separate from an allowance for cost growth in the coming year—might have presented a clearer picture of the rationale for our recommendation.

Multiple factors can contribute to a gap between current payments and costs, including errors in past forecasts of input price inflation, changes in coding practices, unbundling of the payment unit,

or other changes in product. The most important issue for our attention is *whether* payments are too high or too low, as opposed to *how* they became so. But when we believe that a specific factor may have played a major role in making payments too high or too low—particularly in the most recent year—developing an estimate of the effect of that factor may help in deciding whether and how much to adjust for the adequacy of current payments.

Part one: assessing payment adequacy

The first part of MedPAC’s approach to developing payment updates is to assess the adequacy of current payments. In most cases, we address payments for the services covered by a single payment system (for example, home health or physician services). When a single organization provides services across multiple payment systems, however, cross-subsidization and inaccurate allocation of costs among services may distort our measures of payments and costs. The prime examples of this phenomenon are hospitals (that provide acute inpatient, outpatient, home health, skilled nursing, and inpatient rehabilitation and psychiatric services) and dialysis facilities (that provide dialysis treatments and furnish separately billable medications to dialysis patients).

In these instances, we assess the adequacy of payments for all the Medicare services that one type of provider furnishes. If we decide that payments in aggregate are too high or too low, we must then also decide how to distribute the resulting change among services. We would do this by adjusting one or more of the applicable base rates.

As discussed below, MedPAC’s approach to assessing the adequacy of current Medicare payments includes three steps:

- estimating current payments and costs,
- assessing the adequacy of current payments relative to costs, and
- adjusting current payments via an update or distributional change (Figure 2-2).

Estimating current payments and costs

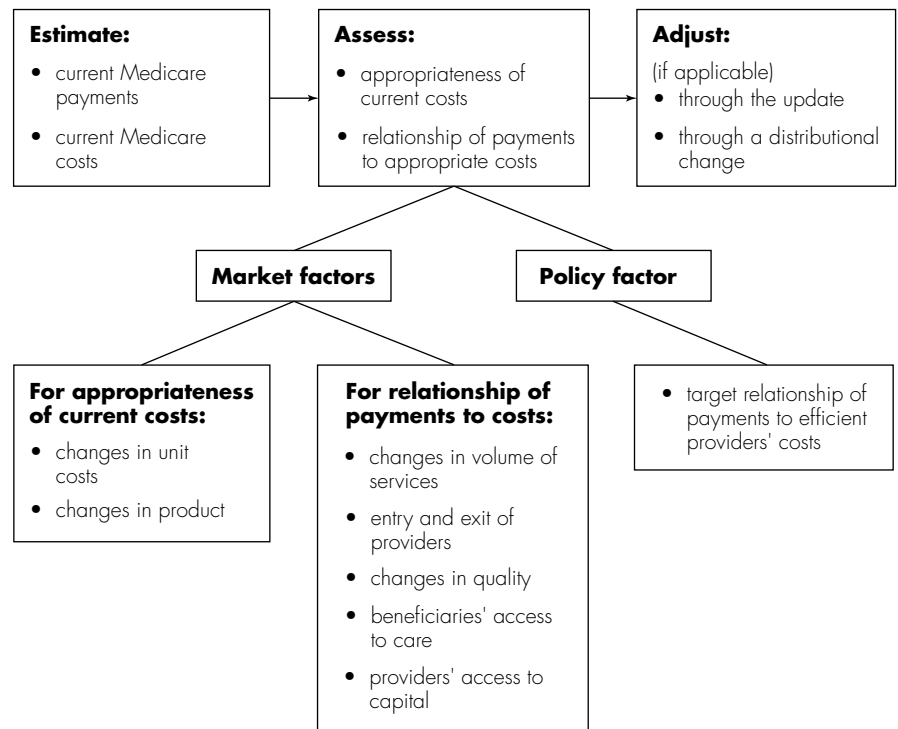
We begin our assessment by estimating total Medicare payments nationally, along with the corresponding provider costs of treating Medicare beneficiaries. The relationship between costs and payments is typically expressed as a margin.¹ The base margin estimate covers the year preceding the one to which our update recommendation will apply. In this report, we are estimating payments and costs for fiscal year 2003 to inform our update recommendations for fiscal year 2004.

Unfortunately, because of processing delays caused by changes in the format of Medicare cost reports, the latest data available to us from providers’ cost reports are from fiscal year 2000. Consequently, we have estimated the changes in both Medicare’s payments and providers’ costs (assuming a constant volume of service) from 2000 to 2003.

On the payment side, we first apply the annual payment updates specified in law for 2001 through 2003 to our 2000 base numbers. We then model the effects of other policy changes that will affect the level of payments during this three-year period. For changes other than updates, we also include provisions scheduled to go into effect in the decision year (fiscal or calendar year 2004).² This allows us to consider whether current payments would be adequate under all applicable provisions of current law. Thus, we end up with estimates of what payments in

FIGURE 2-2

Steps and factors in assessing payment adequacy



1 A margin is calculated as payments less costs divided by payments. Alternatively, the data can be expressed as a ratio of payments to costs.

2 An example of a payment policy scheduled to go into effect in 2004 is eliminating the hold-harmless provision for small rural hospitals under the outpatient prospective payment system.

fiscal year 2003 would have been, had fiscal year 2004 payment rules been in effect.

On the cost side, we estimate the increases in costs per unit of output over the same three-year period—a difficult task given that fiscal year 2003 had just started when we had to make our decisions. Generally we assume that cost per unit of output has increased at the rate of input price inflation, as measured by the applicable market basket index from the Centers for Medicare & Medicaid Services (CMS), adjusted downward slightly in anticipation of productivity improvements.³ In some cases, however, more recent estimates of cost growth are available through claims analysis and alternative data sources such as the National Hospital Indicators Survey, which CMS and MedPAC cosponsor.

Assessing the adequacy of current payments relative to costs

The next step in assessing payment adequacy involves two interrelated issues:

- the appropriateness of providers' costs (that is, whether actual costs provide a reasonable representation of the costs of efficient providers), and
- the relationship of payments to an appropriate cost base.

In examining the cost base (aggregate current costs), we generally treat the volume of services as given. At a certain volume, providers' total costs are driven by the average cost per unit of output, which then becomes the focal point of our analysis. If this unit cost is considered appropriate, we then proceed to the question of whether payments are adequate to cover costs and to provide sufficient funds for keeping plant and equipment up to date. However, if costs are too high (implying some degree of inefficiency) or too low (implying that

additional spending is needed to ensure appropriate quality and access to care), then an adjustment to actual costs may be needed before we decide whether payments are adequate in relation to those costs.

The tasks of assessing the appropriateness of the cost base and the adequacy of payments inevitably require Commission judgment. Available information is invariably limited. Nonetheless, several types of data about the market conditions that providers face may provide useful clues (Figure 2-2).

Market factors Two market factors relate primarily to the appropriateness of current costs:

- the trend in average cost per unit of output, and
- evidence of change in the product being furnished.

Although it is nearly impossible to know whether costs are “efficient” in the absolute, the rate of change in unit costs at least provides evidence of whether the initial level of appropriateness has been maintained. Other things being equal, we would generally expect average growth in unit costs to approximate the rate of increase in the applicable market basket index, or be slightly below the market basket increase with productivity improvements. Changes in product can have a major effect on unit costs, however. For example, substantial reductions in the length or visit content of home health episodes would be expected to reduce the growth in provider costs (inflation adjusted).

Changes in several other market factors may suggest that payments are too high or too low relative to costs, even in the absence of any direct evidence as to whether the cost base is appropriate (Figure 2-2):

- changes in the volume of services,
- entry or exit of providers,
- changes in the quality of care,
- changes in beneficiaries' access to care, and
- changes in providers' access to capital.

Reductions in the volume of services furnished or in the number of providers offering services to Medicare beneficiaries may indicate that revenue flows are inadequate for providers to continue operating or to provide the same level of services. Facilities closing is the extreme outcome, although it can be difficult to distinguish between closures that have serious implications for access to care in a community and those that have resulted from excess capacity. Evidence that more privately practicing physicians are refusing to accept new Medicare patients is another example. By the same token, substantial increases in volume or the number of providers may indicate that payments are more than sufficient to cover providers' financial needs, potentially leading to unnecessary services being provided.⁴

Although difficult to measure, deteriorating quality or access to care may indicate that revenues (either specific to Medicare or across all payers) are inadequate. It is unlikely, however, that quality measures alone would ever provide the basis for concluding that Medicare payments are too high. Changes in bond ratings may indicate that providers' access to needed capital has deteriorated or improved, although the data are difficult to interpret because access to capital depends on more than just bond ratings. The industry's volume of borrowing and overall level of capital expenditures may provide indirect evidence of access to capital.

3 Actual changes in the market basket index were used for 2002 together with CMS's forecasts of the market basket for 2003.

4 Changes in the volume of physician services must be interpreted cautiously because in this case there is some evidence to suggest that volume goes up when payment rates go down—the so-called “volume offset.”

Policy factor Apart from market factors, there is a policy factor to be considered when assessing the adequacy of current Medicare payments—namely, the desired relationship between payments and costs (Figure 2-2). Given a judgment that the current level of costs is appropriate, a target ratio of payment to costs could simplify MedPAC’s assessment of payment adequacy—if our projection of current year payments and costs produced a margin above the target, then we would recommend a downward adjustment, and vice versa.

The appropriate margin of payments over appropriate costs—which could be a narrow range, rather than a specific point—is difficult to discern. Difficulty arises for several reasons: the degree of risk among specific providers varies depending on their size, the actions of other payers, their exposure to nonpaying patients, and other factors. Even on average across all providers, however, risk could vary by sector and over time for a given sector. Moreover, even if we could identify a target aggregate margin, it would still be only one element of a composite picture that is also informed by the other factors described above (the effects of changes in product, quality of care, access to care, and so forth).

In sum, our deliberations have suggested that it will not be possible to develop a *standard* relationship between payments and appropriate costs. Thus, the Commission will still need to think about an appropriate range for this relationship each year, one sector at a time.

Adjusting current payments via an update or distributional change

A finding that current Medicare payments are too high or too low will lead to an adjustment to the payment update that otherwise would apply. If the adjustment is large, the Commission typically recommends phasing it in over two or more years. Sometimes, however, we may find it appropriate to increase or decrease the amount of money in the system in a way that simultaneously redistributes

payments. In this case, we would intend the combined impact of the distributional changes and the update itself to provide for an appropriate level of payments in the policy year.

It may be useful to quantify a percentage adjustment factor when we find that current payments are too high or too low. Often, however, the Commission simply makes clear that current payments are too high or too low and then considers that finding together with the expected cost change in the coming year (as discussed below) in developing its update recommendation.

Part two: accounting for providers’ cost changes in the coming year

The second part of MedPAC’s approach to developing payment update recommendations is to account for expected cost changes in the next payment year. This involves reviewing evidence about the likelihood and extent of changes in factors that are expected to affect providers’ costs. One major factor is change in input prices, as measured by the applicable CMS price index. For institutional providers, we use the forecasted increase in an industry-specific index of national input prices, called a market basket index. For physician services, we use a similar index known as the Medicare Economic Index. These indexes approximate how much providers’ costs would rise in the coming year if the quality and mix of inputs they use to furnish care remain constant. Several other factors may also affect providers’ costs in the coming year:

- *Scientific and technological advances*—Many improvements in medical science and technology enhance quality and reduce providers’ costs (or leave costs unchanged). No increase in Medicare’s payment rates is needed to accommodate these changes because providers have a financial incentive to adopt them. But we should consider the effects of

technological advances that improve quality of care and also increase costs, when these effects are substantial and the technologies are broadly disseminated. The Commission monitors industry trends and has informal discussions with industry representatives in each service area. When evidence suggests that one or more technological advances in a specific area are playing an unusually large role in increasing providers’ costs, we may attempt to estimate the cost impact of these advances.

- *Improvements in productivity*—The Commission believes that providers should be able to reduce the quantity of inputs required to produce a unit of service by at least a modest amount each year while maintaining service quality. Productivity gains are often achieved by adopting new technology. We have adopted the long-term growth rate for productivity in the general economy as our standard of expected productivity improvement. Specifically, we use the 10-year average annual change in total-factor productivity as published by the U.S. Bureau of Labor Statistics, which is currently estimated at 0.9 percent.
- *One-time factors*—On occasion, we recommend an adjustment to the update to reflect a one-time factor that has a systematic and substantial effect on costs and will improve care for beneficiaries or is necessary for another reason (such as a legal mandate). Examples of one-time factors the Commission has taken into account in the past include Medicare’s share of the 2000 computer problem and the cost of complying with the Health Insurance Portability and Accountability Act of 1996.

We generally consider the estimate of input price inflation as the most important factor influencing providers’ costs, particularly since the costs of

technological advances and improvements in productivity at least partially offset each other. This focus on inflation also reflects the reality that the costs of new technology and productivity gains are difficult to measure. To the extent that important changes do not get addressed when we update payments in a given year, their effects can be considered in our analysis of payment adequacy in the next cycle.

Special issues in updating payments

This section addresses two special issues that have arisen this year for assessing payment adequacy and updating payments: considering the budget implications of potential changes to current law and considering the impact of technology pass-through payments.

Budget implications

The Commission is aware of—and we document in our report—how spending under our recommendation would compare to that under current law. We begin by developing a list of current law provisions and changes scheduled to go into effect in the coming year, by sector, to illustrate any differences between MedPAC recommendations and present policy. We also develop rough estimates of the impact of recommendations relative to the current budget baseline, placing each recommendation into one of several categories. (Our method of documenting

the budget implications of recommendations is discussed in greater detail in Chapter 1.)

Considering the impact of technology pass-through payments

For hospital outpatient and inpatient payments, Medicare makes additional payments for specific new technologies that have a substantial impact on provider costs. These payments are intended to be temporary, to ensure that Medicare can pay for a new or substantially improved technology during its initial diffusion period and until its effects on providers' costs can be reflected in the payment weights for the affected groups of patients or procedures.⁵ After two to three years, during which necessary coding changes are implemented and charge data are collected from providers, permanent adjustments will be made to the relative payment weights and the temporary payment adjustments stopped.

It may be necessary to take technology pass-through payments into account in the second part of our update framework—the allowance for expected increases in efficient providers' costs. However, the impact of pass throughs on the overall level of payments will depend on whether they have been implemented in a budget neutral fashion.

If the payment adjustments are not budget neutral, which was the case initially with the outpatient pass-through payments, then they will augment the payment

increase provided by the update. This means that any allowance for technological advancement in our update need only consider major technological cost impacts that are outside the scope of the pass-through system. The effect will be greatest in the first years after pass-through payments are implemented, when new technologies are approved for payment adjustments and there are not existing pass-through technologies ready to be folded into the prospective payment system rates. In later years, the impact on aggregate payments each year will be the net of new adjustments added and current adjustments eliminated.

If payments are made budget neutrally, which is the case now for both the outpatient and inpatient pass-through payments, then the net increase in costs resulting from the technologies should be considered in developing payment updates—but only if they are substantial and systematic. The data from the pass-through payments (utilization and payment rate for each technology) may provide useful input into the decision on how the impact of cost-increasing new technologies compares to expected productivity improvement. However, there are several limitations on how well aggregate pass-through payments will represent the overall impact of cost-increasing new technology, such that the data must be used guardedly. A detailed discussion of the treatment of new technology in Medicare's payment systems is presented in Chapter 4 ■.

⁵ These are ambulatory payment classification (APC) groups for outpatient payments and diagnosis related groups (DRGs) for inpatient payments.

SECTION

2 A

**Assessing payment adequacy
and updating payments for
hospital inpatient and
outpatient services**

R E C O M M E N D A T I O N S

2A-1 The Secretary should add 13 DRGs to the post-acute transfer policy in fiscal year 2004 and then evaluate the effects on hospitals and beneficiaries before proposing further expansions.

.....
***YES: 15 • NO: 1 • NOT VOTING: 1 • ABSENT: 0**

2A-2 The Congress should enact a low-volume adjustment to the rates used in the inpatient PPS. This adjustment should apply only to hospitals that are more than 15 miles from another facility offering acute inpatient care.

.....
YES: 17 • NO: 0 • NOT VOTING: 0 • ABSENT: 0

2A-3 The Secretary should reevaluate the labor share used in the wage index system that geographically adjusts rates in the inpatient PPS, with any resulting change phased in over two years.

.....
YES: 16 • NO: 0 • NOT VOTING: 1 • ABSENT: 0

2A-4 The Congress should raise the inpatient base rate for hospitals in rural and other urban areas to the level of the rate for those in large urban areas, phased in over two years.

.....
YES: 17 • NO: 0 • NOT VOTING: 0 • ABSENT: 0

2A-5 The Congress should raise the cap on the disproportionate share add-on a hospital can receive in the inpatient PPS from 5.25 percent to 10 percent, phased in over two years.

.....
YES: 15 • NO: 1 • NOT VOTING: 1 • ABSENT: 0

2A-6 The Congress should increase payment rates for the inpatient PPS by the rate of increase in the hospital market basket, less 0.4 percent, for fiscal year 2004.

.....
YES: 17 • NO: 0 • NOT VOTING: 0 • ABSENT: 0

2A-7 The Congress should increase payment rates for the outpatient PPS by the rate of increase in the hospital market basket, less 0.9 percent, for calendar year 2004.

.....
YES: 17 • NO: 0 • NOT VOTING: 0 • ABSENT: 0

***COMMISSIONERS' VOTING RESULTS**

SECTION 2A

Section 2A: Assessing payment adequacy and updating payments for hospital inpatient and outpatient services

The Commission finds that Medicare payments for all hospital services are at least adequate as of fiscal year 2003, even after accounting for legislated changes. Our conclusion is based on an estimated overall Medicare margin of 3.9 percent for 2003; broad indicators such as access to capital; and factors affecting costs in the coming year such as inflation and technological advances. We recommend an update of market basket minus 0.4 percent for inpatient services, but because technological advances affecting outpatient services are frequently handled through new technology provisions, we recommend a lower outpatient update—market basket minus 0.9 percent. We view our inpatient update as part of a package that includes five other policy changes aimed at appropriately distributing payments: extending the post-acute transfer policy; implementing a low-volume adjustment; reevaluating the labor share used with Medicare’s wage index; eliminating the differential in base rates for hospitals in rural and small urban areas; and increasing the cap on disproportionate share payments. In addition, we are not satisfied with the current indirect medical education adjustment because it provides payments well above the empirically justified level without accountability, and we will explore ways to target these payments to advance specific Medicare policy objectives.

In this section

- Assessing payment adequacy
- Policies affecting the distribution of payments
- Update for inpatient services
- Update for outpatient services

In this section of Chapter 2, we present the Commission’s analysis of Medicare payments for hospital services, together with seven recommendations on inpatient and outpatient payments. As background, we begin with an overview of the services hospitals provide to Medicare beneficiaries and of Medicare spending on these services. We also describe Medicare’s inpatient and outpatient prospective payment systems (PPSs), which account for the bulk of Medicare spending on hospital services.

Next, we analyze the adequacy of Medicare payments for *all* hospital services—inpatient, outpatient, and other services—in fiscal year 2003. We then discuss the Commission’s findings and recommendations for Medicare payments to hospitals under the inpatient PPS for patients transferred from inpatient hospital to post-acute settings, the indirect medical education (IME) adjustment for the costs of teaching hospitals, and payments to rural hospitals. Finally, we present MedPAC’s recommendations for updates to Medicare’s hospital inpatient and outpatient PPS payment rates.

Background

Hospitals provide a variety of services to Medicare beneficiaries, but the bulk of Medicare spending on hospitals is for inpatient and outpatient care. Each year, approximately one-fifth of Medicare beneficiaries receive hospital inpatient care, and one-half receive care in hospital outpatient departments. Medicare purchases these and other services from over 4,800 short-term general hospitals that meet its conditions of participation and agree to accept the program’s payment rates as full payment.

The services hospitals provide

Short-term general hospitals provide Medicare beneficiaries with inpatient care for the diagnosis and treatment of acute conditions and manifestations of chronic conditions. They also provide ambulatory care through outpatient departments and emergency rooms. Many hospitals provide home health, skilled nursing

facility (SNF), and rehabilitation services following surgery or an inpatient stay for medical care, and many also furnish psychiatric care.

Medicare spending on hospitals

In 2000, about three-fourths of Medicare payments to hospitals were for inpatient care and about one-seventh was for outpatient care, including emergency room services (Figure 2A-1). Most of the remaining Medicare payments went for home health care, care provided by SNFs, and care provided by hospital units exempt from the inpatient PPS.

Total hospital spending grew 8.3 percent in 2001 after increasing 5.8 percent in 2000. CMS estimates that hospital inflation increased 3.2 percent in 2001 after growth of 2.6 percent in 2000 (Levit et al. 2003). Total Medicare spending for inpatient and outpatient care increased from about \$83 billion in 1992 to \$119 billion in 2001 (Figure 2A-2). These expenditures increased 4.2 percent per year over the period, growing at annual rates of 4.9 percent from 1992 to 1998 and 2.7 percent

from 1998 to 2001. Medicare spent \$86 billion on services paid under the inpatient prospective payment system in fiscal year 2001. The Congressional Budget Office (CBO) projects that PPS inpatient spending will increase at an average annual rate of 6.2 percent from 2002 to 2007.

Medicare’s payment systems for hospital inpatient and outpatient services

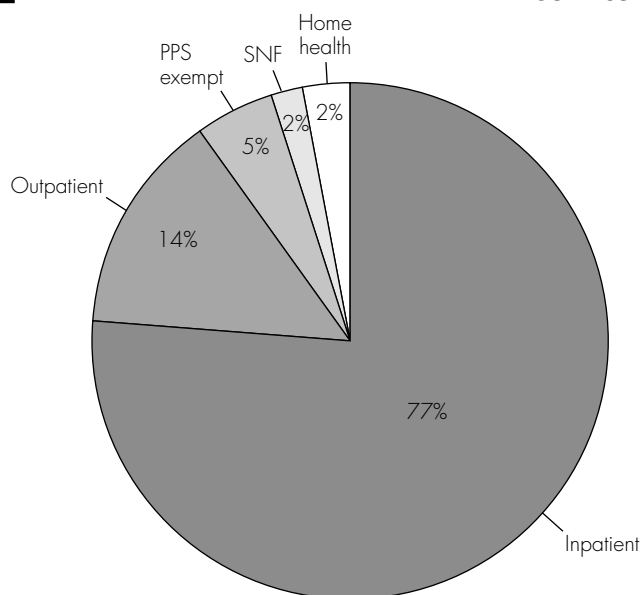
Medicare has used prospective payment for inpatient services since 1984. Medicare introduced prospective payment for hospital outpatient department services (including emergency room services) in 2000.

Medicare’s hospital inpatient PPS

Medicare’s hospital inpatient PPS pays hospitals predetermined amounts per discharge based primarily on the patient’s condition and market conditions in the hospitals’ location. Medicare assigns discharges to diagnosis related groups (DRGs), which group patients with similar clinical problems that are expected to require similar amounts of hospital resources. Separate DRG-based payments apply for operating and capital costs.

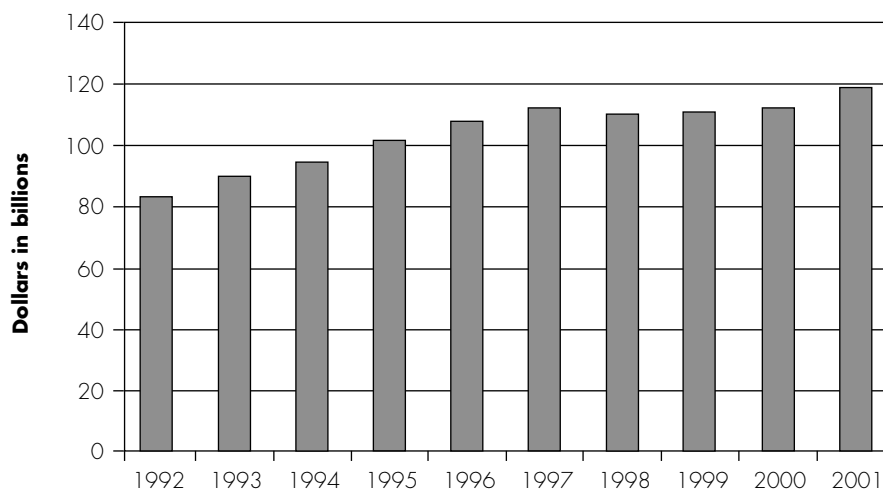
FIGURE 2A-1

Medicare hospital payments by major service line, 2000



Note: PPS (prospective payment system), SNF (skilled nursing facility). PPS exempt units include inpatient psychiatric and rehabilitation services. Data are imputed for hospitals whose cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data from CMS.

**FIGURE
2A-2****Payments to Medicare providers for all hospital inpatient and outpatient services, fiscal years 1992–2001**

Note: Includes inpatient services covered by prospective payment (PPS); PPS-exempt inpatient services (psychiatric, rehabilitation, long-term care, cancer, and children's hospitals and units); outpatient services covered by prospective payment; and other outpatient services. Payments include both program outlays and cost-sharing incurred by beneficiaries.

Source: CMS, Office of the Actuary, 2002.

CMS sets relative weights for 508 DRGs; weights are intended to measure the expected relative costliness for a patient in each DRG compared with costs for the average Medicare patient.¹ The base payment rate reflects the average costliness of Medicare inpatient cases nationwide. The labor share of the base payment amount (71 percent) is adjusted by a wage index to reflect the relative level of input prices in the hospital's local area. The product of the hospital's base payment rate and the relative weight of the DRG to which a patient is assigned is the hospital's DRG payment rate.

The inpatient PPS makes special payments for unusual cases and to hospitals with specific characteristics. These additional adjustments are intended to recognize differences in patient treatment costs or to accomplish a policy goal. Extremely costly cases qualify for outlier payments in addition to the regular DRG payment. An indirect medical education (IME) adjustment accounts for the higher patient care costs of teaching hospitals. The disproportionate share (DSH) adjustment

provides additional payment for hospitals that treat an unusually large share of low-income patients. DRG payments are reduced when a patient is transferred to another PPS hospital, or in some instances to a post-acute care setting. Special payments are made to rural hospitals that qualify as sole community providers, referral centers, or Medicare-dependent hospitals. Additional payments are made for new technologies when PPS payment rates for specific DRGs or cases within DRGs are inadequate.

Medicare's hospital outpatient PPS

By contrast with the inpatient PPS, the outpatient PPS pays hospitals a predetermined amount per service. A hospital receives payment for each inpatient discharge but a separate payment for each service provided during an outpatient encounter. Each service provided to a beneficiary is assigned to 1 of approximately 570 ambulatory payment classification (APC) groups. The APCs group procedures, evaluation and management services, and some drugs used in hospital outpatient departments. Each

APC has a relative weight based on the median cost of the services grouped in the APC. A conversion factor translates relative weights into dollar payment amounts; the outpatient payment rate equals the relative weight for the APC times the conversion factor. The labor portion of the conversion factor (60 percent) is adjusted by the hospital wage index to reflect differences in local input prices.

The outpatient PPS includes five payment adjustments. Pass-through payments for new technologies supplement payments for individual services. These technologies include drugs, biologicals, and medical devices used in the delivery of services. Outlier payments are made for individual services or procedures with extraordinarily high costs relative to the payment rate for the APC. In addition, certain services are assigned to new technology APCs. Hold-harmless payments are made to cancer, children's, and small rural hospitals if their outpatient PPS payments are lower than they would have received under prior policy. Hold-harmless payments to small rural hospitals end in calendar year 2003. Transitional corridor payments, which are also made through 2003, are intended to partially compensate all hospitals for the difference between PPS payments and payments they would have received under previous policy.

Assessing payment adequacy

Each year, MedPAC makes payment update recommendations for hospital inpatient and outpatient services for the coming fiscal year. To inform our recommendations, we consider multiple factors, including the relationship of Medicare's current payments to providers' costs, the appropriateness of providers' current costs, and various market indicators of payment adequacy. MedPAC analysis finds that aggregate Medicare payments for all hospital services provided to beneficiaries are at least adequate as of fiscal year 2003.

¹ There are 527 DRGs in 2003, but 19 of these are no longer used for Medicare payment, leaving 508 DRGs in use.

Financial status of hospitals

Hospitals' general financial health is of concern to the Commission because a severe decline could affect the ability of hospitals to provide high-quality care to Medicare beneficiaries. For that reason, it is important to monitor the impact on hospitals of the payment policies of private and public purchasers of hospital care, as well as measures of hospitals' general financial status.

During the 1990s, increased pressure from private payers on hospitals' revenues was generally credited with producing low growth in hospital costs. In 1998 and 1999, both private payer and Medicare payments fell relative to costs, providing additional pressure to control costs in those years (Figure 2A-3). The situation changed in 2000 when private payments increased relative to costs, while the decline in Medicare payments relative to costs slowed.

The increase in the private-sector payment-to-cost ratio reflects more aggressive negotiations by providers as well as shifts by payers and consumers to less-intrusive approaches to care management. Less-restrictive forms of managed care such as preferred provider organizations (PPOs) have displaced health maintenance organizations (HMOs) as the dominant private insurance models. Plans have responded to consumer demand by establishing broader provider networks. These changes have weakened the bargaining power of plans in dealing with providers—hospitals have been willing to cease contracting with specific plans to avoid price concessions (Strunk 2001).

The total margin for all payers—Medicare, Medicaid, and private payers—reflects the relationship of all hospital revenues to all hospital costs including inpatient, outpatient, post-acute, and nonpatient services. The total margin does not provide a measure of the adequacy of Medicare payments, but it is certainly the most comprehensive measure of hospitals' general financial performance.¹ Data from Medicare cost reports show that the average total margin for the period from 1990 through 2000 was 4.6 percent. After reaching a high of 6.1 percent in fiscal year 1996, the total margin fell to 3.4 percent in fiscal year 2000 (Figure 2A-4).

The decline in total margins appears to have halted in 2002. MedPAC examined data from the American Hospital Association (AHA) on developments since 2000. The AHA annual survey indicates that the total margin fell in 2001 from 4.6 to 4.2 percent (Table 2A-1). However, the national hospital indicators survey, conducted by AHA with funding from the Centers for Medicare & Medicaid Services (CMS) and MedPAC, indicates that this decline had stopped in the first nine months of fiscal 2002. This data source yields a 4.5 percent margin for fiscal years 2001 and 2002. ■

TABLE 2A-1

Trend in hospital total margin, 1998–2002

Fiscal year	Medicare cost report	AHA annual survey	National hospital indicators survey
1998	4.3%	5.8%	4.3%
1999	3.8	4.7	2.7
2000	3.4	4.6	4.7
2001	N/A	4.2	4.5
2002	N/A	N/A	4.5

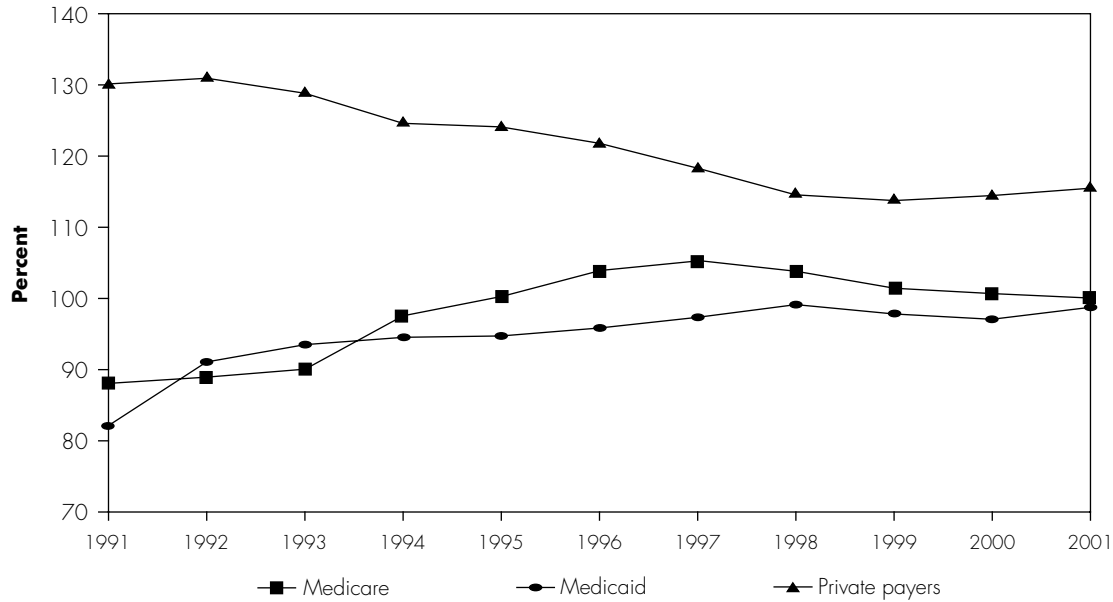
Note: AHA (American Hospital Association). Medicare cost report margins are imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations) and exclude critical access hospitals. The 2002 value for the national hospital indicators survey is based on three quarters of data and is seasonally adjusted.

Source: MedPAC analysis of cost report data from CMS, AHA annual survey of hospitals, and the national hospital indicators survey (sponsored by CMS and MedPAC, conducted by AHA).

¹ There is substantial variation in financial reporting among hospitals and between the Medicare cost report and audited financial statements of individual hospitals. These considerations suggest that comparisons of total margins among hospitals and across data sources should be treated with caution (Kane 2001).

FIGURE 2A-3

Hospital payment-to-cost ratios for Medicare, Medicaid, and private payers, 1991-2001

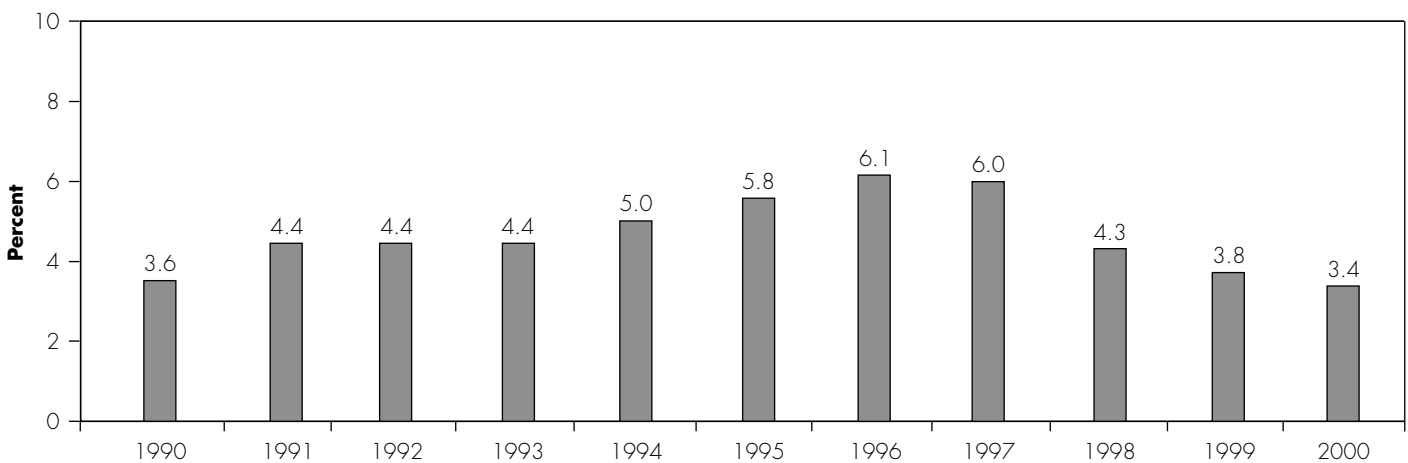


Note: Payment-to-cost ratios indicate the relative degree to which payments from each payer cover the costs of treating that payer's patients. Data are for community hospitals and cover all hospital services. Imputed values were used for missing data (about 35 percent of observations). Most Medicare and Medicaid managed care patients are included in the private payers category.

Source: Medicare analysis of data from the American Hospital Association's annual survey of hospitals.

FIGURE 2A-4

Trend in hospital total margin, 1990-2000



Note: Data are imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data from CMS.

Current payments and costs

One factor the Commission uses to inform its Medicare payment update recommendations for fiscal year 2004 is the estimated relationship between Medicare payments and costs (margins) for fiscal year 2003. Separate margins can be calculated for inpatient, outpatient, and all services provided to Medicare beneficiaries. We use the latest cost report data available (fiscal year 2000) from hospitals as the cost and payment base, and then estimate margins in fiscal year 2003 by projecting cost and payment increases from fiscal years 2000 to 2003. This involves applying payment updates in current law and modeling payment policy changes, including those scheduled to take effect in fiscal year 2004. We compare payments to costs in fiscal year 2003 assuming that all provisions of current law for fiscal year 2004 are in effect except the inpatient and outpatient updates.

Inpatient and outpatient Medicare margins

The inpatient and outpatient margins reflect payments and costs for services covered under Medicare's hospital inpatient PPS and all outpatient services, respectively.² The inpatient margin is overstated and the outpatient margin understated because of the way hospitals allocate their costs between these two settings. This variation results from accounting practices introduced when Medicare paid prospectively determined payments for inpatient services but paid for outpatient and other services at cost. Research for the Health Care Financing Administration (HCFA, now CMS) found that outpatient costs might be overstated by 15 to 20 percent (CHPS Consulting 1994).³ This implied that inpatient costs were understated by 3 to 4 percent. Costs for the other components of hospital services are overstated for similar reasons,

implying a small additional understatement on the inpatient side.

From 1999 to 2000, hospital inpatient margins declined from 12.3 to 10.8 percent, and outpatient margins increased from -16.4 to -13.7 percent (Table 2A-2). These changes were accompanied by increases in the PPS-exempt and home health margins and almost no change in the skilled nursing facility margin.

Overall Medicare margin

The overall Medicare margin incorporates payments and costs for inpatient, outpatient, skilled nursing, home health, psychiatric, and rehabilitative services for Medicare beneficiaries, as well as graduate medical education and Medicare bad debts.⁴

The overall margin is available since 1996 and the inpatient margin since 1984.

Inpatient payments comprise approximately three-fourths of total Medicare payments to PPS hospitals. As a result, the overall margin follows a trend similar to that of the inpatient margin (Figure 2A-5). The inpatient margin increased steadily from 1991 through 1997. The overall margin increased as well, reaching a high point of 10.4 percent in 1997.

The overall Medicare margin was 5.1 percent in 1999 and 5.0 percent in 2000. We estimate that the overall Medicare margin will be 3.9 percent in 2003 (Table 2A-3). The overall margin of major teaching hospitals increased between 1999 and 2000 but is expected to decline in 2003, largely because of the scheduled reduction in IME payments. The overall margin of rural hospitals declined from 1999 to 2000. It is expected to increase by 2003, in part because of the increase in disproportionate share payments implemented in 2001 through the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA).

**TABLE
2A-2**

Overall Medicare margin and margin by major service line, 1999-2000

Service	1999	2000
Inpatient	12.3%	10.8%
Outpatient	-16.4	-13.7
PPS-exempt	-1.8	0.6
Skilled nursing facility	-55.9	-57.4
Home health	-13.1	-9.9
Overall	5.1	5.0

Note: PPS (prospective payment system). Data are based on Medicare-allowable costs. Margins are imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals. PPS-exempt includes inpatient psychiatric and rehabilitation services. Payments and costs for graduate medical education are included in the overall Medicare margin but not in the other margins.

Source: MedPAC analysis of Medicare cost report data from CMS.

Appropriateness of current costs

In general, we find that the hospital cost base as of fiscal year 2003 is appropriate. A number of factors put downward pressure on costs in the late 1990s and 2000, so that hospital costs were constrained. Large reductions in length of stay occurred in the mid-1990s, and revenue pressure from both private and public payers increased in 1998 and 1999. Declining interest rates reduced costs and improved hospital access to capital. However, as length-of-stay decline slowed, revenue pressure moderated, and wage pressures emerged, Medicare cost-per-case growth increased in 2001.

The most direct indicator of the appropriateness of the hospital cost base is growth in Medicare inpatient cost per case

2 Outpatient margins encompass all outpatient services, not just outpatient PPS services. This approach provides consistency over time and reflects the fact that cost reporting periods for some hospitals span the implementation of the new payment system in August 2000.

3 The final report of HCFA's study contains a series of DRG-specific values, rather than a national figure for outpatient cost overstatement. However, the study's principal investigator has estimated that the national figure is between 15 and 20 percent.

4 Because of data limitations, small amounts spent on certain other services, such as ambulance and hospice, are not reflected in the overall Medicare margin.

over time. Growth in hospitals' Medicare cost per case was modest—less than the increase in the hospital market basket—from 1993 through 1998. From 1994 to 1996, cost-per-case growth was negative. This is partly because from 1990 to 1999 hospitals reduced Medicare length of stay about 33 percent, resulting in lower resource use. In an earlier study, MedPAC found that during the period of the largest length-of-stay reductions, each percentage point drop in length of stay resulted in a corresponding 0.8 percent drop in real costs per case (Ashby et al. 2000).

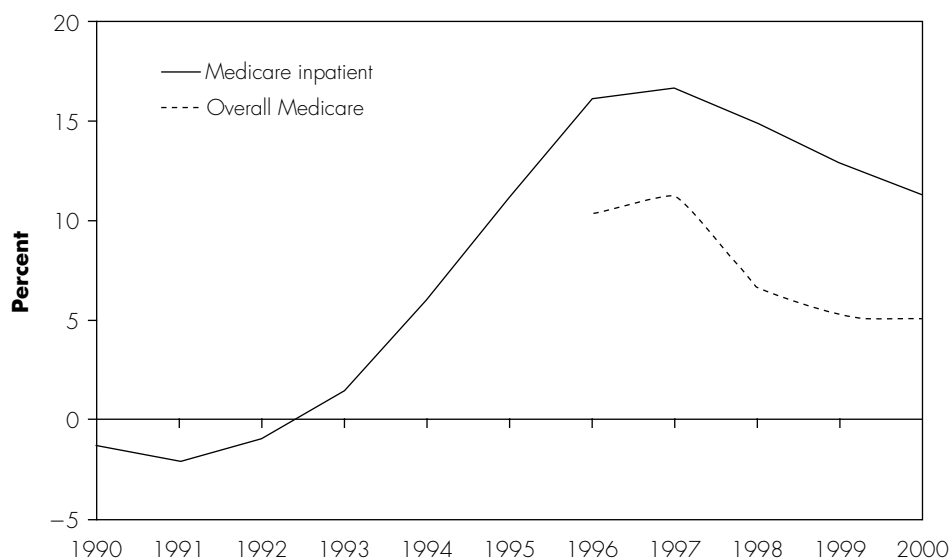
Cost-per-case growth began to accelerate at the end of the 1990s as the decline in length of stay slowed. Length of stay for all hospital inpatients has continued to fall, though at a more moderate rate, with declines of 1.8 percent in fiscal year 1999, 1.9 percent in 2000, and 1.3 percent in 2001. Similarly, the reductions in Medicare length of stay of 1.3 percent in 1999 and 1.9 percent in 2000 trailed annual declines exceeding 5.5 percent from 1993 through 1996.

Wages are the largest component of the hospital market basket. As a result, recent wage growth has contributed significantly to higher overall cost growth. Shortages of specific occupational groups, such as nurses, pharmacists, and therapists, have contributed to this greater wage pressure. Hospital industry wages rose more rapidly than wages in the general economy in 2001 and 2002, reversing a trend of slower hospital wage growth from 1994 to 2000. The employment cost index (ECI) for wages and salaries of hospital workers increased 5.4 percent compared with an increase of 3.6 percent for all workers in fiscal year 2001, and continued at 4.4 percent for hospital workers and 3.2 percent for all workers in fiscal year 2002.⁵

Efforts by private payers to exact price concessions from hospitals have moderated as the expansion of less-intrusive forms of managed care has increased the bargaining power of

FIGURE 2A-5

Trend in Medicare inpatient and overall Medicare margin, 1990–2000



Note: Data are based on Medicare-allowable costs and imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals. Overall Medicare margin covers the costs and payments of hospital inpatient, outpatient, psychiatric and rehabilitation (prospective payment system exempt), skilled nursing facility, and home health services, as well as graduate medical education. Data on overall Medicare margin are unavailable before 1996.

Source: MedPAC analysis of Medicare cost report data from CMS.

TABLE 2A-3

Overall Medicare margin by hospital group, 1999–2003

Hospital group	1999	2000	Estimated 2003
All hospitals	5.1%	5.0%	3.9%
Large urban	8.4	8.4	6.9
Other urban	3.3	2.9	1.7
Rural	-2.5	-2.9	-1.9
Major teaching	13.7	14.9	12.7
Other teaching	5.7	5.0	3.8
Nonteaching	0.1	-0.2	-0.6

Note: Data are based on Medicare-allowable costs. Margins are imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals. Projections for 2003 reflect the effects of all policy changes implemented between 2000 and 2003, plus policy changes other than updates that are scheduled under current law to go into effect in 2004.

Overall Medicare margin covers the costs and payments of hospital inpatient, outpatient, psychiatric, rehabilitation, skilled nursing facility, and home health services, as well as graduate medical education.

Source: MedPAC analysis of Medicare cost report and market basket data from CMS, American Hospital Association (AHA) annual survey of hospitals, and the national hospital indicators survey (sponsored by CMS and MedPAC, and conducted by AHA).

5 Growth in the ECI for wages and salaries of hospital workers is reflected in the market basket, which leads to higher payments under both the inpatient and outpatient PPSs.

providers in their dealings with insurers (Levit et al. 2003).

One measure of hospital cost growth that is available for 2001 is the change in cost per adjusted admission from the American Hospital Association's annual survey of hospitals. It measures costs for all inpatient and outpatient services for all payers. Cost per adjusted admission rose 4.7 percent in 2001—the most rapid increase since 1992—reflecting the stabilizing length of stay and greater wage pressures discussed above.

Relationship of payments and costs

We next assess the relationship between payments and an appropriate cost base. In doing this, we consider measures of the volume of hospital services, entry and exit of providers, access to capital, and beneficiary access to care. We conclude that current payments are at least adequate.

Changes in volume

Substantial increases in volume could indicate that payment rates are too high, and decreases that payment rates are too low. The trend in hospital volume also has implications for the appropriateness of costs. If volume increases, hospitals should have more cases over which to spread fixed costs, which will reduce per-unit cost.

We measure hospital volume by total admissions, total days of care, and total outpatient visits. The volume of hospital services has grown strongly in recent years. The total number of hospital admissions grew a cumulative 6.1 percent from 1990 through 2000 despite falling from 1990 to 1994. According to the American Hospital Association annual survey, total admissions grew by 1.7 percent in 1999, 2.3 percent in 2000, and 2.2 percent in 2001. Medicare discharges grew even more rapidly, by 1.9 percent in

1999, 4.2 percent in 2000, and 3.2 percent in 2001.

Large declines in length of stay and modest admissions growth combined to reduce total inpatient days at community hospitals by 15 percent from 1990 to 1998. Stabilizing length of stay and faster admission growth have since turned this reduction around, with an increase of 1.4 percent from 1998 to 2001 to about 195 million days.

Total outpatient visits have increased steadily over 20 years. Total outpatient visits to community hospitals, including emergency visits, increased 73 percent from 1990 to 2000. Growth continued in 2001, with an increase of 3.3 percent over 2000 to almost 540 million visits.

Entry and exit of providers

Significant changes in the number of providers can indicate the relative health of the hospital market. If payments are too low, some providers may be forced to close; if payments are too high, more providers than are necessary for access may enter the field. Because Medicare is such a large purchaser of hospital services, entry and exit could be influenced by Medicare payment policy.

As the volume of patient days declined through the 1990s, a small number of hospitals closed each year. From 1990 to 2000, there was a net reduction of 469 community hospitals across the country. This reduced the total supply of beds by about 10 percent. Closed hospitals tend to be in areas with low levels of demand for hospital services. At the same time, a smaller number of hospitals opened each year in areas with excess demand. In 1999 through 2001, the number of closures averaged 56 per year, with an average of 21 openings or reopenings (OIG 2002, AHA 2002). In 2002, 52 short stay hospitals ended their participation in Medicare while 42 were accepted in the program.⁶

Hospitals that closed in 2000 had low occupancy rates. Closed urban hospitals were smaller in size than urban hospitals nationally and had lower occupancy. Closed rural hospitals were the same average size as all rural hospitals with modestly lower occupancy rates.

The Office of Inspector General (OIG) of the Department of Health and Human Services found that hospital closures in 2000 generally had modest effects on access to care. Rural hospitals that closed had an average of 23 patients each day in the year before closure, whereas closing urban hospitals had an average of 70 patients. Inpatient care was available within 20 miles of 86 percent of rural hospitals that closed and all urban hospitals that closed. While 24-hour emergency services sometimes disappeared when hospitals closed, patients in 73 percent of rural closures and 91 percent of urban closures still had emergency services within 10 miles of the closed facility.

Despite hospital closures, increased volume of hospital services—in both admissions and total days—supports the conclusion that the capacity of the hospital industry remains adequate.

Access to capital

Access to capital is necessary for hospitals to maintain and modernize their facilities and capabilities for patient care. An inability to access capital that was widespread throughout the sector might indicate inadequate payments. Borrowing by hospitals was strong in 2002, indicating good access to capital. Long-term borrowing by acute care hospitals reached \$20.0 billion in 2002, an increase of 7.3 percent over 2001.⁷ Because about 85 percent of nongovernment short-term acute care hospitals are nonprofit, the level of borrowing is a strong indicator of access to capital for the hospital industry.

Hospitals obtain capital through equity markets (in the case of for-profit hospitals), bond markets, bank lending, receivables financing, and cash flow. The

6 MedPAC analysis of CMS data on number of new participating hospitals, January 2002 to December 2002.

7 MedPAC analysis of data on general acute care long-term bond issuance, Thomson Corporation, January 28, 2003.

outlook for the health care sector remained favorable in 2002. Stock of investor-owned hospital firms generally performed better than the overall stock market in both 2001 and 2002. Wall Street analysts predict continuing financial health for the investor-owned firms attributable to healthy volume growth and high private sector payments (Merrill Lynch 2003).

For those hospitals that are able to borrow on the bond market, access to capital is good. The ability of hospitals to borrow is strongly affected by the bond ratings they receive from credit rating agencies. Better ratings reduce the interest expenses hospitals must incur to raise capital while lower ratings increase them. Hospital bond downgrades exceeded upgrades each year from 1999 through 2001. In 2002, downgrades exceeded upgrades by less than in 2001, indicating easier access to capital for hospitals. Among bond issues rated by Moody's, there were 1.9 downgrades of health care bonds for every upgrade in 2002. This was an improvement compared to 2.5 downgrades for every upgrade in 2001. Fitch Ratings reported a 4:1 ratio of downgrades to upgrades in 2002 for the acute-care bond issues it rated. This was an improvement over 2001, when there were nine downgrades for every upgrade (Fitch 2003). However, these ratios mask the dollar volume of these ratings, which shows the opposite picture. The dollar volume of upgrades exceeded downgrades by 80 percent in 2002, while the volume of downgrades exceeded upgrades by 80 percent in 2001 (Moody's 2003).

Two events in 2002 led to investor concern about hospital finances. These were the difficulties of Tenet Healthcare and the bankruptcy of National Century Financial Enterprises (NCFE). In October, Tenet disclosed unusually large Medicare payments for outliers under the inpatient PPS. The Department of Health and Human Services announced an audit of outlier payments for all hospitals.

NCFE is a privately held company that provided financing to a variety of health care providers in exchange for the providers' receivables. It packaged the receivables and sold bonds based on them to raise capital and pay for more receivables. The company halted payments to its health care provider clients in October and filed for bankruptcy protection in November.

Although these events received significant publicity and had major repercussions on selected stock prices and bond ratings, neither one was expected by Wall Street to overshadow access to capital for the hospital sector as a whole for long. Wall Street analysts see factors such as admissions growth and pricing as the most important determinants of the financial status of investor-owned hospitals.

Expansion of for-profit chains in rural or small urban areas may indicate good access to capital. These firms have expanded by acquiring nonprofit hospitals that reportedly have not been able to make themselves attractive to patients. This may be a symptom of inability of these small hospitals to obtain capital, suggesting that access is constrained. Conversely, the ability of for-profit chains to acquire these hospitals hinges on their ability to enter the capital markets, suggesting that access is good. This contrast illustrates that the capital markets make distinctions among hospitals regarding their financial viability as one would expect in a properly functioning market.

Overall, the trends in the equity and bond markets indicate that both for-profit and nonprofit hospitals have sufficient access to capital if they are financially viable.

Beneficiary access to care

If payments for Medicare services are too low and providers are forced to exit the market, some Medicare beneficiaries may experience problems with access to care. Access to hospital services does not appear to be a problem for most Medicare beneficiaries.

Most hospitals typically have low occupancy rates—the national average occupancy rate was 64.4 percent in 2001. This suggests that hospitals have the capacity to treat Medicare patients. Reports of diversions of ambulances from overburdened emergency rooms and evidence of shortage of emergency department capacity in some areas, however, suggest that in a few instances hospitals may be unable to provide some services sought by beneficiaries. But it is not clear that these problems are related to the level of Medicare payments. Any capacity problems that exist may be aggravated by shortages of nurses and other health care personnel as well as rising malpractice premiums (see Chapter 3).

Medicare beneficiaries in rural areas face challenges with access to hospital services because of longer distances between hospitals, but MedPAC found that use of health services is not lower in rural areas than in urban areas (MedPAC 2001a). Medicare has addressed issues of supply of inpatient care in rural areas with the critical access hospital (CAH) program. CAHs are paid their current Medicare allowable costs for inpatient and outpatient services. The CAH program requires a hospital to be located in an isolated area without another nearby provider, or to be designated as an essential provider in a state health plan. The program has grown rapidly from 375 hospitals in April 2001 to 725 in January 2003.⁸

Policies affecting the distribution of payments

In this section, we discuss six components of the inpatient PPS that we believe could be modified to improve the distribution of payments. For the first component, we recommend extending the post acute transfer policy to 13 additional DRGs (Recommendation 2A-1). For the second one, we discuss the need to explore ways

8 MedPAC analysis of data on critical access hospitals, January 30, 2003.

to target the portion of indirect medical education payments above the empirically justified level to advance specific policy objectives within the Medicare program. Finally, we reissue four previous recommendations designed to improve payments to rural hospitals (Recommendations 2A-2 through 2A-5). These would implement a low-volume adjustment, reevaluate the labor share used in adjusting inpatient payments for geographic differences in input prices, eliminate the differential in base payment rates for hospitals in rural and small urban areas, and raise the cap on disproportionate share payments for rural hospitals.

Inpatient payments for cases transferred to other settings

When hospitals discharge patients to another care setting, some of the care furnished in the other setting may substitute for services that otherwise would have been provided during the hospital inpatient stay; thus the hospital is furnishing a product that does not include the full course of care implied by the diagnosis related group (DRG) payment. Under the inpatient PPS, Medicare treats all cases discharged from the hospital to another PPS hospital with shorter than average stays as partial cases, paying a per diem rate for each day, up to the full DRG amount. Starting in 1999, policymakers expanded the inpatient transfer payment policy to include cases in 10 DRGs that are discharged to post-acute care settings after shorter than average inpatient stays.

The incentives created by Medicare's inpatient transfer payment policy are consistent with the goal of paying efficient providers' costs, and the Commission has previously stated that this policy should be maintained (MedPAC 2000a). The transfer payment policy helps to link acute and post-acute payment systems by adjusting inpatient payments when a

portion of care is shifted to another setting where Medicare also pays for the beneficiaries' care. This policy also improves hospitals' financial incentives to provide quality care. By matching payments more closely to the incremental costs of each day of care, the transfer policy helps to diminish the influence of financial considerations on hospitals' clinical decision-making. The transfer policy also adjusts payments to reflect the circumstances faced by individual hospitals, recognizing that hospitals may have different access to post-acute care services; thus, payment reductions are targeted only to hospitals that discharge patients to post-acute care with short stays.

The Balanced Budget Act of 1997 (BBA) expanded Medicare's transfer payment policy. Before 1997, Medicare considered a case to be a transfer only if an inpatient was discharged from one PPS hospital and immediately admitted to another PPS hospital.⁹ Under the BBA, transfers also include inpatients in selected DRGs who are discharged from a PPS hospital either to a skilled nursing facility (SNF), to a PPS-exempt hospital or unit (i.e., a rehabilitation hospital or unit, psychiatric hospital or unit, long-term care hospital, cancer hospital, or children's hospital), or with a written plan for home health care that starts within three days of discharge and is related to the condition or diagnosis that accounted for the inpatient stay.¹⁰

A number of factors probably entered into the Congress' decision in 1997 to expand Medicare's inpatient transfer payment policy to include discharges from PPS hospitals to PPS-exempt hospitals and other post-acute care settings. At the time the Congress was considering this policy, data showed that Medicare beneficiaries' average inpatient length of stay had dropped substantially—22 percent between 1990 and 1995 (Prospective Payment Assessment Commission

[ProPAC] 1997a). In addition, the drop in beneficiaries' average length of stay was accompanied by dramatic growth in use of and spending for post-acute care by Medicare beneficiaries (ProPAC 1997b). Furthermore, hospitals' Medicare inpatient margins had risen to record levels. The conference report accompanying the BBA noted that the conferees were concerned that Medicare might in some cases be overpaying hospitals for patients who were transferred to a post-acute setting after a very short acute care hospital stay (U.S. House of Representatives 1997).

Analysis by MedPAC and by ProPAC, its predecessor, showed that declines in inpatient lengths of stay were greatest for DRGs in which post-acute care use was most prevalent (MedPAC 1998). Furthermore, hospitals operating post-acute care facilities discharged their patients one day sooner on average than hospitals without such facilities, and their patients used post-acute care about 10 percent more frequently than patients of hospitals without such facilities (ProPAC 1996).

These trends in inpatient length of stay were consistent with the financial incentives of Medicare's hospital inpatient PPS. When the inpatient PPS began in 1984, relatively few patients were discharged to post-acute care. Prospective payments provided hospitals with a strong financial incentive to shorten the length of hospital stays; and the growth in the availability and capabilities of post-acute care providers allowed hospitals to shift some of the care once provided during inpatient hospital stays to SNFs and other post-acute care settings.

CMS's implementation of Medicare's inpatient transfer policy following the BBA, the current operation of the transfer policy, and a proposal for CMS to apply the policy more broadly are discussed

9 Discharges to hospitals excluded from Medicare's inpatient PPS because they participated in a statewide cost control program were also considered transfers. Recently, this policy has affected only discharges from PPS hospitals to acute-care hospitals located in Maryland.

10 Discharges to hospital swing beds, which are designated beds in small rural acute care hospitals that can be used for acute or skilled care, are not counted as transfers. CMS considered treating discharges to swing beds as transfers in the proposed rule for implementing the expanded transfer policy, but withdrew this proposal in the final rule in response to comments.

below. Although Medicare beneficiaries' post-acute care use has grown relatively little in recent years, the shift of services from inpatient to post-acute settings continues. Medicare's inpatient transfer policy is intended to adjust payments to hospitals for inpatient services to reflect this shift of services from inpatient to post-acute settings. So far, however, the policy has been implemented for only 10

DRGs. Consequently, Medicare still overpays hospitals for inpatient services when they discharge patients in other DRGs to post-acute care after very short stays. This is particularly true for the 13 DRGs with high use of post-acute care services. For that reason, the Commission recommends extending the policy to these 13 additional DRGs next year (Table 2A-4).

Implementation of Medicare's inpatient transfer policy

CMS implemented Medicare's expanded inpatient transfer payment policy in fiscal year 1999. To comply with the law, the Secretary selected 10 DRGs in which inpatient cases would be considered transfers if they met certain statutory criteria. The Secretary was authorized by the BBA to expand the list of DRGs

**TABLE
2A-4**

Hospital cases under Medicare's inpatient transfer payment policy currently and under proposed expansion

DRG Title	Number of cases	Percent of cases discharged to post-acute care	Percent of transfer cases with short stays	Percent of all cases in DRG that are short-stay transfers
DRGs under current policy				
14 Specific cerebrovascular disorders except transient ischemic attack	302,095	51.8%	22.1%	11.5%
113 Amputation for circulatory system disorders, except upper limb and toe	39,267	71.4	45.2	32.3
209 Major joint and limb reattachment procedure of lower extremity	356,891	76.7	28.7	22.0
210 Hip and femur procedures except major joint age > 17 with CC	115,722	81.9	28.1	23.0
211 Hip and femur procedures except major joint age > 17 without CC	30,572	79.8	21.7	17.3
236 Fractures of hip and pelvis	37,919	67.3	12.3	8.3
263 Skin graft and/or debridement for skin ulcer or cellulitis with CC	22,919	61.9	40.8	25.3
264 Skin graft and/or debridement for skin ulcer or cellulitis without CC	3,711	50.5	37.0	18.7
429 Organic disturbances and mental retardation	25,373	58.4	31.4	18.3
483 Tracheostomy except for face, mouth, and neck diagnoses	40,954	52.5	47.5	24.9
Total for 10 DRGs	975,423	67.2	27.8	18.7
DRGs under proposed expansion				
12 Degenerative nervous system disorders	47,929	56.2	30.9	17.4
79 Respiratory infections and inflammations age > 17 with CC	158,062	49.6	29.8	14.8
80 Respiratory infections and inflammations age > 17 without CC	8,019	42.7	25.2	10.8
107 Coronary bypass with cardiac catheterization	79,444	42.7	35.8	15.3
109 Coronary bypass without PTCA or cardiac catheterization	54,830	38.9	25.5	9.9
148 Major small and large bowel procedures with CC	123,995	39.2	31.3	12.3
149 Major small and large bowel procedures without CC	18,498	15.4	22.3	3.4
239 Pathological fractures and musculoskeletal and CT malignancy	45,479	53.6	25.2	13.5
243 Medical back problems	88,618	40.9	9.7	4.0
320 Kidney and urinary tract infections age > 17 with CC	184,099	44.0	26.9	11.9
321 Kidney and urinary tract infections age > 17 without CC	29,862	29.0	17.4	5.0
415 OR procedure for infectious and parasitic diseases	37,974	53.6	36.6	19.6
468 Extensive OR procedure unrelated to principal diagnosis	57,861	43.6	27.5	12.0
Total for 13 additional DRGs	934,670	44.0	27.5	12.1
All other DRGs	8,902,789	25.1	17.7	4.4
All DRGs	10,812,882	30.5	20.9	6.4

Note: DRG (diagnosis related group), CC (complication or comorbidity), PTCA (percutaneous transluminal coronary angioplasty), CT (connective tissue), OR (operating room). Short stays are those that are more than one day less than the geometric mean length of stay for the DRG. Percentages may be inexact because of rounding.

Source: MedPAC analysis of 2001 MedPAR data from CMS.

beginning in fiscal year 2001, but, in conjunction with the Balanced Budget Refinement Act of 1999 (BBRA), she decided to delay any expansion by at least two years.

The Secretary considered expanding the transfer policy to encompass DRGs beyond the original 10 in the proposed rule on Medicare's inpatient prospective payments for fiscal year 2003 (CMS 2002b). In the final rule the Secretary decided to defer a decision about expanding the policy until 2004. Commenters raised many issues regarding the impact of expanding the policy that need to be considered carefully before proceeding, and the Secretary stated that the limited time between the close of the comment period and the required publication date for the final rule was not sufficient for analyzing and responding to all the points raised. CMS plans to continue research to assess whether expansion of the policy to additional DRGs is warranted for fiscal year 2004 or subsequent years (CMS 2002a).

Medicare's current inpatient transfer payment policy

For transfer cases with hospital lengths of stay substantially shorter than the national average for the DRG, Medicare pays hospitals a per diem rate up to the full DRG payment—which is reached when the length of stay is one day less than the geometric mean length of stay for the DRG.¹¹ The per diem amount equals the full per discharge payment for the DRG divided by its national geometric mean length of stay. Hospitals receive twice the per diem amount for the first day of care and the per diem amount for all subsequent days up to the full DRG payment. Very expensive cases may qualify for outlier payments as well.

The Secretary may provide a modified per diem payment for DRGs in which a substantial portion of the cost of care is incurred in the early days of the stay. This ensures that the transfer payment will

cover the full cost of care for these cases. By law, the modified payment may be no more than the average of the payment under the basic transfer policy and the full DRG payment. Currently, this modified transfer payment is provided in 3 of the 10 DRGs affected by the transfer policy; all 3 are surgical DRGs. In these instances, hospitals receive half the full DRG payment plus a single per diem payment for the first day of care. They then receive half of a per diem payment for all subsequent days of care up to the full DRG payment for the case.

In selecting the 10 DRGs originally authorized for the expanded transfer policy, the Secretary chose DRGs with a large number of discharges to post-acute care and a high rate of post-acute care use (Table 2A-4). More than half the cases in each of these DRGs were discharged to post-acute care settings. In these 10 DRGs, as in most DRGs, the patients who use post-acute care tend to have longer than average inpatient stays. For example, patients who are transferred to post-acute care settings in DRG 14 (strokes) have average acute inpatient stays of 6.8 days, which is 2.1 days higher than the national geometric mean length of stay for all cases in this DRG (Figure 2A-6). Since Medicare's transfer policy applies only to transfer cases with lengths of stay that are more than one day shorter than the national geometric mean for the DRG, patients transferred to post-acute care settings are affected only when their stays are several days shorter than those typical of post-acute care users.

Proposals to expand Medicare's inpatient transfer payment policy

CMS, as part of the proposed rule for Medicare's hospital inpatient PPS for fiscal year 2003, considered two options for expanding the transfer policy to encompass additional DRGs:

- *Expansion of the policy to some additional DRGs.* Under one option

CMS would apply the inpatient transfer payment policy to 13 additional DRGs with high rates of transfers to post-acute care settings (similar to the initial group of 10 DRGs).

- *Expansion of the policy to all DRGs.* Under the second option, CMS would apply the inpatient transfer policy to all DRGs.

As discussed below, we believe that the weight of evidence supports expanding Medicare's inpatient transfer payment policy beyond the original 10 DRGs. Because expanding the policy to all DRGs might reduce PPS payments to some hospitals by as much as 4 percent, we recommend that the policy be extended initially to 13 additional DRGs, with the effects of this expansion evaluated before extending the policy to more DRGs.

Why the expanded transfer policy is needed

Medicare's inpatient PPS is intended to encourage providers to seek more efficient ways to furnish high-quality care to its beneficiaries. In many instances, substituting less costly post-acute care services for more expensive inpatient care may provide a more efficient overall episode of care of comparable quality. As long as this is true and Medicare's payment policies adapt appropriately, it is in everyone's interest to promote such changes in the quantity and mix of services furnished across care settings.

There would be no need to broaden Medicare's inpatient transfer payment policy if all of the observed increases in the use of post-acute care represented additional care, or if the substitution of post-acute care for inpatient care were occurring roughly similarly across all DRGs and hospitals. In the latter case, the payments could adjust to reflect this through the update. Available evidence, however, strongly suggests that observed increases in the use of post-acute care reflect the substitution of post-acute care

11 The geometric mean length of stay provides a more representative measure of the usual length of stay than the arithmetic average when the distribution includes many cases with extremely long stays.

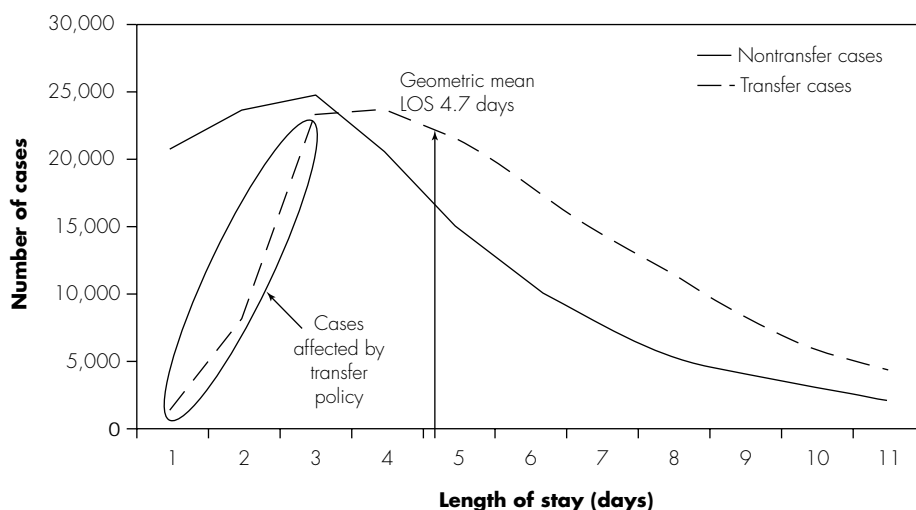
for some inpatient care services, and that the substitution of services differs among DRGs and hospitals. Furthermore, expanding the transfer policy would improve the incentives for providing quality care by reducing the strong financial incentives Medicare's inpatient PPS gives providers to discharge patients to post-acute settings as quickly as possible. Expanding the policy would also improve payment equity among hospitals by accounting for differences in hospitals' short stay post-acute transfer rates.

Shifts in services from inpatient to post-acute settings In recent years, Medicare beneficiaries' average inpatient length of stay has declined, while the number of discharges from inpatient to post-acute care settings has increased. Between 1991 and 2001, Medicare length of stay fell 34 percent and Medicare discharges from PPS hospitals to post-acute care settings increased 49 percent. During this period, Medicare discharges from acute care hospitals to hospitals and units exempt from the inpatient PPS doubled; discharges from acute care hospitals to skilled nursing facilities climbed 65 percent; and discharges from acute care hospitals to home health care increased by 14 percent (Table 2A-5).

Analysis of Medicare hospital inpatient claims also suggests that some of the increase in post-acute care has substituted for inpatient days and related services.¹² One analysis, for example, has shown that length of stay declines were greater in DRGs with high rates of post-acute care use (MedPAC 1998). Another study showed that length-of-stay declines between 1991 and 1998 were greater for post-acute users compared with nonusers—4.5 days and 2.4 days, respectively (Gillman et al. 2000). Further, average length of stay in DRGs with high use of post-acute care dropped 7.1 days for users versus 5.6 days for nonusers.

FIGURE 2A-6

Length of stay distribution for stroke (DRG 14)



Note: DRG (diagnosis related group), LOS (length of stay).
Source: MedPAC analysis of 2000 MedPAR data from CMS.

TABLE 2A-5

Medicare hospital discharges to post-acute care providers, 1991–2001

	Percent of hospital cases		
	1991	1998	2001
PPS exempt hospital or unit	2.7%	4.7%	5.5%
Skilled nursing facility	9.3	15.8	15.3
Home health	8.5	9.7	9.7
Total	20.5	30.2	30.5

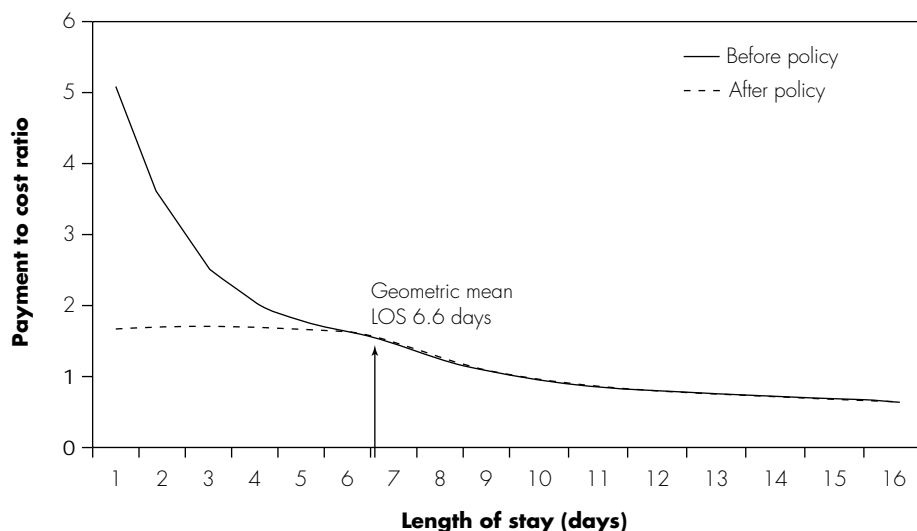
Note: PPS (prospective payment system).

Source: Gillman et al. (2000) and MedPAC analysis of 2001 MedPAR data from CMS.

Analysis of inpatient payments and estimated costs for patients discharged to post-acute care suggests that hospitals incur much lower costs for post-acute care users with very short stays. In the absence of an expanded transfer policy, this can result in large financial gains to hospitals that discharge many patients to post-acute care settings. Although hospitals receive a lower payment for short-stay cases under

the transfer policy, per diem transfer payments still exceed the cost of caring for these cases on average. In DRG 79 (respiratory infections), for example, per diem transfer payments prior to reaching the full DRG payment would exceed estimated daily costs by about 50 percent (Figure 2A-7, p. 48). Almost all other DRGs would have similar outcomes under an expanded transfer policy. In the few

12 Although Medicare beneficiaries' use of post-acute care has not been growing rapidly since 1998, the substitution of post-acute services for hospital inpatient care has not yet been fully addressed in the inpatient PPS.

**FIGURE
2A-7****Payment-to-cost ratios for transfer cases before and after transfer policy, respiratory infections (DRG 79)**

Note: DRG (diagnosis related group), LOS (length of stay).

Source: MedPAC analysis of 2001 MedPAR data from CMS.

instances where per diem payments would not cover per diem costs (DRG 107, for example), applying the modified transfer payment method would provide per diem payments well above per diem costs for cases affected by the policy.

Thus there is strong evidence that the current payment system overpays hospitals that discharge patients to post-acute settings with shorter than average stays in DRGs where the expanded transfer policy does not apply. The expanded transfer policy provides a mechanism for linking acute and post-acute payments by reducing the overpayment when a portion of the care is shifted to a post-acute setting where Medicare also pays for services. The policy, however, also is necessary to account for differences in hospitals' circumstances, recognizing that access to post-acute services can vary, contributing to different financial outcomes among hospitals.

Post-acute care use patterns among DRGs and hospitals The percentage of cases discharged to post-acute care

settings varies widely among DRGs. Over half of all cases are discharged to a post-acute care provider in 41 DRGs that account for about 12 percent of Medicare discharges. Between 25 and 50 percent of all cases are discharged to post-acute care in another 177 DRGs. In all, more than three-fifths of all Medicare discharges are in DRGs in which at least 25 percent of all cases go on to post-acute care. At the other end of the spectrum, 12 percent of all discharges are in 108 DRGs where less than 10 percent of cases go on to post-acute care.

Transfers to post-acute care are similarly uneven across hospitals. For instance, urban hospitals on average transfer a larger proportion of Medicare cases to post-acute care providers than do rural hospitals—32 percent and 26 percent, respectively (Table 2A-6). Finer breakdowns of urban and rural hospitals show even greater differences in use of post-acute care. Hospitals located in large urban areas (metropolitan statistical areas with over 1 million people) transferred 34 percent of their cases to post-acute care, compared with only 20 percent for rural

hospitals with less than 50 beds that do not currently receive special treatment under Medicare.

Regional disparities in the use of post-acute care are even larger. For example, post-acute care transfer rates are twice as high in New England (46 percent) as in the West South Central census division (23 percent). Most other differences among hospital groups (e.g., ownership or teaching status) tend to be small, however. These small differences reflect the wide variability in post-acute care transfer rates among the hospitals within most hospital groups.

Individual hospitals' transfer rates do appear to be strongly consistent across DRGs (Table 2A-7, p. 50). When we grouped hospitals by their overall percentage of Medicare cases transferred to post-acute care, it turned out that those with low overall transfer rates also had low transfer rates in each of the DRGs we examined. Similarly, those with high overall transfer rates also had high rates in each of the DRGs. These findings suggest that hospitals' transfers to post-acute care are driven more by their specific circumstances than by any shared hospital characteristic. Short-stay transfers to post-acute care—those that have inpatient stays prior to transfer that are more than one day less than the national geometric mean length of stay for the DRG—show similar patterns, with strong hospital-specific differences and relatively small differences among hospital groups.

Average length of stay for Medicare beneficiaries varies across regions, although the differences are much less than they were 10 years ago (Table 2A-8, p. 51). Some observers have suggested that expansion of the transfer policy would penalize hospitals in regions with short stays. This concern is only valid to a point, however, because the relationship between regional average Medicare lengths of stay and the proportion of cases affected by the policy is fairly weak. Two factors influence the proportion of cases affected by the policy. One is the share of cases discharged to post-acute care and

**TABLE
2A-6**

Use of post-acute care providers and cases affected by expansion of transfer policy to all DRGs

Hospital group	Number of hospitals	Number of cases	Percent of cases discharged to post-acute care	Percent of transfer cases with short stays	Percent of all cases discharged to post-acute care with short stays
Total	4,613	10,812,882	30.5%	20.9%	6.4%
Urban	2,632	8,646,905	31.7	20.5	6.5
Rural	1,656	2,103,922	25.9	22.7	5.9
Large urban	1,537	4,902,476	33.6	20.3	6.8
Other urban	1,095	3,744,429	29.2	20.8	6.1
Rural referral	248	833,371	28.3	20.7	5.8
Sole community	521	476,975	23.6	24.4	5.8
Small rural Medicare dependent	241	183,454	25.0	24.1	6.0
Other rural < 50 beds	313	161,707	19.9	27.6	5.5
Other rural ≥50 beds	333	448,415	26.3	23.5	6.2
Major teaching	298	1,493,872	32.3	21.5	6.9
Other teaching	824	3,620,550	31.6	20.3	6.4
Nonteaching	3,166	5,636,405	29.4	21.1	6.2
New England	183	537,570	46.2	24.6	11.4
Middle Atlantic	474	1,605,852	37.2	17.0	6.3
South Atlantic	687	2,084,098	29.3	20.0	5.8
East North Central	696	1,914,994	32.3	22.1	7.1
East South Central	406	958,806	26.1	19.9	5.2
West North Central	571	872,834	28.6	22.7	6.5
West South Central	648	1,260,795	22.8	20.4	4.7
Mountain	328	467,115	27.9	26.1	7.3
Pacific	564	972,134	30.8	22.8	7.0
Voluntary	2,596	7,900,024	32.0	20.8	6.6
Proprietary	650	1,239,981	27.8	20.3	5.6
Urban government	368	985,048	26.9	21.8	5.8
Rural government	669	625,657	23.4	21.9	5.1

Note: DRGs (diagnosis related groups). Short stays are those that are more than one day less than the geometric mean length of stay for the DRG.

Source: MedPAC analysis of 2001 MedPAR data from CMS.

the other is the share of these cases that have short stays. Hospitals in regions with relatively short stays tend to have a higher proportion of their transfer cases discharged after a short stay, but there is no relationship between length of stay and the proportion of cases discharged to post-acute care.

Further, although hospitals located in short-stay regions may have more transfer cases affected by the policy, they benefit financially from their short stay pattern of care on all their other cases. The per discharge payment rates under the inpatient PPS reflect national average care patterns. Other things being equal,

however, cases in relatively short-stay regions tend to have lower than average costs.

Hospitals with high short-stay transfer rates would lose some payments under the post-acute transfer policy, but they benefit from having relatively short stays and low

**TABLE
2A-7**

Share of cases discharged to post-acute care settings for selected DRGs, by hospital group

Hospital group	Percent of hospitals	DRGs						
		14	79	89	107	116	204	209
Group defined by percent of hospital cases discharged to postacute care								
< 10	10%	11%	6%	5%	7%	2%	2%	20%
≥ 10–20	17	36	28	17	19	5	8	52
≥ 20–30	31	49	43	28	32	8	12	73
≥ 30–40	28	57	55	38	52	12	17	81
≥ 40–50	10	63	66	50	72	20	23	88
≥ 50	4	69	74	62	82	32	31	93
Total	100	52	50	34	43	11	15	77
Group defined by percent of hospital cases discharged to postacute care with short stays								
< 2	10	2	2	1	2	–*	–*	3
≥ 2–5	30	7	8	3	8	–*	1	13
≥ 5–10	44	13	16	6	18	1	3	24
≥ 10–15	13	19	25	12	32	2	3	34
≥ 15	3	31	38	21	45	3	9	45
Total	100	11	15	6	15	1	2	22

Note: DRGs (diagnosis related groups), DRG 14 = stroke, DRG 79 = respiratory infections, DRG 89 = pneumonia, DRG 107 = coronary bypass with cardiac catheterization, DRG 116 = other permanent cardiac pacemaker implant, DRG 204 = disorders of the pancreas except malignancy, DRG 209 = major joint and limb reattachment procedures of lower extremity. Short stays are those that are more than one day less than the geometric mean length of stay for the DRG.

* Less than 0.5 percent

Source: MedPAC analysis of 2001 MedPAR data from CMS.

costs throughout their Medicare caseload, which contributes to their having higher Medicare inpatient margins (Table 2A-9).¹³ When hospitals are grouped by their short-stay post-acute transfer rates, those with high proportions of short-stay transfers on average have relatively short overall Medicare lengths of stay. For instance, hospitals that had more than 15 percent of their cases transferred to post-acute care settings after short inpatient stays had average actual lengths of stay about 20 percent lower than we would expect given their mix of cases among the

DRGs.¹⁴ They also had a higher proportion of cases discharged to post-acute care overall.

Improving incentives for quality care

A per case payment system provides strong financial incentives for hospitals to shorten inpatient stays. Per diem payments reduce hospitals' incentives to transfer patients to post-acute settings by bringing payments more in line with the estimated incremental cost of providing care. The rationale for the policy does not assume that hospitals are prematurely

discharging patients to post-acute care settings but that they substitute post-acute services for acute care. Nevertheless, the expanded transfer policy provides a better set of incentives to protect beneficiaries from potential premature discharge to post-acute care. When hospitals are paid less for short stays and more for long stays, the decision to transfer will be influenced less by financial considerations. Hospitals should be financially indifferent to the decision to transfer a patient to a post-acute setting if the marginal cost of care and the per diem payment amounts are close. Past research has shown that Medicare's current transfer payment method provides a reasonable approximation of marginal cost (Carter and Rumpel 1993).

HCFA (now CMS) analysis of the initial 10 DRGs showed that per diem payments would on average more than cover the cost of care for the affected transfer cases (HCFA 1998). Consequently, hospitals still had a financial incentive to discharge patients to post-acute care, and in fact the percentage of cases in the original 10 DRGs discharged to post-acute care increased slightly after the policy was implemented. As discussed earlier, our analysis also shows that per diem transfer payments would more than cover the estimated daily cost of care for short-stay cases in the original 10 DRGs and in other DRGs to which the policy might be expanded.

Providing a more equitable distribution of payments Another reason to expand the transfer policy is that it would improve payment equity across cases and hospitals. The expanded transfer policy would help improve payment equity in two ways. First, it would account for differences across providers in the availability and use of post-acute care for short-stay cases. In general, the policy would provide a

13 Medicare inpatient margins were calculated excluding disproportionate share hospital payments and IME payments above the teaching cost relationship. These amounts were excluded because they are unrelated to the transfer policy and they tend to obscure the relationships between average length of stay, short-stay post-acute transfers, and hospital financial performance.

14 To make this calculation, we compared each hospital's actual average length of stay for Medicare patients with what the average would have been if its cases had the national average length of stay in each DRG.

**TABLE
2A-8**

Use of post-acute care, transfers, and length of stay by region, 2001

Region	Average length of stay	Percent of transfer cases with short stays	Percent of cases discharged to post-acute care	Percent of all cases discharged to post-acute care with short stays
Total	5.6 days	20.9%	30.5%	6.4%
Middle Atlantic	6.7	17.0	37.2	6.3
South Atlantic	5.6	20.0	29.3	5.8
East South Central	5.5	19.9	26.1	5.2
West South Central	5.5	20.4	22.8	4.7
New England	5.5	24.6	46.2	11.4
Pacific	5.3	22.8	30.8	7.0
East North Central	5.3	22.1	32.3	7.1
West North Central	5.1	22.7	28.6	6.5
Mountain	4.8	26.1	27.9	7.3

Note: Short stays are those that are more than one day less than the geometric mean length of stay for the DRG.

Source: MedPAC analysis of 2001 MedPAR data from CMS.

Second, expanding the transfer policy would improve the accuracy of the DRG weights in the affected DRGs. The DRGs not included in the expanded transfer policy are now affected adversely because cases that would be treated as transfers are treated as discharges—and not discounted in recalibration. Thus DRGs not included in the expanded transfer policy that have experienced substantial declines in length of stay (and charges) because of increased post-acute transfers have likely seen their relative weights fall. In this situation, hospitals able to discharge patients early likely are paid too much while those that are unable to do so (because of limited access to post-acute services) are paid too little.

Tracheostomy cases provide an example of the potential inequities of the payment before the expanded transfer policy was put in place. Cases in DRG 483 tend to have very long lengths of stay (the geometric mean is 35 days) and receive very high DRG payments (the payment rate is more than 10 times the average for all cases). However, hospitals located in areas with facilities that can provide ventilator support for these patients are potentially able to transfer patients relatively early in a stay (after as few as three days) and thus receive a full DRG payment and a large financial gain. Under the expanded transfer policy, cases with

payment reflecting the care provided during the acute inpatient stay, recognizing that use of post-acute care can begin at different points in similar patients' care. Hospitals that have their own post-acute care units, for example, may be able to move patients safely to a post-acute care unit earlier than hospitals where patients would need to be transported for post-acute care. In

addition, the timing of discharge or use of post-acute care may be affected by the availability of open beds in facilities that are able to handle patients' specific treatment needs. The transfer policy matches payments to the local circumstances, rather than applying the same payment in widely differing circumstances.

**TABLE
2A-9**

Use of post-acute care, Medicare inpatient operating margins, and length of stay, 2001

Hospital group defined by percent of cases transferred to post-acute care with short stays	Percent of hospitals	Percent of cases discharged to post-acute care	Ratio of actual to expected length of stay	Medicare inpatient margin excluding DSH and above cost IME*	Change in payments if transfer policy expanded to all DRGs
<2	10%	10%	115%	-1.8%	-0.2
≥ 2-5	30	24	107	-0.9	-0.7
≥ 5-10	44	33	97	1.8	-1.3
≥ 10-15	13	42	88	7.2	-2.3
≥ 15	3	50	80	10.4	-3.8

Note: DSH (disproportionate share), IME (indirect medical education). Short stays are those that are more than one day less than the geometric mean length of stay for the DRG.

*Portion of the IME adjustment above the relationship between teaching intensity and cost per discharge.

Source: MedPAC analysis of 2001 MedPAR data from CMS.

short stays receive much smaller per diem payments, and the DRG relative payment weight is raised for the remaining cases. Even though short-stay transfer cases are paid less than the full DRG amount, analysis shows that transfer payments for DRG 483 are still greater on average than the cost of care provided in the hospital (Gillman et al. 2000, HCFA 1998). The availability of long-term care hospitals and SNFs with ventilator support capacity varies tremendously, and hospitals in close proximity to these providers benefited relative to other hospitals before the expanded transfer policy was adopted. The expanded transfer policy, however, brings payments more in line with the cost of providing care for all hospitals.

Criticisms of the expanded transfer policy One of the criticisms leveled against the transfer policy is that in a system based on averages, expansion of the transfer policy penalizes hospitals for providing efficient care. However, if hospitals establish true efficiency gains by reducing length of stay, the transfer policy does not penalize them. If length-of-stay declines result from transferring patients to another setting, this change results in a transfer of costs to another setting, not a gain in efficiency by the hospital. In such circumstances, Medicare ends up paying twice for the care, once through a full DRG payment and then again in the payments made to the post-acute care provider. The transfer policy allows Medicare to split the total payment appropriately between the two providers involved in the episode of care. Moreover, even though payments are reduced for short-stay transfers, they will on average continue to exceed the hospital’s cost of care for these cases.

Critics have also argued that the current policy (and its expansion to other DRGs) violates the averaging principle of PPS by taking away the opportunity for hospitals to balance losses associated with long stay cases with gains on short-stay cases. This argument, however, ignores the cost reducing effect of site-of-care substitution. The transfer policy treats short-stay cases

that are discharged to post-acute care as partial cases, reflecting that part of the care is provided in another setting. Even though the policy reduces payments for these cases, our analysis shows that hospitals on average would continue to be paid more than the cost of care for these cases. On average, gains made on short-stay cases would continue to offset losses on high-cost longer stay cases.

Some critics of the transfer policy suggest that it creates a disincentive to provide quality care by encouraging hospitals to attain a target length of stay in each DRG. Without a transfer policy, the current payment system gives hospitals an incentive to discharge patients to post-acute care as quickly as possible. The transfer policy changes hospitals’ financial incentives by setting payment rates close to the marginal cost of care. The additional financial gains a hospital might achieve by keeping the patient an additional day, however, are small. As a result, the transfer policy provides a better balance between financial and clinical considerations.

RECOMMENDATION 2A-1

The Secretary should add 13 DRGs to the post-acute transfer policy in fiscal year 2004 and then evaluate the effects on hospitals and beneficiaries before proposing further expansions.

Spending

- This policy would reduce Medicare payments by between \$200 million and \$600 million in the first year and between \$1 billion and \$5 billion over 5 years.

Beneficiary and provider

- This policy would not adversely affect beneficiaries and would better align incentives for hospitals as they consider when to place patients in post-acute care.
- It would reduce payments to providers who discharge many patients to post-acute care more than one day before reaching the national geometric mean length of stay for cases in DRGs affected by the policy.

Adding the 13 DRGs considered by the Secretary would allow the transfer policy to capture a larger share of cases transferred to post-acute care providers. With these 13 plus the original 10 DRGs, almost one-third of cases discharged to post-acute care and about two-fifths of the short-stay transfers would be affected (Table 2A-10). The 13 DRGs have a lower percentage of cases transferred to post-acute care settings compared with the initial 10 DRGs, but a similar proportion of transfer cases with short stays (Table 2A-11).

TABLE 2A-10

Distribution of hospital cases under the transfer policy, 2001

	Share of all cases	Share of cases discharged to post-acute care	Share of transfer cases with short stays	Share of savings if transfer policy applied to all DRGs
DRGs under current policy	9%	20%	26%	34%
DRGs under proposed expansion	9	12	16	20
All other DRGs	82	68	57	46
All DRGs	100	100	100	100

Note: DRGs (diagnosis related groups). Columns may not total to 100 percent because of rounding. Short stays are those that are more than one day less than the geometric mean for the DRG.

Source: MedPAC analysis of 2001 MedPAR data from CMS.

**TABLE
2A-11**

Characteristics of hospital cases under the transfer policy, 2001

	Share of all cases	Percent of cases discharged to post-acute care	Percent of transfer cases with short stays	Percent of all cases discharged to post-acute care with short stays	Change in payments from expanded transfer policy
DRGs under current policy	9%	67%	28%	19%	-0.6%
DRGs under proposed expansion	9	44	28	12	-0.4
All other DRGs	82	25	18	4	-0.8
All DRGs	100	31	21	6	-1.8

Note: DRGs (diagnosis related groups). Short stays are those that are more than one day less than the geometric mean length of stay for the DRG.

Source: MedPAC analysis of 2001 MedPAR data from CMS.

Adding 13 DRGs to the transfer policy would decrease Medicare payments by 0.4 percent, assuming hospitals' transferring behavior remains unchanged. The proportion of all cases affected by the policy would increase by about 1 percentage point. The effects on PPS payments would be fairly uniform across provider groups, although this would differ substantially across regions; hospitals in New England would see the largest decline (0.7 percent) and those in the West South Central region the smallest (0.2 percent) (Table 2A-12, p. 54).

Extending the policy to all DRGs would reduce Medicare payments by about 1.2 percent. About 6 percent of Medicare cases would receive a partial DRG payment. Despite the drop in Medicare spending, per case payments under the expanded transfer policy on average would remain above the cost of care for covered cases.

The effects of expanding the transfer policy to all DRGs would be substantially larger than expansion to 13 additional DRGs, but with similar patterns across hospital groups and regions. In New England, which has the highest proportion of cases transferred to post-acute settings, payments would fall by about 2.4 percent, compared with 0.8 percent in the West

South Central Census division, which has one of the lowest rates of transfer to post-acute care. Differences in the financial impact for rural and urban hospitals are mostly in the original 10 DRGs; the impact of expanding to all DRGs is much more uniform for the remaining set of cases.

The indirect medical education adjustment for inpatient payments

Teaching hospitals—hospitals that train physicians in approved residency training programs—have always had higher Medicare inpatient costs per discharge than nonteaching hospitals. Part of the cost difference reflects the direct costs of operating graduate medical education (GME) programs, such as stipends for residents, salaries for teaching physicians, and related overhead expenses. Teaching hospitals' costs per discharge also tend to be higher for other reasons that are associated with teaching activity but difficult to measure directly. These include unmeasured differences in patients' severity of illness, inefficiencies in service use associated with residents' learning by doing, greater use of emerging technologies, and so forth.

When the Congress established the hospital inpatient PPS in 1983, it

recognized teaching hospitals' higher costs in two ways. First, it excluded direct GME costs from the PPS payment rates; these costs continued to be reimbursed on a reasonable cost basis. The Congress later established a separate prospective payment for direct GME costs based on hospital-specific costs per resident in 1984 trended forward to account for inflation.¹⁵

Second, the Congress included an indirect medical education (IME) adjustment to the hospital inpatient payment rates. The IME adjustment is a percentage add-on to the PPS payment rates for teaching hospitals, which is based on the estimated relationship between their Medicare costs per discharge and their teaching intensity as measured by the ratio of residents to beds. Because of doubts about the ability of the PPS to fully capture differences in patient severity and other factors that might account for teaching hospitals' higher costs, the Congress required the Secretary to double the empirically estimated IME adjustment (see the text box on the history of the IME adjustment for more information on how the adjustment has changed over time, p. 55). Teaching hospitals receive IME add-on payments for Medicare patients whose care is paid for under the inpatient PPS and also for those whose care is paid for by a Medicare+Choice plan.

15 Teaching hospitals' per resident amounts vary widely. In the Balanced Budget Refinement Act of 1999, the Congress established a floor per-resident payment currently set at 85 percent of the geographically adjusted national average per-resident amount. The Congress also reduced annual increases in per-resident payments for hospitals with very high per-resident amounts (above 130 percent of the national average, after geographic adjustment).

**TABLE
2A-12**

Change in inpatient payments from expanded transfer policy, 2001

Hospital group	Number of hospitals	Number of cases	Change in payments for the DRGs under current policy	Change in payments for the DRGs under proposed expansion	Change in payments if policy expanded to all DRGs
Total	4,613	10,812,882	-0.6%	-0.4%	-1.2%
Urban	2,632	8,646,905	-0.7	-0.4	-1.2
Rural	1,656	2,103,922	-0.5	-0.4	-1.2
Large urban	1,537	4,902,476	-0.7	-0.4	-1.2
Other urban	1,095	3,744,429	-0.6	-0.4	-1.1
Rural referral	248	833,371	-0.5	-0.3	-1.1
Sole community	521	476,975	-0.4	-0.4	-1.2
Small rural					
Medicare dependent	241	183,454	-0.3	-0.4	-1.4
Other rural < 50 beds	313	161,707	-0.3	-0.4	-1.3
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Major teaching	298	1,493,872	-0.7	-0.4	-1.3
Other teaching	824	3,620,550	-0.6	-0.3	-1.2
Nonteaching	3,166	5,636,405	-0.6	-0.4	-1.2
New England	183	537,570	-0.6	-0.7	-2.4
Middle Atlantic	474	1,605,852	-0.5	-0.3	-1.1
South Atlantic	687	2,084,098	-0.6	-0.3	-1.0
East North Central	696	1,914,994	-0.8	-0.4	-1.4
East South Central	406	958,806	-0.6	-0.3	-0.9
West North Central	571	872,834	-0.6	-0.4	-1.3
West South Central	648	1,260,795	-0.7	-0.2	-0.8
Mountain	328	467,115	-0.8	-0.4	-1.3
Pacific	564	972,134	-0.6	-0.4	-1.3
Voluntary	2,596	7,900,024	-0.6	-0.4	-1.2
Proprietary	650	1,239,981	-0.7	-0.3	-1.0
Urban government	368	985,048	-0.7	-0.3	-1.1
Rural government	669	625,657	-0.4	-0.3	-1.1

Note: DRGs (diagnosis related groups).

Source: MedPAC analysis of 2001 MedPAR data from CMS.

Based on current law and the most recent data, the adjustment is still set at a level that is twice the estimated effect of teaching intensity on hospitals' costs per discharge. The Commission has previously recommended that the Congress combine IME and direct GME payments into a single payment adjustment that would better account for the higher costs of inpatient care in

teaching hospitals (MedPAC 2000b). In the absence of congressional action, teaching hospitals continue to receive separate direct GME and IME payments. This section focuses on the IME adjustment.

Current IME adjustment

Medicare's IME adjustment is based on a statutory formula that in fiscal year 2003

increases payments by about 5.5 percent for each 10 percent increment in teaching intensity, as measured by the ratio of residents to hospital beds (see text box on IME adjustment formula, p. 56). The adjustment in fiscal year 2003 is about 15 percent lower than it was in fiscal year 2002, when it was set at 6.5 percent. Hospitals with a higher ratio receive a larger add-on adjustment to their inpatient

History of Medicare's indirect medical education adjustment for inpatient payments

Medicare's indirect medical education (IME) adjustment has changed over time.

Setting the IME adjustment for the start of Medicare's inpatient prospective payment system

- Regression analysis was used to estimate indirect medical education (IME) costs—the relationship between inpatient operating costs per discharge and teaching intensity as measured by the ratio of residents per bed. This analysis (conducted in 1983 using 1981 data) suggested that inpatient operating costs increase by about 5.8 percent for every 10 percent increase in the resident-to-bed ratio.
- At the start of Medicare's inpatient prospective payment system, the Congress doubled the IME adjustment to 11.6 percent, because analyses suggested that teaching hospitals would not fare as well as other hospitals under the new payment system.¹ Doubling the adjustment was the simple, but arbitrary, way the Congress then chose to ensure that teaching hospitals would not be harmed by the new payment system. Because

total projected payments were held constant, the revenues to double the adjustment were obtained by reducing the base payment rates for all hospitals.

Modifying the IME adjustment when disproportionate share hospital payments were introduced

- When the disproportionate share hospital (DSH) adjustment was introduced in 1986, the IME adjustment was reduced to 8.1 percent to help pay for part of the costs of the new adjustment and to reflect the impact of the DSH adjustment on the empirical level of the IME estimate. At this point the adjustment was still set at double the relationship between resident intensity and costs per case.
- With additional expansion of the DSH adjustment, the IME adjustment was further reduced to 7.7 percent in 1988 (1.89 times the empirical level as calculated when the DSH adjustment was implemented in 1986).

Recent legislative history

- The Balanced Budget Act of 1997 (BBA) reduced the level of the IME

adjustment from 7.7 percent in fiscal year 1997 to:

- 7.0 percent in fiscal year 1998,
- 6.5 percent in fiscal year 1999,
- 6.0 percent in fiscal year 2000, and
- 5.5 percent in fiscal year 2001 and subsequent years.
- The Balanced Budget Refinement Act of 1999 modified the BBA reductions by holding the IME adjustment at 6.5 percent through fiscal year 2000, then lowering the adjustment to 6.25 percent in fiscal year 2001, and finally reducing it to 5.5 percent in fiscal year 2002 and subsequent years.
- The Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA) further delayed the reduction by holding it to an average of 6.5 percent in both fiscal year 2001 and fiscal year 2002, before allowing it to fall to 5.5 percent in fiscal year 2003. ■

¹ Two factors contributed to the projected adverse effects on teaching hospitals. First, they understated the complexity of their case mix in the base year, leading to an underestimate of the prospective payment system (PPS) payments they would receive. Second, the analysis used to estimate the relationship between teaching intensity and costs per case included some factors, such as number of beds, which were not a part of the new payment system, lowering the estimated IME cost relationship. Teaching hospitals in fact did not perform poorly under PPS.

DRG payments. A teaching hospital with 400 beds and 40 residents, for example, would receive a payment add-on of 5.3 percent for each Medicare discharge in fiscal year 2003 compared with an adjustment of 24.1 percent per discharge for a 400-bed hospital with 200 residents

(Table 2A-13, p. 56). The Congressional Budget Office (CBO) estimates that Medicare IME payments will total \$5.1 billion in fiscal year 2003. These payments go to about 1,100 hospitals that train residents, or about one-fourth of all PPS hospitals.

Commission's views on Medicare's payments to teaching hospitals

In an August 1999 report to the Congress on Medicare payment policies for graduate medical education and teaching hospitals, the Commission concluded that

IME adjustment formula

The current IME adjustment is based on the following formula that is multiplied by hospitals' base payment rate for a case to determine the IME payment:

$$1.35 \times [(1 + \text{number of residents/beds})^{0.405} - 1]$$

The formula essentially has three parts:

- The 1.35 multiplier increases the level of the adjustment to the target level. The 5.5 percent adjustment level for every 10 percent increase in the resident to bed ratio is derived by multiplying 1.35 by the 0.405 exponent. This multiplier is what the Congress changed when it altered the level of the IME adjustment.
- The resident-to-bed ratio reflects the number of residents training in the hospital and the number of licensed inpatient beds that a hospital is operating. The resident count used in the IME formula, however, is capped at 1996 levels.¹
- The 0.405 exponent factor was derived from a Congressional Budget Office analysis of 1980 cost report data on the relationship between teaching intensity and costs per case and several other factors. ■

¹ The Congress capped the number of residents in the BBA to counter hospitals' financial incentives to increase residents in order to raise payments.

**TABLE
2A-13**

Percent increase in inpatient payment rates under alternative levels of the indirect medical education adjustment

Indirect medical education adjustment percentage*	Resident-to-bed ratio				
	.05	.10	.25	.50	.75
6.5	3.2%	6.3%	15.1%	28.6%	40.7%
5.5	2.7	5.3	12.8	24.1	34.3
2.7	1.3	2.6	6.2	11.6	16.3

Note: The 6.5 percent indirect medical education (IME) adjustment percentage was in effect from fiscal year 2000 through fiscal year 2002. The 5.5 percent IME adjustment started in fiscal year 2003. The 2.7 percent adjustment is the estimated empirical level of the IME adjustment.

* Per 10 percent increment of teaching intensity, measured by the ratio of residents to beds.

Source: MedPAC analysis.

residents bear the cost of their training by receiving lower wages than they might otherwise earn and that Medicare payments for direct GME costs should therefore be considered patient care expenses (MedPAC 1999). The Commission consequently recommended folding costs for inpatient direct GME into Medicare's PPS rates for inpatient services through a revised adjustment to teaching hospital payments (MedPAC 2000b). The Commission also recommended that federal policies intended to affect the number, specialty mix, and geographic distribution of health care professionals be implemented through specific targeted programs rather than through Medicare payment policies.

As part of the Commission's report on teaching hospitals, we assumed that the IME adjustment would gradually phase down to 5.5 percent as the Balanced Budget Act of 1997 instructed. In addition, last year's payment update recommendation and evaluation of payment adequacy for inpatient services was based on the assumption that the IME adjustment would be set at 5.5 percent in fiscal year 2003, down from 6.5 percent in fiscal year 2002.

Relationship of Medicare's IME payments to patient care costs

Medicare's IME payments exceed the estimated cost relationship between teaching intensity and costs per case. Our most recent analysis of the relationship between teaching intensity and patient care costs, conducted with 1999 cost report data, found that inpatient operating costs increase about 2.7 percent for every 10 percent increase in the ratio of residents to hospital beds (or 2.8 percent if capital costs are included). Our analysis of 1997 data showed that this relationship was 3.2 percent (or 3.1 percent if capital costs were included). Payments above this cost relationship are unrelated to higher patient care costs or to education and training costs of residents—which are paid separately on a per-resident basis. In fiscal year 2003 these payments (those above the cost relationship) will account for about 2.5 percent of Medicare inpatient operating payments.

In conducting our analysis we standardize hospitals' inpatient costs for cost-related payment factors (the area wage index, case mix, and outlier payments) to reflect how these factors are used in the PPS. This method allows the IME adjustment to pick up the effect of any remaining

16 Estimated Medicare inpatient margins for major teaching hospitals remain more than 3 percentage points higher than those for nonteaching hospitals after disproportionate share hospital (DSH) payments and IME payments above costs are removed from the calculation, also suggesting that the IME estimate is conservative.

variation in costs not captured in the payment system that may be related to the level of teaching activity in the hospital. These methods tend to produce higher estimates of the effect of teaching on hospital patient care costs than we would get if we included other cost factors (patient severity within DRG, for example) in the analysis. Thus the estimated impact of teaching on hospital costs would be lower (and the amount of payments above the cost relationship would be even higher) if we were to control for other factors like these.¹⁶ We do not control for these other factors, however, because the payment system does not consider them in setting payment rates.

The empirical level of the IME adjustment has fallen over time, probably as a result of two factors. One is that teaching hospitals have had lower cost growth than other hospitals over time. The second is that increases in the resident-to-bed ratio do not necessarily correspond to higher patient care costs. The resident-to-bed ratio, for instance, can increase if hospitals decrease the number of beds without any change in the number of residents trained. In addition, the number of residents in training has also grown by more than 35 percent since the beginning of PPS, and increases in the number of residents trained may cause little if any increase in costs per case (especially if resident salaries and benefit costs are excluded and paid separately as is the case in the current payment system).

The calculation of the empirical level of the IME adjustment is based on policy parameters at a point in time and may change somewhat with future modifications in the payment system. For example, changes in the wage index—such as the addition of an occupational mix adjustment—might raise the IME estimate somewhat. On the other hand, case-mix refinements might lower the estimate because more of the difference in costs between teaching and nonteaching hospitals would be captured in measured case-mix differences.

In fiscal year 2003, Medicare’s IME payments above the empirical cost relationship will total an estimated \$2.6 billion, accounting for a little more than half of total IME payments received by teaching hospitals. Reducing the IME adjustment to the empirically justified level would substantially lower Medicare inpatient payments to teaching hospitals; for major teaching hospitals—those with 25 or more residents per 100 hospital beds—payments would fall by 7.2 percent, and other teaching hospitals’ payments would decline by 1.7 percent. Lowering the IME adjustment from 5.5 to 5.0 percent would decrease IME payments by about 8 percent, or about 0.4 percent of total Medicare inpatient revenues, with payments to major teaching hospitals falling 1.3 percent and payments to other teaching hospitals dropping by 0.3 percent.

Financial performance of teaching hospitals under Medicare

Teaching hospitals have substantially higher Medicare margins than other hospitals. In fiscal year 2000 (the latest data available), the Medicare inpatient margin for major teaching hospitals was 22.9 percent (Table 2A-14). This compares with 10.2 percent for other

teaching hospitals, and 4.9 percent for nonteaching hospitals. If the IME adjustment had been set at 5.5 percent in fiscal year 2000 instead of 6.5 percent, the inpatient margin would have been 20.7 percent for major teaching hospitals and 9.5 percent for other teaching hospitals.

The overall Medicare margin (considering most Medicare services furnished by hospitals) was also substantially higher for major teaching hospitals in fiscal year 2000: 14.9 percent compared with 5.0 percent for other teaching and –0.2 percent for nonteaching hospitals (Table 2A-15, p. 58). Teaching hospitals’ overall Medicare margins still remain substantially higher even after accounting for the current 5.5 percent IME adjustment level: 13.1 percent for major teaching hospitals and 4.5 percent for other teaching hospitals.

In 2000, the portion of the IME payment above the measured cost relationship accounted for about 10 percent of major teaching hospitals’ Medicare inpatient payments. If this portion of IME payments were removed, the net inpatient margin for major teaching hospitals in fiscal year 2000 still would have been 13.8 percent, and the overall Medicare margin 7.5 percent.

TABLE 2A-14

Medicare inpatient margin in fiscal year 2000 and at alternative indirect medical education adjustment levels

Hospital group	Indirect medical education adjustment percentage		
	6.5	5.5	2.7
All hospitals	10.8%	10.1%	7.7%
Major teaching	22.9	20.7	13.8
Other teaching	10.2	9.5	7.6
Nonteaching	4.9	4.9	4.9

Note: The 6.5 percent indirect medical education (IME) adjustment percentage was in effect from fiscal year 2000 through fiscal year 2002. The 5.5 percent IME adjustment started in fiscal year 2003. The 2.7 percent adjustment is the estimated empirical level of the IME adjustment. Margins were imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002) from CMS.

**TABLE
2A-15**

**Overall Medicare margin in fiscal year 2000
and at alternative indirect medical
education adjustment levels**

Hospital group	Indirect medical education adjustment percentage		
	6.5	5.5	2.7
All hospitals	5.0%	4.3%	2.5%
Major teaching	14.9	13.1	7.5
Other teaching	5.0	4.5	2.9
Nonteaching	-0.2	-0.2	-0.2

Note: The 6.5 percent indirect medical education (IME) adjustment percentage was in effect from fiscal year 2000 through fiscal year 2002. The 5.5 percent IME adjustment started in fiscal year 2003. The 2.7 percent adjustment is the estimated empirical level of the IME adjustment. Margins were imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002) from CMS.

Medicare inpatient margins grew for all hospitals in the 1990s, but the largest growth was for major teaching hospitals, which saw Medicare inpatient margins climb from 6 percent in 1990 to 26

percent in 1997 (Figure 2A-8). In contrast, inpatient margins for nonteaching hospitals rose from -5 percent in 1990 to 12 percent in 1997. Recently, Medicare inpatient margins have fallen from their

1997 peak, down to 23 percent for major teaching hospitals and to 5 percent for nonteaching hospitals.

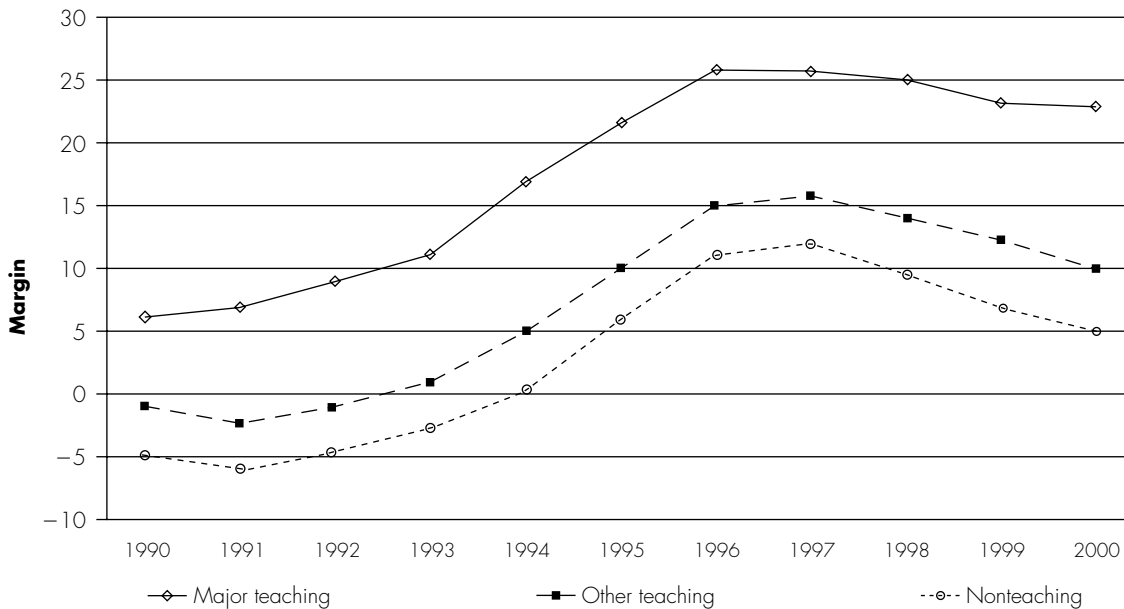
Uncompensated care in teaching hospitals

One argument against reducing the indirect medical education adjustment is that teaching hospitals provide a substantial amount of uncompensated care, which the IME payments may offset.¹⁷ The cost burden of uncompensated care, however, is not uniform across teaching hospitals. AHA annual survey data show that uncompensated care accounts for 20 percent of costs in public major teaching hospitals compared with 5 percent in private major teaching hospitals (Figure 2A-9). Private major teaching hospitals provide about the same amount of uncompensated care as other private hospitals.

IME payments are not targeted to hospitals with the most uncompensated

**FIGURE
2A-8**

Change in Medicare inpatient margins, by teaching status, 1990-2000



Note: Major teaching hospitals have at least 25 residents per 100 hospital beds.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002) from CMS.

17 Uncompensated care is defined as care provided by hospitals or other providers that is not paid directly (by the patient, or by a government or private insurance program). It includes charity care, which is furnished without the expectation of payment, and bad debts, for which the provider has made an unsuccessful effort to collect payment due.

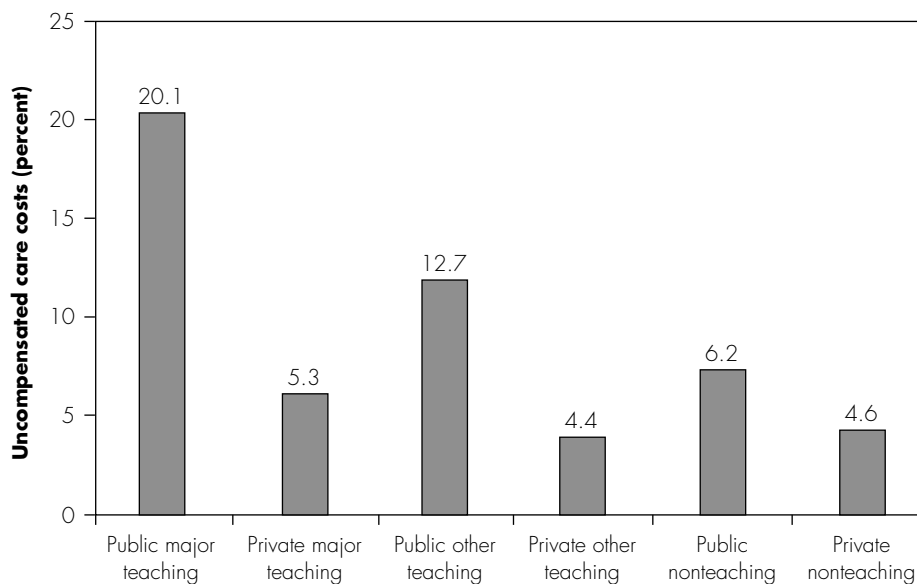
care. Only 27 percent of major teaching hospitals and 8 percent of other teaching hospitals, for instance, are public hospitals that tend to have higher than average levels of uncompensated care. Further, because Medicare accounts for only 20 percent of patient care costs in public major teaching hospitals, IME payments above the cost relationship can have only limited effectiveness in helping defray these hospitals' uncompensated care burdens. Moreover, the variable that determines IME payments, the resident-to-bed ratio, does not reflect uncompensated care costs.

Medicare's DSH payments are explicitly designed to help hospitals with a high share of low-income patients and, presumably, a high load of uncompensated care. In 2000, teaching hospitals received about \$3 billion or two-thirds of Medicare DSH payments. Teaching hospitals' share of uncompensated care costs was about 62 percent in 2000. Teaching hospitals also received more than 80 percent of state and local payments for uncompensated care, the vast majority of which went to public major teaching hospitals.

Hospitals can also make up for losses from uncompensated care through other payments, such as those from private payers and nonpatient care revenues. On average, private major teaching hospitals have much lower payment-to-cost ratios from private payers than other providers, 3.4 percent compared to 12.5 percent for all providers.¹⁸ Although public major teaching hospitals have private payer payment-to-cost ratios that are much higher than average—25.8 percent—private payers account for a much smaller share of their case load. Teaching hospitals use nonpatient care revenue (e.g., endowments, parking) more to support operations than other facilities, accounting for 6.5 percent of total revenue in major teaching hospitals, compared to 3.8 percent in nonteaching hospitals.

FIGURE 2A-9

Uncompensated care costs as a percentage of total hospital costs, by hospital group, 2000



Source: 2002 American Hospital Association annual survey of hospitals.

Conclusion

The Commission believes that Medicare should recognize the higher costs teaching hospitals incur in caring for beneficiaries. The IME adjustment currently provides payments well above an empirically justified level. The Commission is not satisfied with the current policy because it provides payments to teaching hospitals above the empirically justified level without accountability for their use or without targeting policy objectives consistent with Medicare's goals. However, we were not able to reach consensus on reducing the adjustment to the empirical level at this time. To address this problem, the Commission will explore ways to target some or all of the IME payments above the empirically justified level to advance specific Medicare policy objectives such as providing enhanced medical education to better prepare providers with the capacity to manage the changing needs of Medicare beneficiaries. The Commission

believes this problem should be addressed promptly.

Inpatient payments for rural hospitals

In a Congressional report devoted exclusively to rural health care issues, MedPAC found that rural hospitals on average had worse financial performance under Medicare than their urban counterparts (about 7 percentage points lower on both Medicare inpatient and overall Medicare margins). The Commission responded to this finding by reviewing Medicare's payment policies and making four recommendations designed to improve inpatient payments to rural hospitals (MedPAC 2001a). The next year we issued a fifth recommendation with a similar objective (MedPAC 2002). In each case, our recommendation was based on evidence that the current payment system does not account for factors that systematically raise some providers' unit costs beyond their short-term control, or that the current

¹⁸ The payment-to-cost ratio is expressed as a percentage by taking the ratio, subtracting 1.0 and multiplying by 100.

system does not treat rural and urban hospitals equitably.

CMS has already implemented one of the recommendations we made in the rural report administratively. That recommendation was to implement immediately (in contrast to a three-year phase-out) the policy of excluding the salaries of personnel categories paid under Part B from the hospital wage index. Because these personnel—teaching physicians, residents, and certified registered nurse anesthetists—all receive relatively high wages and are more frequently employed by urban than rural hospitals, excluding them in calculating the wage index modestly increases payments for areas with low wage index values (mostly rural) and decreases payments for areas with high wage index values (mostly urban).

The other four recommendations would require legislative changes, and although the Congress has considered all four, none has been enacted to date. We are repeating these four recommendations this year. In this section we summarize the recommendations along with the rationale for and impact of each. Appendix C provides additional background, explanation, and support for the four recommendations.

Implementing a low-volume adjustment

The inpatient PPS applies the same base rate to payment for hospitals of all sizes. Our analysis revealed that hospitals with a small volume of total discharges have higher costs per discharge than larger facilities, after controlling for the other cost-related factors recognized in the payment system.¹⁹ Thus, the current system places smaller providers at a financial disadvantage. The critical access hospital, sole community hospital, and Medicare-dependent hospital programs benefit many small and isolated hospitals, but eligibility for these programs is not

well targeted to those with low discharge volume. Consequently, low-volume hospitals on average have much lower Medicare inpatient margins than larger facilities.

A low-volume adjustment is most critical for isolated hospitals, where the facility is important for maintaining beneficiaries' access to care. Adjusting payments for a low-volume hospital that is near other facilities offering similar services, on the other hand, is not a priority; in fact, the close proximity of two hospitals in the same rural market may be one of the primary reasons for the low volume of service.

RECOMMENDATION 2A-2

The Congress should enact a low-volume adjustment to the rates used in the inpatient PPS. This adjustment should apply only to hospitals that are more than 15 miles from another facility offering acute inpatient care.

IMPLICATIONS 2A-2

Spending

- This policy change would be implemented with new monies without a phase-in schedule, but it is expected to increase total spending for PPS inpatient services by less than \$50 million in the first year and less than \$250 million over five years.

Beneficiary and provider

- This additional payment option should help maintain access to basic emergency service and inpatient care in isolated rural areas by maintaining the financial viability of small rural hospitals. A number of these institutions do not qualify for assistance under the current payment mechanisms designed to help rural hospitals within the PPS.
- A low-volume adjustment will provide substantial financial relief to

small and isolated rural hospitals, enabling some to earn a margin on their inpatient services by remaining in the PPS rather than electing cost-based payment through the critical access hospital program.

Reducing the labor share used in geographic adjustment

The labor share is an estimate of the national average proportion of hospitals' costs associated with inputs that are directly or indirectly affected by local wage levels. It is used to determine the portion of the PPS base payment rate to which the wage index is applied. For inpatient hospital services, the labor share currently is set at 71.1 percent.

Most of the inputs that CMS has included within the labor share are purchased in local markets. However, a number of categories (data processing and accounting services, for instance) appear to include some inputs that are purchased in national markets and some in local markets. As a result, the national average labor share may be somewhat lower than 71.1 percent.

Since our rural report, we have obtained preliminary results from an analysis of the factors explaining variation in hospitals' costs per discharge that provide strong evidence that the current labor share is too high. However, the study found that, contrary to what many observers have assumed, the labor-related share of expenses is lower in high-wage markets (most of which are in large urban areas) than in low-wage markets (most of which are rural). This pattern occurs because hospitals in major metropolitan areas generally provide more sophisticated services and treat more complex patients, which raises their costs for plant and equipment. In the coming year, MedPAC will undertake a follow-up study designed to identify the best labor share value for the hospital industry as a whole.

19 Although Medicare payments are intended to cover the costs of Medicare patients, a hospital's total volume of service (that is, including patients covered by all payers) determines its unit costs of production.

RECOMMENDATION 2A-3

The Secretary should reevaluate the labor share used in the wage index system that geographically adjusts rates in the inpatient PPS, with any resulting change phased in over two years.

IMPLICATIONS 2A-3

Spending

- Any change in the labor share used for geographic adjustment of rates should be implemented budget neutrally, such that it would have no impact on aggregate spending for PPS inpatient services.

Beneficiary and provider

- By better aligning payments to efficient providers' costs, a lower labor share should contribute to maintaining access to care in low-wage communities, many of which are in isolated rural areas.
- Depending on the exact labor share chosen, this recommendation should marginally increase payments for hospitals in areas with below-average wage index values (mostly rural areas) and marginally reduce them in areas with above-average values (mostly large urban areas).

Eliminating the base rate differential

In Medicare's inpatient PPS, the operating base payment rate for hospitals in large urban areas (metropolitan areas with more than 1 million people) is 1.6 percent above the payment rate for other hospitals, and the differential is 3.0 percent for the capital base rate (comprising about 10 percent of the overall rate).

When we compared hospitals' costs by location, we found no statistically significant difference between the costs of hospitals in large urban and other areas after controlling for other cost-related payment adjustments in the inpatient PPS. In addition, after removing the effects of DSH payments and IME payments above

the measured relationship between teaching and unit costs, hospitals in large urban areas still have Medicare inpatient margins that are three percentage points above those of hospitals in other urban and rural areas.

RECOMMENDATION 2A-4

The Congress should raise the inpatient base rate for hospitals in rural and other urban areas to the level of the rate for those in large urban areas, phased in over two years.

IMPLICATIONS 2A-4

Spending

- Because this policy change would be implemented with new monies, it would raise aggregate spending for PPS inpatient payments by between \$200 and \$600 million in the first year and between \$1 and \$5 billion over 5 years.

Beneficiary and provider

- This policy change should help to maintain access to care in rural and less populated urban areas of the country by better aligning hospitals' payments to their average costs.
- The change will increase payments for hospitals in rural and other urban areas, while having no impact on hospitals located in large urban areas.

Raising the cap on disproportionate share payments

Medicare's DSH adjustment for hospital inpatient services is designed primarily to offset the financial pressure of uncompensated care. However, the Commission has concluded that the current system has two key design flaws (MedPAC 2000b, 2001a):

- The current low-income share measure (used to distribute DSH payments) does not include uncompensated care.

- The system has separate payment rates for 10 hospital groups, with the least favorable rates given to most rural hospitals and to urban facilities with fewer than 100 beds.

Previous legislation mandated that CMS collect the uncompensated care data needed to reform the system and partially addressed the unequal treatment of rural facilities. Since MedPAC's complete reform package probably cannot be implemented until at least fiscal year 2005, because of the time required to collect and process uncompensated care data, an appropriate interim step is needed.

RECOMMENDATION 2A-5

The Congress should raise the cap on the disproportionate share add-on a hospital can receive in the inpatient PPS from 5.25 percent to 10 percent, phased in over two years.

IMPLICATIONS 2A-5

Spending

- This policy change would be implemented with new monies. Due to the 2-year phase-in schedule, the first-year impact on aggregate spending for PPS inpatient services would fall into the \$50 to \$200 million range.
- Over five years, it would raise spending by between \$200 million and \$1 billion.

Beneficiary and provider

- Because this policy change would mitigate the effects of uncompensated care for many rural hospitals, it should help protect access to care for Medicare beneficiaries in rural communities.
- The policy would raise payments for qualifying rural hospitals as well as urban facilities with fewer than 100 beds. Other hospitals would not be affected.

Impact of rural recommendations (2A-2 through 2A-5)

In two instances—our recommendations calling for Congress to implement a low-volume adjustment and to reevaluate the labor share used in its geographic adjustment of rates—the impact would depend on design decisions that Congress or CMS must make. But we have simulated sample designs to illustrate the pattern and general magnitude of impact these policy changes would likely have.

To illustrate the financial impact of a low-volume adjustment, we simulated an adjustment that increases payments by up to 25 percent and drops to zero for hospitals with 500 or more discharges.²⁰ Payments would rise by about 8 percent for hospitals with fewer than 200 discharges and 4 percent for those with 201 to 500 discharges. Since low-volume hospitals account for a small share of Medicare discharges, however, the aggregate increase in payments across all hospitals would be less than 0.1 percent.

We simulated an illustrative change in labor share from 71.1 percent to 68 percent. On average, this change would raise payments for hospitals in both rural and small urban areas by 0.2 percent while reducing payments for those in large urban areas by the same amount. By design, the change would have no effect on overall payments.

Our recommendation to eliminate the differential in base payment rates would raise payments for hospitals in rural areas by 1.2 percent. With the two year phase-in we are recommending, a 0.3 percent increase in funding would be needed in fiscal year 2004, followed by a 0.4 percent increase in 2005.

Implemented with new funding, our recommendation to raise the cap on the DSH add-on from 5.25 to 10 percent would increase rural hospitals' payments by 1.2 percent. However, because rural hospitals account for only about 15

percent of PPS spending, the change would increase aggregate inpatient payments by 0.2 percent. With a two-year phase-in schedule, an increase in funding of 0.1 percent would be needed in each of fiscal years 2004 and 2005.

As shown in Table 2A-16, the four recommendations combined would increase rural hospitals' payments by 1.3 percent in 2004 and 2.6 percent in 2005, eliminating more than a third of the difference in inpatient margins between rural and urban facilities. (The impact of each policy change implemented in isolation is detailed in Appendix C.)

Although the policy changes affect rural hospitals the most, hospitals in small urban areas would receive a 1.7 percent increase because the recommended increase in base rates applies to them.

Payments would decline by 0.1 percent for hospitals in large urban areas because of budget neutral implementation of the reduction in the labor share. By far the largest payment increases—over 4 percent—would go to hospitals that do not benefit from any of the existing programs aimed at helping rural hospitals. These facilities currently have the lowest inpatient margins.

Update for inpatient services

We now turn to the question of the appropriate payment update for inpatient services in fiscal year 2004. The Commission concluded that payments are adequate in light of current costs. The

**TABLE
2A-16**

One- and two-year impacts on Medicare inpatient payments of recommendations to improve payments to rural hospitals

Hospital group	Baseline margin	Change in payments	
		One-year	Two-year
All hospitals	10.3%	0.4%	0.9%
Urban	11.3	0.3	0.6
Rural	3.9	1.3	2.6
Large urban	13.6	-0.1	-0.1
Other urban	7.7	0.8	1.7
Rural referral	3.9	1.3	2.5
Sole community	4.6	0.5	1.1
Small rural Medicare-dependent	7.2	1.6	3.0
Other rural < 50 beds	3.7	2.3	4.4
Other rural ≥ 50 beds	2.5	2.1	4.2
Major teaching	20.7	0.1	0.1
Other teaching	9.6	0.4	0.8
Nonteaching	5.4	0.7	1.3

Note: Baseline margin is the actual 2000 margin adjusted to reflect the increase in disproportionate share payments implemented in 2001 and the decrease in indirect medical education payments implemented in 2003. Margins were imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of cost report, MedPAR, and impact file data from CMS.

²⁰ The formula we used in this simulation, which derives from our multivariate cost analysis, is documented in Appendix C.

update must account for the expected increase in efficient providers' costs.

Accounting for cost changes in the coming year

After any adjustments to the update for payment adequacy, the Commission examines likely changes in providers' costs in the coming year. The estimate of changes in the costs of efficient providers reflects expected changes in prices, the impact of the costs of scientific and technological advances that improve quality but increase costs, and expected improvements in productivity.

Changes in input prices

CMS measures price inflation for the goods and services that hospitals use in producing inpatient services with the hospital market basket. Separate market baskets measure operating and capital cost changes. CMS's latest forecast for fiscal year 2004 is 3.5 percent for the operating market basket and 1.4 percent for the capital market basket. Under current law the operating update will equal the rate of increase in the market basket, while the capital update is not specified by law and is set by CMS.

Scientific and technological advances

Technological advances may increase the costs hospitals incur in providing care to Medicare beneficiaries. MedPAC takes account of this in its update recommendation based on information on anticipated technological changes in the hospital industry in the coming year. Although we have not conducted a comprehensive review of new technology, we note that CMS approved only one technology for inpatient technology pass-through payments. Accordingly, we believe that an allowance of 0.5 percent for fiscal year 2004 will compensate adequately for this one major technological advance as well as numerous other smaller advances.

Increases in productivity

The Commission believes that hospitals should be able to cover the costs of

technological advances with the savings resulting from productivity gains. Increases in productivity decrease hospital unit costs. An index of productivity change estimates the change in output associated with a given increase in inputs. MedPAC has established a standard for expected productivity growth based on the 10-year average growth rate of total factor productivity in the general economy, which currently equals 0.9 percent. Productivity growth has been even higher than this average in the last several years.

Update recommendation

Medicare separately updates payments for operating costs (such as labor and supplies) and capital costs (primarily buildings and equipment) in the PPS for acute inpatient services. The Congress sets the update for operating payments, usually several years in advance, and CMS sets the capital update. The Commission's inpatient update recommendation focuses solely on the operating update because operating costs account for about 92 percent of total hospital costs and because the operating update is of primary interest to the Congress.

RECOMMENDATION 2A-6

The Congress should increase payment rates for the inpatient PPS by the rate of increase in the hospital market basket, less 0.4 percent, for fiscal year 2004.

IMPLICATIONS 2A-6

Spending

- This recommendation would increase payments by a smaller amount than under current law. Consequently, it would result in savings of between \$200 and \$600 million in one year. Over 5 years, the savings would be between \$1 and \$5 billion.

Beneficiary and provider

- The recommendation results in a payment increase that should be adequate to cover increases in provider costs for 2004. To the extent that adequate payment allows

hospitals to meet beneficiaries' health care needs, beneficiaries' access to care would be unchanged.

- The recommended update would increase Medicare inpatient payments to hospitals covered by the inpatient PPS by 3.1 percent in fiscal year 2004. In combination with the Commission's recommendations on expansion of the post-acute care transfer policy and its rural recommendations the update recommendation would increase payments by 3.2 percent (Table 2A-17, p. 64).

The increase in the market basket and the recommended offset for the costs of technological advances net of productivity change affect recommended payments to all hospitals equally. The distributional impacts of the rural and transfer policy recommendations affect hospital groups differently. Together, the Commission's recommendations lead to payment increases of 4.2 percent for hospitals in rural areas, 3.6 percent for hospitals in other urban areas, and 2.7 percent for hospitals in large urban areas. Payments would rise 3.5 percent for nonteaching hospitals, 3.2 percent for other teaching hospitals, and 2.8 percent for major teaching hospitals.

Update for outpatient services

At the beginning of this chapter, we reviewed the adequacy of Medicare's payments in relationship to current costs for most of hospitals' services and found them to be at least adequate. Although MedPAC considers Medicare payment adequacy for the hospital as a whole, we make a separate update recommendation for hospital outpatient services covered by Medicare's outpatient PPS.

As shown in Table 2A-2 (p. 40), the aggregate margins for Medicare hospital outpatient services improved between 1999 (-16.4 percent) and 2000 (-13.7 percent). The improved margins are consistent with policies that added funds

**TABLE
2A-17****Impact on Medicare inpatient payments of update and distributional recommendations**

Hospital group	Market basket	Update offset	Distributional changes	Net change in payments
All hospitals	3.5%	-0.4%	0.1%	3.2%
Large urban	3.5	-0.4	-0.4	2.7
Other urban	3.5	-0.4	0.5	3.6
Rural	3.5	-0.4	1.1	4.2
Major teaching	3.5	-0.4	-0.3	2.8
Other teaching	3.5	-0.4	0.1	3.2
Nonteaching	3.5	-0.4	0.4	3.5

Note: Recommendations include the update; a low-volume adjustment; eliminating the base rate differential; reducing the labor share; raising the cap on disproportionate share payments; and expanding the transfer policy. Payments are imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report, MedPAR, impact file, and market basket data from CMS.

to the outpatient PPS: transitional corridor payments to limit hospitals' losses under the new payment system and new technology payments. The transitional corridor payments made up some of the difference between what hospitals received under the PPS and what they would have received under previous payment policies for hospitals that received lower reimbursements under the PPS. Hospitals receiving higher reimbursements under the PPS kept the gains. The Congress authorized new monies to fund these payments. In contrast, the pass-through payments for certain new technologies are budget neutral by law.²¹ However, from August 2000 to April 2002, CMS did not enforce the budget-neutrality provisions due to administrative and congressional actions.

As discussed previously, the large negative values for the outpatient margins

appear to be the result of cost allocation decisions by hospitals, where a disproportionate share of fixed costs seem to be allocated to outpatient services rather than to inpatient services.²² Consequently, the outpatient margins are understated and the inpatient margins overstated. In examining overall Medicare payments to hospitals in relationship to costs, the fiscal year 2000 margin is 5.0 percent, with an estimated overall Medicare margin of 3.9 percent in 2003 (Table 2A-3, p. 41). This and other indicators, including volume, entry and exit, and access to capital suggest that payments are at least adequate.

The Congress mandated development of the outpatient PPS in the BBA; it was implemented in August 2000. Unlike the hospital inpatient PPS, the outpatient PPS operates on a calendar year. Updates for outpatient services were set in legislation

for calendar years 2001 and 2002. The Secretary set the update for 2003 at the projected rate of increase for the hospital market basket. Current law also provides for an update equal to the rate of increase in the hospital market basket for 2004.

Trends in Medicare payments for outpatient services

Total Medicare payments for services covered by the outpatient PPS in calendar year 2001 were \$16.3 billion, including \$9.2 billion by the program and \$7.1 billion in beneficiary cost-sharing.²³ This \$16.3 billion represents about 6 percent of total Medicare spending. Given that the outpatient PPS was implemented in August 2000, calendar year 2001 is the first year in which spending data are available specifically for services covered by the outpatient PPS.

In 2001, services covered under the outpatient PPS represented about 87 percent of all hospital outpatient spending. Hospital outpatient services not covered by the outpatient PPS include those paid on a separate fee schedule (e.g., ambulance, clinical lab services, rehabilitation and other therapies, and durable medical equipment), as well as those still reimbursed on a cost basis (e.g., organ acquisition, and, beginning in 2003, some vaccines).

Information on trends in Medicare spending on outpatient services is only available for all outpatient services, not just those covered under the outpatient PPS. Such spending has grown considerably over the past decade, almost doubling in nominal dollars from calendar year 1991 to 2001 (Figure 2A-10).

21 See Chapter 4 for further discussion of the pass-through payment mechanism.

22 The Health Care Financing Administration (now CMS) commissioned a study of hospitals' cost allocation practices and found that the general pattern of over-allocation to outpatient services existed, at least in part as a response to the introduction of prospective payment for inpatient services, while outpatient services continued to be reimbursed based on reported costs (CHPS Consulting 1994).

23 Beneficiary cost-sharing for hospital outpatient services has not been based on 20 percent of total payments, as it has been for most other Part B services. Historically, the Medicare program based its payments on hospitals' costs, whereas the beneficiary coinsurance was based on 20 percent of charges. Over time, charges increased more quickly than costs, resulting in beneficiaries paying a greater share of total payments, reaching 50 percent by 2000. This trend was reversed under the outpatient PPS, and beneficiary cost-sharing will slowly decline, although it will continue to be greater than 20 percent for the foreseeable future.

Growth was fastest early in the 1990s and slowed from 1997 to 2001.

Several factors contributed to the slowing of growth since the mid-1990s, including policy changes such as the elimination of inadvertent overpayments in the BBA and the introduction of Medicare's outpatient PPS in 2000.²⁴ Other explanatory factors might be reactions to stepped-up fraud and abuse efforts and a slowing of medical inflation in the late 1990s. Projections by both the CMS Office of the Actuary and the Congressional Budget Office, however, forecast future growth. Payments under the outpatient PPS are projected to increase at an average annual rate of about 8 percent between calendar years 2002 and 2007.

Payments for outpatient services accounted for approximately 14 percent of Medicare payments to hospitals in 2000 (Figure 2A-1, p. 36).

Accounting for cost changes in the coming year

We now turn to factors likely to affect hospitals' unit costs for outpatient services in 2004, such as changes in input prices, scientific and technological advances, and increases in productivity.

Changes in input prices

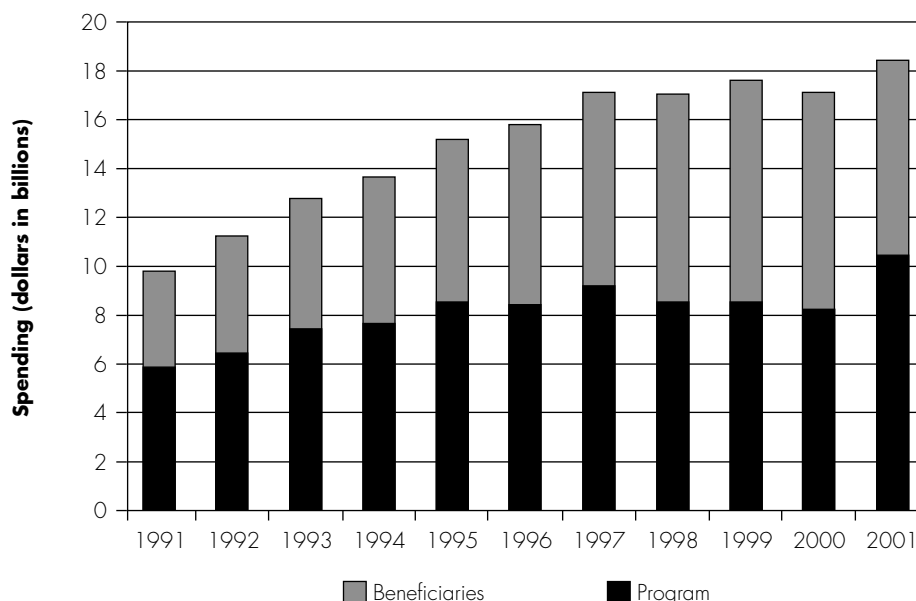
The hospital market basket forecast is our best approximation of increases in input prices paid by providers. The outpatient update will be implemented on January 1, in contrast to October 1 for the inpatient update. The latest forecast of the hospital market basket for calendar year 2004 is 3.4 percent.

Scientific and technological advances

Technological advances may increase or decrease unit costs for outpatient services in 2004, but most new outpatient technologies that increase costs will be

FIGURE 2A-10

Spending on all hospital outpatient services, 1991-2001



Note: Spending includes both services covered by the outpatient prospective payment system and those paid on separate fee schedules or on a cost basis.

Source: Office of the Actuary, CMS.

paid for explicitly through two special provisions discussed below:

- new technology ambulatory payment classification groups; and
- transitional pass-through payments.²⁵

Given these special mechanisms to pay for new technology, MedPAC concludes there is no need for an addition to the outpatient PPS update for scientific and technological advances in 2004.

New technology ambulatory payment classification groups

The new technology APCs pay for completely new services, such as a positron emission tomography (PET) scan or a new surgical procedure. Services are placed in a new technology APC based only on their expected costs. New

technology APCs start at \$0 to \$50 and continue through \$5,000 to \$6,000, with an additional category for \$19,500 to \$20,500. Payment is set at the midpoint of the range. Currently, 75 services (as denoted by a Healthcare Common Procedure Coding System, or HCPCS, code) are paid for under the new technology APCs. In addition, CMS has five applications under review for services to be placed in new technology APCs. Technologies that fall into new technology APCs will generate payments for each service rendered. This payment mechanism has no budget neutrality provision, so these payments represent increased expenditures. The costs of new technologies covered by the new technology APCs, therefore, do not need to be factored into the update. In 2001, payments for services in new technology

²⁴ The BBA eliminated so-called formula-driven overpayments, which were generated by a mistake in the payment formula for some ambulatory surgery, radiology, and other diagnostic services that inadequately accounted for beneficiary copayments when setting program payments, leading to excessive total payments.

²⁵ See Chapter 4 for a full discussion of these payment mechanisms for new technology.

APCs accounted for about 1 percent of total payments.²⁶

Transitional pass-through payments

Pass-through payments cover technologies that are inputs to a service, such as a drug or medical device, rather than a service as a whole. Pass-through payments are made in addition to base APC payments. The Congress required CMS to implement the pass-through payments in a budget neutral manner, with a cap of 2.5 percent of total payments. If CMS estimates that pass-through payments will be above the cap, all payments should, by law, be subject to a pro rata reduction. From August 2000 to April 2002, however, no pro rata reduction was made. Consequently, in 2001, payments for pass-through items exceeded \$1.3 billion (8 percent of total payments), rather than the limit of about \$450 million (2.5 percent of total payment).²⁷ Thus, excess payments of about \$750 million were made. For the last nine months of 2002, however, CMS imposed a pro rata reduction of 64 percent on pass-through payments to ensure the cap was met.

CMS estimates that pass-through spending for calendar year 2003 will be below the cap. Projections by industry and CMS suggest that the same will be true in 2004 (2004 marks a change in the statutory limit for the cap from 2.5 percent to 2 percent). Currently, fewer than 10 applications for new pass-through technologies are pending. Therefore, the full costs of pass-through items should be covered by the payment mechanism.

If estimated pass-through payments exceed the cap in 2004, requiring a pro rata reduction, some might argue that the reductions in payments represent costs that are not covered by the payment system that should be factored into the update. If this situation arises, however, a judgment would be needed to determine whether the reduced payments actually

cover hospitals' costs for these items. The estimated payments are based on the existing payment mechanisms, which the Commission has previously stated could result in overpayments (MedPAC 2002) and likely exceed providers' costs.

Payments for pass-through drugs equal 95 percent of average wholesale price, generally considered to be well above providers' acquisition costs. Payments for devices equal hospitals' charges reduced to costs using a cost-to-charge ratio. This payment mechanism provides hospitals an incentive to increase charges to increase payments.

Increases in productivity

Whereas technological advances may increase or decrease the unit costs of providing services, increases in productivity decrease unit costs. Last year, MedPAC conservatively assumed that the increases in unit costs from new technologies were offset by improved productivity. We acknowledged that this assumption was likely to benefit hospitals, given the limited number of pass-through technologies expected to be approved in 2003. The decision hinged on the newness of the payment system and the uncertainty over the flow of pass-through items. The experience in setting rates for 2003, however, has confirmed that fewer technologies are currently flowing through the pass-through mechanism. Consequently, this year we conclude that most increases in costs of technology are already reflected in the payments and do not offset productivity gains.

Given that prospective payment systems are designed to provide incentives for efficiency, hospitals should be expected to improve productivity at a rate that is consistent with multifactor productivity improvement in the economy as a whole. The latest estimate of the 10-year moving average of multifactor productivity in the

economy as a whole is 0.9 percent. This estimate averages lower productivity growth in the past with larger increases in more recent years.

Update recommendation

After reviewing the adequacy of current payment and costs, as well as the factors likely to affect hospitals' costs in calendar year 2004, we make the following recommendation:

RECOMMENDATION 2A-7

The Congress should increase payment rates for the outpatient PPS by the rate of increase in the hospital market basket, less 0.9 percent, for calendar year 2004.

IMPLICATIONS 2A-7

Spending

- This recommendation would increase payments by a smaller amount than under current law. Consequently, it would result in savings of between \$50 and \$200 million in one year. Over 5 years, the savings would be between \$250 million and \$1 billion.

Beneficiary and provider

- Although it is below the update established in current law, this recommendation would result in a payment increase that is adequate to cover increases in provider costs for outpatient services for 2004. Hospitals should be able to realize productivity gains to partially offset the increases in input prices reflected in the hospital market basket.
- To the extent that adequate payment allows hospitals to meet beneficiaries' health care needs, beneficiaries' access to care would be unchanged. ■

26 Based on MedPAC analysis of 2001 outpatient PPS claims from CMS.

27 Based on MedPAC analysis of 2001 outpatient PPS claims from CMS.

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2B

SECTION

Assessing payment adequacy and updating payments for physician services

R E C O M M E N D A T I O N

The Congress should update payments for physician services by the projected change in input prices, less an adjustment for productivity growth of 0.9 percent, for 2004.

***YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1**

***COMMISSIONERS' VOTING RESULTS**

SECTION 2B

Section 2B: Assessing payment adequacy and updating payments for physician services

Medicare payment rates for physician services are based on a fee schedule and are updated annually with the so-called sustainable growth rate system, which ties updates to growth in the national economy. Under this system, the update for 2003 is a reduction of 4.4 percent. If the Congress changes current law and increases payment rates modestly for 2003, current rates would be adequate. MedPAC would then recommend an update for 2004 that equals the estimated change in input prices less an adjustment for productivity growth. If the Congress does not increase rates for 2003, a higher update would be necessary in 2004 to offset the rate reduction in 2003.

In this section

- Assessing payment adequacy
- Accounting for cost changes in the coming year
- Update recommendation

In this section, we assess the adequacy of Medicare's current payments for physician services. We then recommend a payment update for 2004 that considers the adequacy of current payments and changes in cost for the coming year.

Recommending a payment update for 2004 is complicated by the uncertainty of the update for 2003. Under current law, the update for 2003 is a reduction of 4.4 percent. This would follow a 5.4 percent reduction in payment rates that occurred in 2002.¹ A bill passed by the House last summer would have reversed this reduction and required a positive update of 2.0 percent. More recently, the Senate passed an omnibus spending bill for fiscal year 2003 that included a freeze of physician payment rates through September 30 of this year. MedPAC still believes a modest positive update for 2003 is appropriate, as recommended in our March 2002 Report to the Congress: Medicare Payment Policy.

In 2001, total payments (program spending and beneficiary cost sharing) for physician services totaled \$55.9 billion. These payments have been increasing at an average annual rate of 4.9 percent, since 1991, due to changes in the number of beneficiaries, use of services per beneficiary, and payment rates. Program spending for physician services is projected to grow at an average annual rate of 2 to 4 percent from 2001 to 2006.² This growth is projected to occur despite a series of negative updates during this period (Figure 2B-1). That is, despite negative updates in payment rates, the volume of services is projected to increase

at a rate sufficient to result in positive rates of growth in spending.

Assessing payment adequacy

Some indicators of payment adequacy, such as entry and exit of providers, suggest that Medicare's payments for physician services were at least adequate through 2002. Other information presents more of a mixed picture of payment adequacy. In 2002, physicians were somewhat less willing to accept new Medicare patients than they were in 1999. In addition, Medicare's payment rates fell farther below private sector rates when Medicare rates were reduced in 2002. Whether the difference between Medicare and private sector payment rates has grown enough to become a problem is not clear because the difference in 2002 was about the same as it was in 1999.

Taken together, these indicators suggest that payments were adequate in 2002. For 2003, payments should remain adequate as long as the Congress changes current law to prevent the 4.4 percent payment reduction from taking effect. If the Congress does not change current law, however, then payments may not be adequate in 2003 and a compensating adjustment in payments would be necessary in 2004.

Entry and exit of providers

Provider entry and exit is one indicator of the adequacy of the current level of payments. Rapid growth in the number of

providers furnishing services to Medicare beneficiaries may indicate that the program's payment rates are too high. Conversely, widespread provider withdrawals could suggest that the rates are too low.

For physician services, there are two indicators of provider entry and exit. One indicator is the number of physicians billing Medicare. The other more commonly used indicator is the participation rate. The participation rate is the percentage of physicians who have signed a participation agreement that commits them to "accept assignment" on all their Medicare billings for one year.³ Both indicators can provide evidence that payments were adequate. Data on the number of physicians billing Medicare are available through 2001, and the participation rate is available for 2002. The participation rate, as an indicator of payment adequacy, requires some qualification, however, for reasons discussed below.

Physicians billing Medicare

Counts of physicians billing Medicare show that the number of physicians furnishing services to beneficiaries has more than kept pace with growth in the number of beneficiaries (Table 2B-1).⁴ From 1995 to 2001, the number of physicians billing traditional Medicare grew by 8.1 percent, but Medicare Part B enrollment grew by only 5.7 percent. This difference in growth rates led to an increase in the number of physicians per 1,000 beneficiaries, from 12.9 to 13.2. The difference also suggests that payment rates were not too low in 2001.

1 Both reductions—the 4.4 percent reduction in 2003 and the 5.4 percent reduction in 2002—apply to the fee schedule's conversion factor, which translates the fee schedule's relative weights into dollar payment amounts. The reductions include payment updates under the sustainable growth rate system, legislative adjustments, and budget neutrality adjustments (CMS 2001 and CMS 2002).

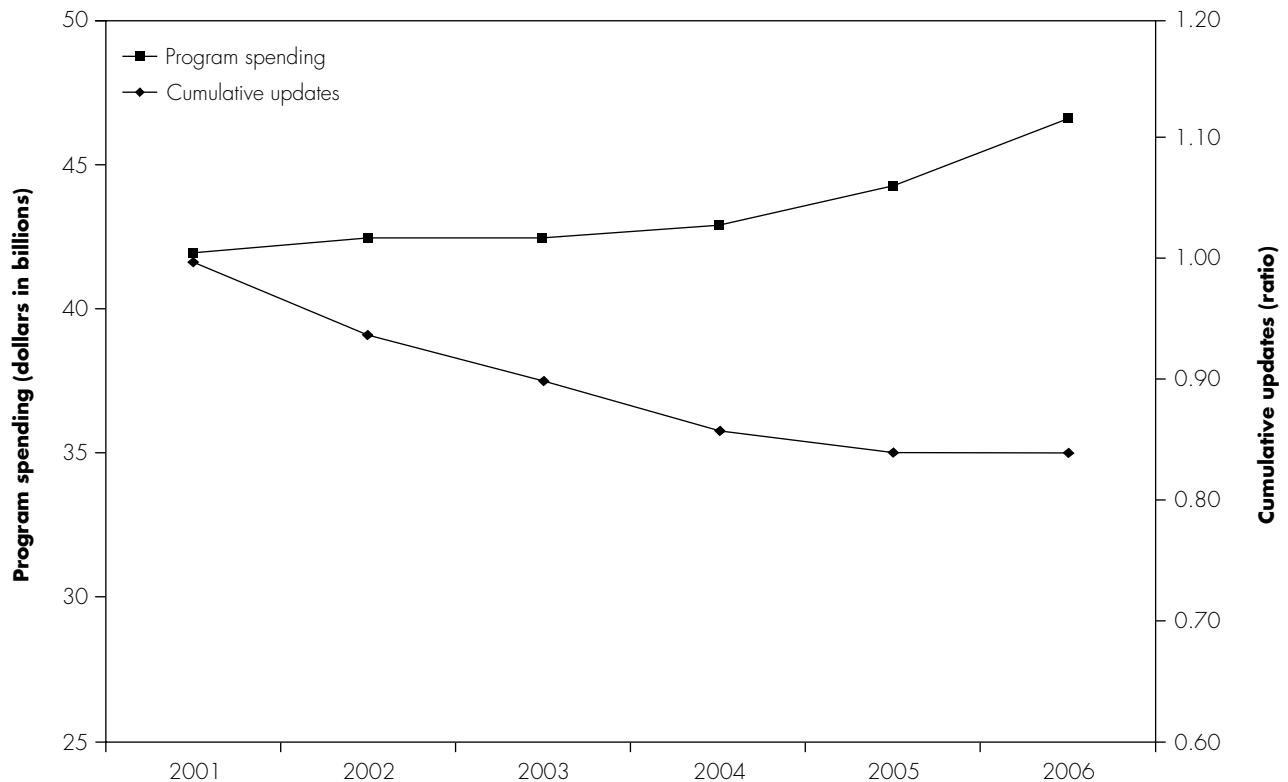
2 The 2 percent growth rate is based on projections in the 2002 annual report of the Boards of Trustees of the Medicare trust funds. The 4 percent growth rate is based on projections in the March 2002 baseline from the Congressional Budget Office.

3 Accepting assignment means that physicians accept the payment rates in the physician fee schedule as payment in full with no further billing of beneficiaries for amounts above those rates. Under assignment, the physician receives the program payment, which is 80 percent of the total payment amount, directly from Medicare. The beneficiary is responsible for the other 20 percent. Without assignment, the beneficiary receives the program payment, and the physician bills the beneficiary for the total.

4 The counts of physicians billing Medicare are affected by multiple physicians (e.g., those in the same practice) using the same billing number. The extent of this problem is unknown. To the extent it occurs, however, it means that the counts reported here are an understatement of the number of physicians billing Medicare. In addition, there are indications that the problem of multiple physicians using the same billing number is increasing over time. This means that the growth rate reported for the number of physicians billing Medicare may be understated also.

FIGURE 2B-1

Physician services program spending and payment updates, 2001–2006



Source: 2002 annual report of the Boards of Trustees of the Medicare trust funds.

Physicians signing participation agreements

The other indicator of entry and exit—the participation rate—is a leading, or anticipatory, indicator. At the beginning of the calendar year, physicians establish a new agreement, if one is not already in effect, or they cancel existing agreements. This occurs after CMS determines Medicare’s payment rates for physician services for the coming year. Thus, physicians decide in advance whether to participate, based on the level of the rates and other factors they deem relevant.

Participation rates have been rising steadily (Figure 2B-2, p. 74). The rate was 80.2 percent in 1997, and it rose to 89.7 percent in 2002.⁵ This trend may end, however, if there is another payment

TABLE 2B-1

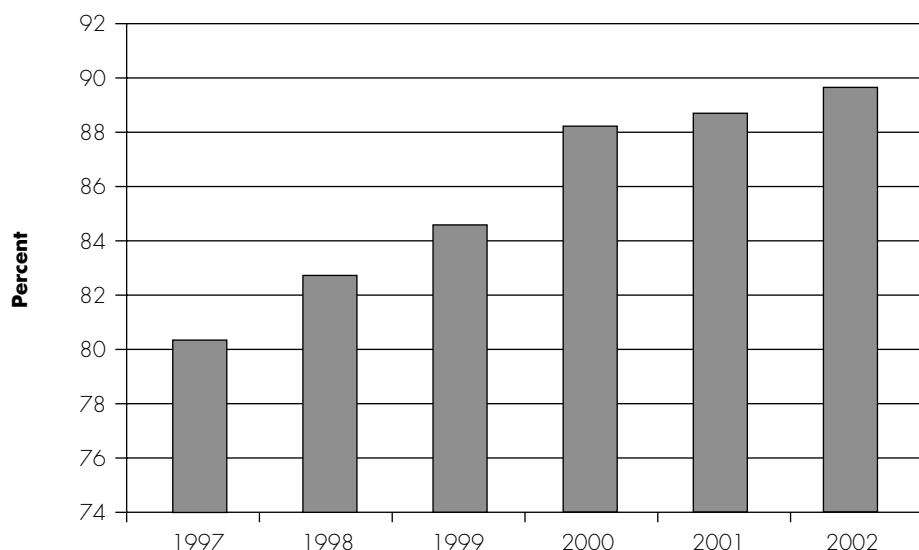
Physicians billing traditional Medicare, 1995–2001

Year	Number of physicians	Part B enrollment (millions)	Number of physicians per 1,000 beneficiaries
1995	460,700	35.641	12.9
1996	469,915	36.104	13.0
1997	476,164	36.445	13.1
1998	478,123	36.756	13.0
1999	484,576	37.022	13.1
2000	491,547	37.315	13.2
2001	498,232	37.657	13.2

Note: The numerator of the ratio of physicians per 1,000 beneficiaries includes allopathic and osteopathic physicians and excludes nurse practitioners, physician assistants, psychologists, and other nonphysician health professionals. The denominator is the number of beneficiaries enrolled in Medicare Part B, including traditional Medicare and Medicare+Choice, on the assumption that physicians are providing services to both types of beneficiaries.

Source: Unpublished CMS data.

⁵ There has been a delay in the availability of information on the participation rate for 2003. Preliminary information is usually available early in the calendar year, following CMS’s distribution of enrollment materials in November. For 2003, distribution of these materials did not occur until early January because of a delay in determining this year’s payment rates.

**FIGURE
2B-2****Physician participation rates, 1997–2002**

Source: Unpublished CMS data.

reduction. According to an online survey conducted by the American Medical Association (AMA), 42 percent of physicians said they would not sign or continue a participation agreement with Medicare for 2003 if there is an additional payment cut (AMA 2002).⁶

Regardless of what happens in 2003, for two reasons the participation rate, as an indicator of payment adequacy, requires qualification.

First, physicians have strong incentives to sign a participation agreement. These incentives make the participation rate less sensitive than some other indicators of payment adequacy. This is particularly true for physician specialties that are heavily dependent on Medicare for revenue, such as ophthalmology and cardiology.

One incentive for physicians to sign a participation agreement is that their names

appear in a directory that is available to beneficiaries. The other—stronger— incentive is that, for those who sign an agreement, the allowed charge for a service is 100 percent of the fee schedule payment rate. For physicians who do not sign an agreement, the allowed charge for a service is only 95 percent of the fee schedule rate. Nonparticipating physicians can charge the beneficiary an additional amount, above the standard 20 percent copayment, but only if they choose not to accept assignment and forego direct payment from Medicare. Also, the amount of this so-called balance billing is limited by statute. The total charge for a service cannot exceed 115 percent of the allowed charge, or 109.25 percent (115 percent of 95 percent) of the fee schedule payment rate.

The second reason the participation rate requires qualification is that it includes physicians who are no longer billing

Medicare. This introduces a subtle bias in the rate (see text box). It also reduces the value of the rate as an indicator of beneficiary financial liability.

To better understand the relationship between participation and beneficiary financial liability, it is necessary to analyze claims data and calculate the percentage of allowed charges that are attributable to participating physicians. When such analysis is done, it shows that almost all charges are submitted by physicians who have signed a participation agreement. For instance, based on claims data from the first 6 months of 2002, about 96 percent of allowed charges for physician services were for services furnished by participating physicians.⁷

Beneficiaries' access to care

Payment adequacy can also be evaluated by assessing beneficiaries' access to care. Widespread access problems for beneficiaries may indicate that Medicare's payment rates are too low. However, access measures may be difficult to interpret because they are influenced by many factors. Access to care for specific services, for example, may be affected by beneficiaries' incomes, supplemental insurance coverage, preferences, or transportation barriers, all of which are unrelated to Medicare's payment policies.

Physician willingness and ability to serve beneficiaries

Findings from a 2002 survey of physicians, sponsored by MedPAC and conducted by Project HOPE and The Gallup Organization (Schoenman and Feldman 2002), present a mixed picture.⁸

- Of physicians accepting some new patients, 96 percent reported that they were accepting at least some new Medicare patients. This percentage was higher than for physicians

⁶ The results of this survey are based on responses from 520 physicians and a response rate of 26 percent.

⁷ Another 3 percent of allowed charges were for services furnished by nonparticipating physicians who accepted assignment. Only 1 percent of allowed charges were for services furnished by nonparticipating physicians who did not accept assignment.

⁸ The survey was fielded from April through August 2002. About 800 physicians participated, representing a response rate of 54.5 percent.

Interpreting the participation rate

Bias in the participation rate arises because the numerator of the rate is more accurate than its denominator. The numerator is the number of physicians who have signed a participation agreement, and the denominator is a total number of physicians who may bill Medicare during the coming year. Both numbers are based on lists of physicians maintained by the contractors that process the claims for payment that physicians submit to Medicare.

Because physicians have no reason to contact Medicare to say whether they are still billing the program, the denominator changes only when the contractors review their lists of physicians and drop those who are no longer active. The numerator—the number of physicians who have signed a participation agreement—can change in two ways: Physicians can establish an agreement or cancel an existing one, or the contractors can review their lists of physicians, as above. Because the numerator is less likely than the denominator to be inflated by inactive physicians, a bias in the participation rate occurs.

This bias introduces uncertainty into interpreting the participation rate as an indicator of payment adequacy. For example, the rate may fall because of a drop in the number of physicians who have a participation agreement with Medicare, which would indicate provider exit and, perhaps, inadequate payments. On the other hand, the participation rate may fall because the contractors' lists of physicians have not been reviewed recently, which would not indicate provider exit or inadequate payments.

The only way to avoid the problem of bias in the participation rate is to, instead, use the percentage of allowed charges attributable to participating physicians, or a measure such as the assignment rate (the percentage of allowed charges paid on assignment). The disadvantage of these measures, however, is that they cannot be calculated until claims data become available. (Claims data for the first six months of the year are usually not available until December.) ■

accepting new Medicaid or private health maintenance organization (HMO) patients.

However, there are some signs that physician willingness to accept Medicare patients is declining.

- The percentage of physicians accepting all new Medicare fee-for-service patients dropped from 76 percent in 1999 to 70 percent in 2002. The percentage of physicians accepting only some new Medicare

fee-for-service patients rose from 20 percent in 1999 to 26 percent in 2002.

- Physicians reported that it was more difficult to find appropriate referrals for their Medicare fee-for-service patients than for their private fee-for-service or preferred provider organization (PPO) patients. Conversely, Medicare patients were easier to refer than private HMO or Medicaid patients.

Many doctors participating in MedPAC's survey expressed concerns about payment levels, but physicians were also concerned

about the administrative burdens imposed by Medicare. About 77 percent said that they were concerned about reimbursement levels for their Medicare fee-for-service patients, although only 15 percent of them said that this concern had led them to limit acceptance of new Medicare patients. About 75 percent of physicians reported that they were concerned about billing paperwork and administration, and 16 percent of them said these factors led them to limit their acceptance of new Medicare patients.

Finally, many physicians who responded to MedPAC's survey reported taking steps to reduce their practice costs.

- Two-thirds of physicians said that their practices had delayed or reduced capital expenditures.
- More than one-third of physicians reported that their practices had increased the number of nonphysician clinical staff, and more than half had increased billing and administrative staff.
- Three-quarters of physicians said that they had increased the number of patients seen in an effort to increase revenues.⁹

The relationship between changes in physician practices and Medicare payment policy is unclear. With time spent furnishing services to Medicare beneficiaries as a measure of the importance of Medicare to a physician's practice, the survey data show no consistent relationship between dependence on Medicare and reductions in staff costs or capital expenditures. More importantly, such practice changes may not indicate that payments were too low. Instead, physicians could have been making their practices more efficient in response to forces in the marketplace, such as lower private sector payment rates. Research on patient outcomes is necessary before policymakers can reach conclusions about whether access to high-quality care has diminished.

⁹ When asked about increasing the number of patients seen, physicians were not asked to distinguish between Medicare and non-Medicare patients.

Private payer reimbursement for physician services

In addition to sponsoring the survey of physicians, MedPAC contracted with two research firms, Direct Research, LLC, and Dyckman and Associates, LLC, to assess the difference between Medicare and private-payer reimbursement for physician services. If Medicare's payment rates fall relative to the rates of other payers, some physicians may have the ability to stop accepting Medicare patients and instead focus their practices on other patients.

To assess the difference between Medicare and private rates, Direct Research used claims data and other information to estimate average private payment rates for physician services for 1999 to 2001, and to compare those rates with Medicare's (Hogan 2002). To provide information on the actions of private plans after Medicare's rates were reduced in 2002, Dyckman and Associates interviewed private health plan executives and collected survey data from the plans on their physician payment methods and their changes in payment rates from 2001 to 2002 (Dyckman and Hess 2002).

The key findings are:

- The difference between Medicare and average private rates is smaller now than it was in the mid-1990s, primarily because of shifts in private plan enrollment from higher-paying indemnity plans to lower-paying PPOs and HMOs. Medicare's rates were about 66 percent of private rates in 1994, but this percentage rose to about 83 percent in 2001.
- During the recent period of volatility in Medicare's payment updates, the difference between Medicare and private rates narrowed. In 2000 and 2001, Medicare's updates for physician services exceeded inflation. Since 2001, the difference has started to widen again because the shift in

private sector enrollment to HMOs has stopped and because private payers generally did not reduce rates in 2002. Still, in 2002, Medicare rates were about 77 to 79 percent of private rates, which appears to be no lower than in 1999 and above the percentage in 1994.

- Private plans report that Medicare reductions in payment rates have increased pressure on them to raise their rates. None of the plans, however, say that the reductions have had a strong or direct impact on their decisions about payment rates for 2002 or 2003. Some plans indicate that the reductions have had a moderate impact on their decisions.

Additional access measures

National indicators of access are important because they allow a general assessment of access and inform decisions about payment updates that change the overall level of payments. A limitation of these indicators, however, is that they do not reveal access problems that may exist locally or with regard to specific services. Such problems, if they exist, are important because they may signal a need to alter the distribution of payments among geographic areas, services, or providers.¹⁰

We can obtain some insight on the local picture through the work of the Center for Studying Health System Change (HSC). For example, in a survey of physicians conducted in 2001, HSC found that 71 percent of all physicians were willing to take all new Medicare patients, but only 55 percent of physicians in Seattle were willing to take all new beneficiaries.

HSC's latest published results are based on survey data collected before the reduction in Medicare payment rates took effect. HSC is currently fielding a new round of surveys, and MedPAC will continue to monitor the results.

Changes in the volume of services

Changes in the volume of services can be considered an indirect measure of payment adequacy. Medicare spending for physician services is determined by two factors: the rates physicians are paid for specific services and the number of services performed by physicians for Medicare beneficiaries. The volume of physician services per beneficiary can be expected to rise based on factors such as the demographic profile of beneficiaries, their health status, and changes in treatment patterns for specific conditions. According to MedPAC's payment update framework, if the overall volume of services provided to beneficiaries falls, it may indicate that physicians are providing fewer services to Medicare beneficiaries because Medicare payments to physicians are inadequate. Conversely, large increases in volume growth may indicate that Medicare is overpaying for services. In addition, changes in volume growth for specific services may provide evidence of underpayment or overpayment by Medicare for those services. Because volume growth can be driven by a number of factors, these data must be interpreted cautiously.

In the case of physician services, the need for caution is particularly important because of ambiguities in interpreting data on changes in the volume of services.

- There is some evidence to suggest that volume goes up when payment rates go down, the so-called "volume offset." For instance, actuaries at the Centers for Medicare & Medicaid Services have estimated that payments for increased use of services have offset projected savings from past Medicare payment rate reductions by between 30 percent and 50 percent (Codespote et al. 1998).

10 MedPAC has discussed the distinction between the overall level of payments and the distribution of payments (MedPAC 1999, p.15).

- It is possible that a volume offset, if it occurs, results in increased volume for services other than those affected by the payment reduction. For example, some services, such as office visits and noninvasive diagnostic procedures, are more discretionary than others and may be more likely to grow in volume than other services if payment rates are reduced.
- In addition, the volume of services per beneficiary varies among geographic areas in ways that appear unrelated to patient outcomes (Wennberg et al. 2002; Welch et al. 1993). These findings raise questions about whether some of the current, or baseline, volume of physician services is necessary and whether a change in volume means that access to needed services has changed.

With these qualifications in mind, we analyzed the growth in the volume of physician services, by type of service, using claims data for 1999 to 2002 (Table 2B-2, p. 78). Volume was measured as per capita use of physician services by beneficiaries in traditional Medicare.¹¹

The analysis shows that, across all services, the volume growth rate was 4.3 percent for 2001 to 2002.¹² This growth rate is one percentage point higher than the average annual growth for 1999 to 2001, which raises the possibility that physicians offset some of the negative update in 2002 by increasing the volume of services. For two reasons, however, we cannot conclude that such a volume offset occurred:

- Volume growth has been high previously, even in years when payment rates have increased. For instance, the volume growth rate was also 4.3 percent for 1999 to 2000, when the payment update for physician services was a positive 5.4 percent.

- Volume could have grown because of technological advances or other factors unrelated to the payment reduction. To conclude that the payment reduction, and not other factors, was the cause of some of the 2001 to 2002 volume growth, it would be necessary to contrast the behavior of physicians who experienced the payment reduction with others who did not. This is not possible, however, because the payment reduction applied to all services and, therefore, to all physicians.

When we group services into four major categories—evaluation and management, imaging, procedures, and tests—and look at 2001 to 2002 growth rates for each, we see that evaluation and management had the lowest rate, which was 2.9 percent. Still, this was more than double the growth rate for this category in 1999 to 2001. Among the other services, the growth rate for procedures was nearest the average for all services, at 3.5 percent. The growth rates for imaging and tests were much higher at 9.4 percent and 9.0 percent, respectively.

Relatively high growth rates for imaging services were concentrated in several specific categories, all of which involve technology of one kind or another. For instance, nuclear medicine grew by 13.0 percent, computerized automated tomography (CAT) of parts of the body other than the head grew by 15.3 percent, magnetic resonance imaging (MRI) of parts of the body other than the brain grew by 15.9 percent, and MRI of the brain grew by 14.6 percent. It is noteworthy, however, that none of these technologies are new. Instead, it appears that use of well-established technologies is increasing. CAT, for example, was introduced in the 1970s. MRI began to diffuse as a new technology in the 1980s. Thus, the indications for use of these technologies may be changing.

Volume growth was most pronounced for services related to the most common health problems of the elderly. For example, some coronary care services showed relatively high volume growth as follows: echography of the heart (10.8 percent); pacemaker insertion (8.9 percent); and cardiovascular stress tests (8.7 percent).

Some of the highest growth rates we found were for a minor-procedures category that includes primarily outpatient rehabilitation. Those rates included 17.6 percent for 1999 to 2001 and 14.3 percent for 2001 to 2002. This rapid growth occurred when spending caps for outpatient rehabilitation were temporarily lifted. Under the Balanced Budget Refinement Act of 1999, a moratorium on the spending caps was implemented in 2000. The moratorium was later extended through 2002, and CMS recently announced a delay until July 2003 for ending the moratorium.

Volume decreased for some services. For example, the volume of two types of cardiology services—coronary angioplasty and heart imaging, including cardiac catheterization—went down slightly, by 1.2 percent and 0.4 percent, respectively. Given the rapid growth in use of these services that had occurred previously, such small decreases may not signal a change in access to care for Medicare beneficiaries. Reasons for some of the other volume decreases—office visits by new patients, coronary artery bypass grafts, cystoscopy, hip fracture repair, and colectomy—are unclear. In some cases, volume decreases may be the result of the substitution of one service for another. The decrease in the volume of coronary artery bypass grafts, for example, may be due to greater use of coronary angioplasty, which is a newer procedure for treatment of coronary artery disease.

11 This is the same measure we used in MedPAC's June 2001 Report to the Congress on Medicare in rural America (MedPAC 2001).

12 The analysis is based on data for the first six months of each year. Growth rates calculated with these data may differ from growth rates based on full-year data because of seasonal variation in use of services.

**TABLE
2B-2****Change in per capita use of physician services by beneficiaries in traditional Medicare, by selected type of service, 1999–2002**

Type of service	Per capita service use						Percent of total service use
	1999	2000	2001	2002	Average annual percent change		
					1999–2001	2001–2002	
All services	663.4	691.8	707.9	738.5	3.3%	4.3%	100.0%
Evaluation and management	353.6	359.4	361.9	372.5	1.2	2.9	50.4
Office visits—established patient	127.6	131.2	130.3	133.3	1.1	2.3	18.1
Hospital visit—subsequent	65.0	64.6	64.7	66.7	-0.2	3.1	9.0
Consultations	39.8	41.5	42.6	44.5	3.5	4.4	6.0
Emergency room visit	18.1	19.0	20.1	21.4	5.3	6.5	2.9
Specialist—psychiatry	18.5	18.3	18.2	18.5	-1.0	2.1	2.5
Specialist—ophthalmology	15.9	16.8	17.5	18.1	4.9	3.5	2.4
Hospital visit—initial	17.6	17.4	17.2	17.2	-1.2	0.3	2.3
Office visits—new patient	15.4	15.5	14.9	14.9	-1.4	-0.2	2.0
Imaging	81.1	88.2	96.1	105.1	8.9	9.4	14.2
Echography—heart	12.6	13.8	14.9	16.5	8.8	10.8	2.2
Standard—nuclear medicine	10.0	11.7	13.6	15.4	16.5	13.0	2.1
Advanced—CAT: other	9.3	10.7	12.3	14.1	14.8	15.3	1.9
Advanced—MRI: other	6.4	7.9	9.4	10.9	21.3	15.9	1.5
Standard—musculoskeletal	8.5	8.8	9.2	9.5	3.9	2.9	1.3
Advanced—MRI: brain	5.1	5.8	6.5	7.4	12.6	14.6	1.0
Standard—chest	6.7	6.5	6.3	6.3	-3.3	0.4	0.9
Advanced—CAT: head	2.7	2.8	2.9	3.0	3.2	4.5	0.4
Imaging/procedure—heart, including cardiac catheterization	1.9	2.1	2.4	2.4	10.4	-0.4	0.3
Procedures	200.3	214.5	218.5	226.1	4.5	3.5	30.6
Minor—other, including outpatient rehabilitation	14.7	18.9	20.4	23.3	17.6	14.3	3.2
Eye—cataract removal/lens insertion	16.0	16.1	15.6	15.8	-1.3	1.3	2.1
Endoscopy—colonoscopy	7.6	8.3	9.0	9.9	8.4	10.1	1.3
Major, cardiovascular—coronary artery bypass graft	6.7	6.7	6.1	5.6	-4.7	-7.0	0.8
Endoscopy—upper gastrointestinal	4.7	4.9	4.9	5.0	1.8	2.7	0.7
Major, orthopedic—knee replacement	3.9	4.0	4.2	4.6	4.2	9.9	0.6
Major, cardiovascular—coronary angioplasty	3.9	4.2	4.6	4.6	9.0	-1.2	0.6
Endoscopy—cystoscopy	3.8	3.8	3.8	3.7	0.0	-3.1	0.5
Eye—treatment of retinal lesions	3.5	3.7	3.5	3.6	0.9	2.6	0.5
Major, orthopedic—hip fracture repair	3.6	3.6	3.5	3.2	-1.9	-9.5	0.4
Major, orthopedic—hip replacement	2.7	2.8	2.8	2.9	1.8	3.1	0.4
Major, cardiovascular—pacemaker insertion	1.7	1.9	2.1	2.2	8.6	8.9	0.3
Tests	22.0	22.6	23.7	25.9	3.9	9.0	3.5
Other—electrocardiograms	6.5	6.5	6.4	6.6	-0.6	1.9	0.9
Other—cardiovascular stress tests	3.3	3.6	3.9	4.2	8.8	8.7	0.6
Lab tests—other (physician fee schedule)	1.9	2.1	2.4	2.9	12.9	22.1	0.4
Other—electrocardiogram monitoring	1.9	1.9	1.9	2.0	0.2	6.0	0.3

Note: CAT (computerized automated tomography), MRI (magnetic resonance imaging). Service use is measured as the relative weights (relative value units) for services received multiplied by the physician fee schedule conversion factor. To put service use in each year on a common scale, we used the relative weights and conversion factor for 2002. For billing codes not used in 2002, we imputed relative weights based on the average change in weights for each type of service.

Source: MedPAC analysis of claims for a 5 percent random sample of Medicare beneficiaries from the first six months of each year.

It should be emphasized that further analysis is required to understand the factors underlying volume growth. MedPAC is currently conducting research on this issue.

Accounting for cost changes in the coming year

In order to determine the appropriate payment update for 2004, we must estimate how much costs will change in the coming year. Two factors are expected to affect the cost of physician services during the coming year: input price inflation and productivity growth. Productivity growth is expected to reduce costs through capital investment, changes in work processes, and other factors.

It is possible that other factors, including some scientific and technological advances, may increase costs. Features of the physician fee schedule should account for those cost increases, at least partially, however. Every year, new billing codes are created and existing codes are revised. Also, by law, the fee schedule's relative weights are reviewed and recalibrated every five years.

Measuring input price inflation

The Medicare Economic Index (MEI) is used as the generally accepted measure of input price inflation for physician services. It is calculated by CMS as a weighted average of price changes for inputs used to provide physician services (Table 2B-3). Those inputs include physician time and effort, or work, practice expense, and professional liability insurance (PLI). Practice expense includes nonphysician employee compensation, office expense, medical materials and supplies, medical equipment, and other professional expenses, such as private transportation. In general, the weights

**TABLE
2B-3**

Medicare Economic Index weights and forecast of input price changes for 2004

Input	Weight (percent)		Price changes for 2004 (percent)
	Category	Total	
Total		100.0%	3.4%
Physician work		54.5	3.4
Wages and salaries	44.2%		3.4
Nonwage compensation	10.3		3.5
Practice expense		42.3	3.1
Nonphysician employee compensation	16.8		3.7
Wages and salaries	12.4		3.7
Nonwage compensation	4.4		3.6
Office expense	11.6		3.0
Medical materials and supplies	4.5		2.3
Medical equipment	1.9		1.7
Other professional expense	7.6		2.7
Professional car	1.3		1.8
Other	6.3		2.9
Professional liability insurance		3.2	5.6

Note: Numbers may not total exactly because of rounding.

Source: MedPAC analysis of unpublished data from CMS.

used to construct the MEI represent the shares of physicians' practice revenues attributable to each input, based primarily on a survey conducted by the AMA for 1996. Physician work has a weight of 54.5 percent, practice expense has a weight of 42.3 percent, and PLI has a weight of 3.2 percent. CMS revises these weights and the other components of the MEI periodically (see text box, p. 80).

CMS currently projects that input prices for physician work will increase 3.4 percent in 2004, based on increases of 3.4 percent in wages and salaries and 3.5 percent in nonwage compensation. Practice expenses are projected to increase by 3.1 percent. This projection includes a 3.7 percent increase in nonphysician employee compensation and a 3.0 percent increase in office expenses.

The largest change expected in input prices is for PLI, which is projected to

increase by 5.6 percent. Historically, this component of the MEI has followed a cyclical pattern, illustrated by the changes in PLI premiums from 1990 to 2002 (Figure 2B-3, p. 80).¹³ The recent increase in PLI premiums in 2002, estimated at 11.3 percent, was the highest in over a decade.

In sum, the index shows that input prices for physician services are expected to increase by 3.4 percent in 2004.

Productivity growth

Productivity growth is the ratio of growth in outputs to growth in inputs. Measuring productivity growth requires detailed information on the personnel, facilities, and other inputs used and on the quantity, quality, and mix of services (outputs) produced. Because such data are generally not available, MedPAC has adopted a policy standard or goal for achievable

13 Despite the changes in PLI premiums, the premiums have not varied much as a percentage of physician revenues. From 1990 through 1998, PLI premiums remained in a narrow range, from 3 to 5 percent of revenues (Gonzalez and Zhang 1998, Zhang and Thran 1999, and Wassenaar and Thran 2001).

Revising the Medicare Economic Index

CMS revises the Medicare Economic Index (MEI) periodically so that the index's weights and other components reflect current conditions. A revision occurred most recently in 1998 based on data primarily for 1996. Previous to that revision, the agency revised the MEI in 1992 with data for 1989.

So far, the primary data source for the weights in the MEI has been the American Medical Association's Socioeconomic Monitoring System (SMS) survey. The weights for the major categories of inputs considered in the MEI—physician work, practice expense, and professional liability insurance—have all come from the SMS survey. The SMS survey has also been the source of the weights for

subcategories of practice expense: nonphysician employee compensation, office expense, medical materials and supplies, medical equipment, and other professional expense. Within these subcategories, CMS has assigned weights to inputs with data from other sources, including the Employment Cost Index of the Bureau of Labor Statistics, the Asset and Expenditure Survey of the Bureau of the Census, and the Current Population Survey of the Bureau of the Census.

For the next revision of the MEI, it will be necessary for CMS to substitute another data source for the SMS survey because the AMA discontinued the SMS survey after it was conducted last, in 1999. ■

productivity growth that is based on growth in multifactor productivity in the national economy.¹⁴

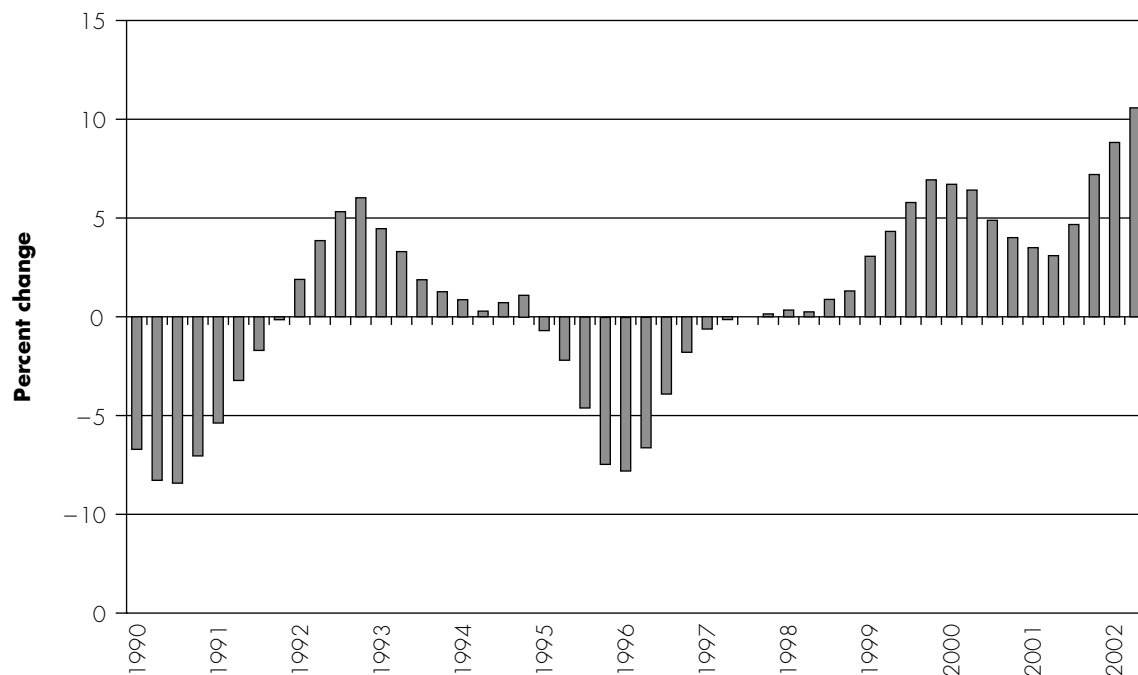
Using the current estimate of growth in multifactor productivity from the Bureau of Labor Statistics, the productivity adjustment would be 0.9 percent.

Update recommendation

Under MedPAC's payment update framework, updates can include three components: an adjustment for payment adequacy, if appropriate; an estimate of inflation in input prices; and a downward adjustment in the update for productivity growth.

FIGURE 2B-3

Quarterly changes in professional liability insurance premiums, 1990–2002



Source: Unpublished CMS data.

14 Multifactor productivity is based on all relevant inputs used to provide goods and services. These inputs include labor, capital, and other inputs, such as energy and materials.

RECOMMENDATION 2B

The Congress should update payments for physician services by the projected change in input prices, less an adjustment for productivity growth of 0.9 percent, for 2004.

Payments are adequate if there is a modest positive update in 2003. If the Congress does not change current law and prevent a payment reduction in 2003, however, payments may not be adequate, and a compensating adjustment in payments may be necessary in 2004. The other components of the update are the

projected change in input prices, which is 3.4 percent, and an adjustment for productivity growth, which is 0.9 percent. The net of these two components is an update of 2.5 percent.

IMPLICATIONS 2B:

Spending

- This recommendation would update physician payments more than under current law. It is expected to increase costs by more than \$1.5 billion in 2004.

Beneficiary and provider

- Increasing payments for physician services would help preserve beneficiary access to care.
- Increasing payments to physicians would help to maintain the adequacy of those payments and allow physicians to furnish high-quality services. ■

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SECTION
2C

**Assessing payment adequacy
and updating payments
for skilled nursing facility services**

R E C O M M E N D A T I O N S

2C-1 The Secretary should continue a series of nationally representative studies on access to skilled nursing facility services (similar to studies previously conducted by the Department of Health and Human Services' Office of Inspector General).

***YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1**

.....
2C-2 The Congress should eliminate the update to payment rates for skilled nursing facility services for fiscal year 2004.

YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

.....
2C-3A Consistent with previous MedPAC recommendations, the Secretary should develop a new classification system for care in skilled nursing facilities.
Because it may take time to develop this system, the Secretary should draw on new and existing research to reallocate payments to achieve a better balance of available resources between the rehabilitation and nonrehabilitation groups.

To allow for immediate reallocation of resources, the Congress should give the Secretary the authority to:

- ▶ remove some or all of the 6.7 percent payment add-on currently applied to the rehabilitation RUG-III groups.
- ▶ reallocate money to the nonrehabilitation RUG-III groups to achieve a better balance of resources among all of the RUG-III groups.

2C-3B If necessary action does not occur within a timely manner, the Congress should provide for a market basket update, less an adjustment for productivity growth of 0.9 percent, for hospital-based skilled nursing facilities to be effective October 1, 2003.

YES: 17 • NO: 0 • NOT VOTING: 0 • ABSENT: 0

***COMMISSIONERS' VOTING RESULTS**

SECTION 2C

Section 2C: Assessing payment adequacy and updating payments for skilled nursing facility services

In this section

- Assessing payment adequacy
- Accounting for cost changes in the coming year
- Update recommendations

Based on the available evidence, we conclude that aggregate Medicare payments for skilled nursing facilities (SNFs) are adequate as of fiscal year 2003, but that payments are not distributed appropriately to account for the expected resource needs of different types of Medicare beneficiaries. Our estimate of the overall Medicare margin for SNF services across all providers in fiscal year 2003 is about 5 percent, with the Medicare margin for freestanding SNFs (90 percent of all facilities) about 11 percent and the Medicare margin for hospital-based facilities about -36 percent. After high cost growth prior to the implementation of the prospective payment system for SNFs, we have seen a decline in costs for freestanding facilities in recent years in response to incentives in the SNF prospective payment system. We expect this trend to continue into fiscal year 2004. This decline in costs does not appear to have resulted in a lower quality of care. Continued entry of for-profit freestanding providers, increases in the volume of services provided, continued access to services for most Medicare beneficiaries, and lack of systematic problems with SNFs' access to capital that would pose problems for beneficiaries' access to services suggest that Medicare payments are at least adequate to cover the costs of caring for Medicare beneficiaries. We believe it is important to continue monitoring beneficiaries' access to SNF services.

Background

Medicare beneficiaries who need short-term skilled care (nursing or rehabilitation services) on an inpatient basis following a hospital stay of at least three days are eligible to receive covered services in skilled nursing facilities (SNFs).¹ These services may be provided either in freestanding or hospital-based facilities, with freestanding facilities representing about 90 percent of all SNFs. A freestanding SNF is typically part of a nursing facility that also provides residential long-term care, which is not covered by Medicare.

Skilled nursing facility payment system

In July 1998, Medicare adopted a prospective payment system for SNF services. This system pays SNFs a case mix adjusted amount for each day of care.²

The per diem payment rates under this system are intended to provide full payment for all facility services, except for the costs of approved medical education programs. The rates cover all routine, ancillary, and capital costs, as well as those for most ancillary items and services for which payment previously was made under Medicare Part B.³

Patients are assigned to 1 of 44 groups, called resource utilization groups, version III (RUG–III). Each RUG–III group includes patients with similar service needs who are expected to require similar amounts of resources. Patients' expected resource needs are determined by periodic assessments of their condition, including

their need for intensive physical, occupational, or speech therapy; special treatments (such as tube feeding); and their functional status (their ability to manage unassisted ordinary daily activities, such as eating and using the toilet). The daily rate for each RUG–III group is the sum of three components:

- a fixed amount for routine services (such as room and board, linens, and administrative services),
- a variable amount reflecting the intensity of nursing care and ancillary services patients are expected to require, and
- a variable amount for the expected intensity of therapy services (physical, occupational, and speech therapies).

Payment rates for SNF services are computed separately for urban and rural areas, and the labor portion of the total rate is adjusted to reflect the wage market conditions within the SNF's geographic location. Furthermore, rates are updated annually on the basis of the projected increase in the SNF market basket index, a measure of the national average price level for the goods and services SNFs purchase to provide care (see Appendix A for more information on the SNF payment system).

Shortly after the SNF prospective payment system was implemented, the Congress responded to providers' concerns about payment rates and the distribution of payments by granting a series of temporary payment rate increases:

- The Balanced Budget Refinement Act of 1999 (BBRA) increased rates for all 44 RUG–III groups by 4 percent for care furnished between April 2000 and September 2002.
- The Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA) increased the base rate for the nursing component by 16.66 percent for care furnished from April 2001 through September 2002.
- BBRA and BIPA increased payment rates for 14 rehabilitation groups by 6.7 percent and rates for 12 complex care groups by 20 percent. These increases were intended to give CMS time to refine the RUG–III classification system and are scheduled to expire when CMS adopts that refinement.

Trends in Medicare payments for skilled nursing facility services

Total spending for SNF services on behalf of Medicare beneficiaries was \$15.3 billion in fiscal year 2001. This amount includes benefit payments by the Medicare program and beneficiaries' payments for cost-sharing obligations. Medicare spending on SNF services grew an average of 13 percent from fiscal years 1992 through 2002, with a noticeable dip in spending occurring in fiscal years 1999 and 2000 (Figure 2C-1). The Congressional Budget Office (CBO) projects that expenditures for this sector will grow by about 8 percent per year from fiscal years 2002 to 2007.⁴ Medicare spending for SNF services represents

1 Medicare covers 100 SNF days in a spell of illness. Medicare pays 100 percent of the rate for the first 20 days of a SNF stay. From the 21st to the 100th day, beneficiaries are responsible for a copayment equal to one-eighth of the hospital deductible, or \$105 per day in fiscal year 2003.

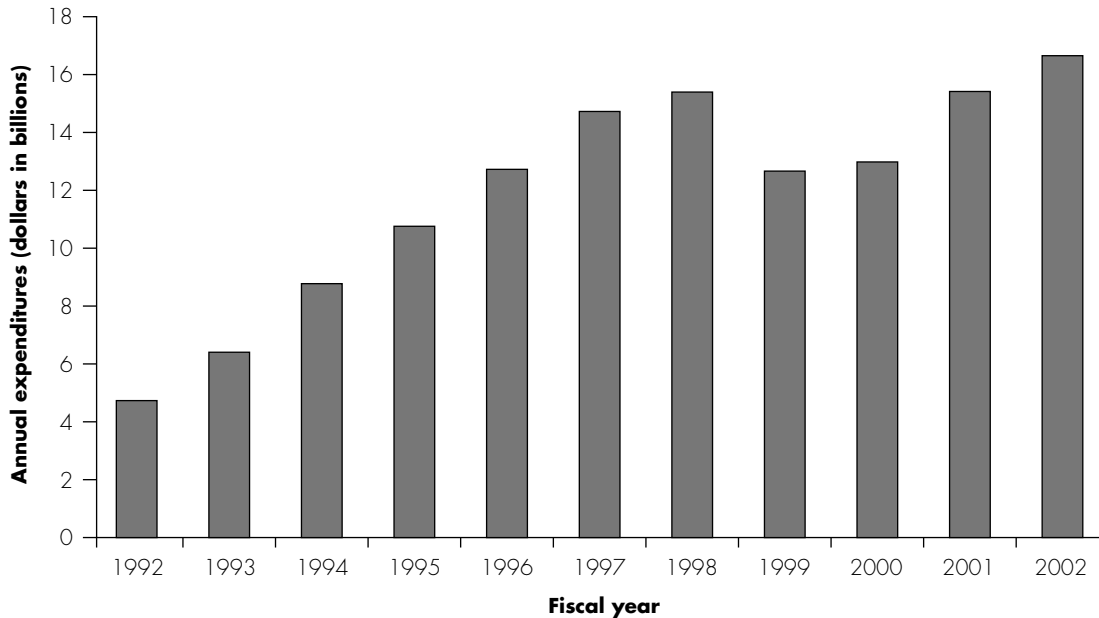
2 The prospective payment system differs substantially from the payment system in effect throughout most of the 1980s and 1990s, when SNFs were paid on the basis of their costs subject to limits on their per diem routine costs (room, board, and routine nursing care). No limits were applied for ancillary services (such as drugs and therapy).

3 The per diem rates exclude amounts for services furnished by physicians and certain other practitioners, such as qualified psychologists, and for dialysis services and supplies. These services continue to be paid for under Part B. Certain high cost, low probability ancillary services have also been excluded from the SNF per diem rate to limit SNFs' liability for services typically outside the scope of SNF care. These services include emergency room care, outpatient hospital CAT scans, MRIs and surgeries, and certain high cost chemotherapy agents and prosthetic devices. Costs for physical, occupational, and speech therapy services are included in the per diem rate even if they are furnished by or under the supervision of a physician.

4 CBO plans to revise its projections of Medicare spending for SNF services downward after conducting an updated analysis of the relationship between the use of SNF services and the incidence of disabilities and hospitalizations among Medicare beneficiaries. CBO's updated projections for SNF services were not available before our report went to press.

**FIGURE
2C-1**

Medicare spending for skilled nursing facility services, 1992–2002



Note: Spending is for Part A services only.

Source: CMS, Office of the Actuary, 2002.

about 6.5 percent of total Medicare spending for all services. Although about 1.4 million beneficiaries (about 3.5 percent of all beneficiaries) use SNF services each year, Medicare’s payments for these services account for only about 10 to 12 percent of freestanding nursing facilities’ revenues and less than 2 percent of total revenues for hospitals. Other payments for these services come from Medicaid and private sources.

Assessing payment adequacy

Each year, MedPAC makes payment update recommendations for the coming fiscal year for SNF services. To inform our recommendations, we consider multiple factors, including the relationship of payments to costs and the appropriateness of current costs, providers’ entry and exit from the program, changes in the volume of

services, beneficiaries’ access to care, and SNFs’ access to capital.

After assessing all of these factors, we conclude that fiscal year 2003 payments to SNFs overall are adequate to cover the costs of caring for the beneficiaries that use these services. We estimate the Medicare margin—a measure of the relationship between Medicare payments and costs—for all SNFs to be about 5 percent, with the Medicare margin for freestanding SNFs (90 percent of all SNFs) about 11 percent (Table 2C-1). The costs of providing SNF services appear to be decreasing, while we find no evidence of declines in the quality of care. In addition, the most recent available data suggest no declines in the overall number of SNFs participating in the Medicare program between 1998 and 2002—with increases in freestanding providers balancing decreases in hospital-based providers—or in the volume of services provided. We find no evidence of substantial declines in beneficiaries’

ability to access SNF services or in SNFs’ access to capital.

However, while Medicare payments to SNFs appear adequate overall, the SNF classification system appears to do a poor job of tracking the expected resource needs of different types of beneficiaries who use SNF services. This causes some types of beneficiaries to be more profitable for SNFs than others. Studies

**TABLE
2C-1**

Medicare margins for skilled nursing facilities, 2000 and estimated 2003

	Reported 2000	Estimated 2003
Freestanding	17	11
Hospital-based	-57	-36
All facility types	7	5

Source: MedPAC analysis of Medicare cost report data from CMS.

have repeatedly shown that hospital-based SNFs tend to treat a much larger proportion of the less-profitable types of patients—those with multiple complex needs that do not include rehabilitation therapy—than freestanding facilities (Dalton 2002, Liu and Black 2002, MedPAC 2001). The Medicare margin for hospital-based facilities also tends to be lower (–36 percent in fiscal year 2003) than the Medicare margin for freestanding facilities.⁵ This may be one of many reasons why some hospital-based facilities—about 26 percent between 1998 and 2002—have exited the Medicare program. The decline in hospital-based facilities does not appear to have led to a decline in beneficiaries’ access to care, though, because beneficiaries who otherwise would have been treated in these facilities either remain in the acute care hospital setting longer or receive care in a freestanding facility. However, the substantial declines in the number of hospital-based facilities participating in Medicare may indicate an imbalance in the distribution of payments across different types of patients in the SNF payment system.

Current payments and costs

One of the many factors we use to inform our update recommendation for fiscal year 2004 is the estimated relationship between SNF payments and costs (margin) for fiscal year 2003.⁶ To produce this estimate, we modeled fiscal year 2003 SNF payments and costs using methods

similar to those we use for all settings for which we make update recommendations:

- We used the latest cost report data available (fiscal year 2000) as the cost and payment base.
- We increased costs by the actual SNF market basket index for fiscal years 2001 and 2002 and used CMS’s forecast of the SNF market basket index for fiscal year 2003.
- We increased payments by the update factor that applied for each year starting after fiscal year 2000.

In modeling fiscal year 2003 payments and costs, we incorporated any policy changes scheduled in current law for fiscal year 2004. We excluded the 16.66 percent increase in the nursing component of the base rate from our estimate because it was implemented after fiscal year 2000 (our base year) and expired before fiscal year 2003 (the year we modeled). We deducted the 4 percent increase to all payment rates from the fiscal year 2000 payments before estimating fiscal year 2003 payments because this add-on is not scheduled to be in effect for fiscal year 2004. We included the 20 percent add-on for certain RUG–III groups in our projections because we anticipate that this increase will still be in effect in fiscal year 2004.⁷

We estimate that the overall Medicare margin for all SNFs will be about 5 percent in fiscal year 2003. This is about the same as the overall Medicare margin

for all SNFs we estimated for fiscal year 2002. However, the lack of a difference is due largely to our approach to estimating the Medicare margin for hospital-based SNFs—it is more conservative than last year’s approach.⁸ If we had used the same method as last year, we would likely have seen an increase in the Medicare margin for all SNFs in fiscal year 2003 both because the Medicare margin for freestanding SNFs increased substantially and the proportion of all SNFs that are freestanding increased between 1998 and 2002.

On average, we estimate that the Medicare margin for the 90 percent of all SNFs that are freestanding will be 11 percent in fiscal year 2003, an increase of less than 2 percentage points over the 9.4 percent we estimated for fiscal year 2002.⁹ The increase is due largely to substantial increases in freestanding SNFs’ reported margins between fiscal years 1999 and 2000. The reported margin for freestanding facilities was about 9 percent in fiscal year 1999 and just under 17 percent in fiscal year 2000 (see text box next page).

In contrast to the increase in the margin seen for freestanding facilities, the Medicare margin for hospital-based facilities does not appear to have changed much between fiscal year 1999 and fiscal year 2000 (–56 to –57 percent). However, the fiscal year 2003 Medicare margin for hospital-based facilities is different from that which we estimated for fiscal

5 Hospital-based SNFs’ higher case mix is only one factor that may explain the lower Medicare margin for these facilities. Recent research indicates that much of the difference between freestanding and hospital-based SNF margins is due to hospital-based SNFs having higher fixed costs (Pizer et al. 2002). To some extent, these higher fixed costs result from hospital cost allocation methods. Hospital-based SNFs may also offer a different product than freestanding SNFs, with more licensed staff and a much shorter average length of stay (MedPAC 2001).

6 A margin is calculated as payments less costs, divided by payments.

7 The 20 percent add-on for certain RUG–III groups that became effective in April 2000 was intended to give CMS time to refine the SNF classification system. BIPA changed this add-on, effective April 2001, by applying the 20 percent add-on only to nonrehabilitation RUG–III groups and applying a 6.7 percent add-on to all of the rehabilitation RUG–III groups. However, the 20 percent add-on as originally mandated in BBRA only applies in fiscal year 2000.

8 To estimate the fiscal year 2002 Medicare margin for hospital-based SNFs last year, we used the costs for freestanding SNFs and inflated them by 30 percent (our best estimate of the difference in costs attributable to a different case mix and product between the two types of facilities). In computing the fiscal year 2003 Medicare margin for hospital-based SNFs, we took a more conservative approach; we used the costs for hospital-based SNFs and deducted 17.5 percent (our best estimate of the amount attributable to hospital cost accounting based on a study sponsored by the Health Care Financing Administration [HCFA, now CMS] that estimated the range to be between 15 and 20 percent) (CHPS Consulting 1994).

9 The 9.4 percent estimate for fiscal year 2002 was modeled assuming that the 20 percent add-on to payments for 12 complex care groups and the 6.7 percent add-on to payments for 14 rehabilitation groups would remain in current law in fiscal year 2003. Because CMS has yet to announce a refinement of the SNF classification system, this add-on remains in effect.

Adjustment to freestanding skilled nursing facility costs (margin)

Prior to implementation of Medicare's prospective payment system for skilled nursing facilities (SNFs) in 1998, many nursing facilities designated separate and distinct units as Medicare SNF units. Nursing facilities would generally use the beds in these SNF units exclusively to care for patients during their Medicare coverage for SNF services; the rest of the nursing facility would generally care for other types of patients, such as long-term care patients paid for under Medicaid or with private resources. Nursing facilities that maintained separate units for Medicare and non-Medicare patients were required to report the costs of caring for their Medicare patients to the Medicare program each year, and Medicare payments were based on these reported costs for Medicare patients.

Under the SNF prospective payment system, Medicare no longer pays nursing facilities based on their reported costs; instead, facilities receive a fixed, case-mix adjusted per diem amount for each Medicare SNF patient. Consequently, many nursing facilities have abandoned their practice of maintaining a separate unit for

Medicare SNF patients, now interspersing them with non-Medicare patients throughout their facilities. The nursing facilities that made this change now report the average costs of caring for all patients in the facility to Medicare each year, instead of reporting separate costs for Medicare SNF patients only. Facilities may have chosen to make this change for a number of reasons: It allows them to keep patients in the same beds when the Medicare SNF coverage ends and patients must transition to other sources of coverage, and it allows facilities flexibility to accept more Medicare SNF patients.

Averaging Medicare and non-Medicare costs results in understated costs for Medicare patients. Medicare SNF patients generally require a higher level of nursing care than other patients. So, Medicare payment-to-cost ratios appear higher than they would if the SNFs' reported costs were only based on their Medicare patients. Independent analysis by the General Accounting Office using a different method reaches a similar conclusion—that the use of freestanding SNFs' unadjusted average costs in computing the Medicare

margin overstates SNFs' actual Medicare margin (GAO 2002b).

To account for this understatement of the actual costs of caring for Medicare SNF patients, we adjusted fiscal year 2000 costs. We estimated the cost differential between Medicare and non-Medicare patients in the 54 percent of SNF facilities that reported separate costs for each patient group in fiscal year 2000 and applied this adjustment to the Medicare costs for facilities that reported average costs across all patients. It should be noted that this adjustment relies on the accuracy of facilities' reported costs of caring for Medicare patients in the distinct part units, which are determined using cost-allocation methods. To the extent that these costs are overallocated, our adjustment would underestimate the true margin.

Prior to the adjustment, we estimate a fiscal year 2000 Medicare margin for freestanding SNFs of almost 20 percent. The adjustment brings the Medicare margin for fiscal year 2000 down to just under 17 percent. ■

year 2002, primarily because we changed the method to estimate the margin (see footnote 6). We estimate the hospital-based facilities' Medicare margin to be about -36 percent in fiscal year 2003. Differences in measured margins between hospital-based and freestanding facilities are difficult to interpret, because they result from both the artifact of hospitals' allocation of costs to their SNFs and differences in case mix and product between the two types of facilities.

Appropriateness of current costs

Under the cost-based Medicare payment system in effect for SNFs throughout most of the 1980s and 1990s, SNFs were paid based on their reported costs. Both the General Accounting Office (GAO) and the Office of Inspector General (OIG) found that these costs were excessively high (GAO 1998, OIG 1999b). According to that system, SNFs had limits for routine operating costs (for example, room and board) but no limits on costs for ancillary

services, such as physical therapy. Separate limits applied based on location (urban or rural) and whether facilities were hospital-based or freestanding, with hospital-based facilities having higher limits than freestanding facilities. In addition, new SNFs were exempt from the routine cost limits for up to their first four years of operation.

Because Medicare's payments were based on SNFs' costs and SNFs had little incentive to contain costs, Medicare spending grew rapidly during this period.

Between 1990 and 1996, for example, SNF spending grew at an average of about 23 percent per year (MedPAC 2002). Much of this growth in spending was due to increased provision of ancillary services.¹⁰

Under the prospective payment system, SNFs have financial incentives to decrease their costs, and evidence indicates that freestanding SNFs have responded accordingly.¹¹ Freestanding SNFs have lowered costs in a number of ways, including negotiating lower prices for contract therapy (physical, occupational, and speech therapists) and pharmaceuticals, substituting lower-cost labor for higher-cost labor (Liu et al. 2000), and decreasing the number of therapy staff (White 2001).

In addition, preliminary research suggests that the average number of minutes of therapy provided in freestanding SNFs may have declined (Gifford and Angelelli 2002) and that rehabilitation charges per patient per SNF day declined substantially in freestanding SNFs—in some cases, by as much as 47 percent—from 1997 to 2000 (White 2002c).

Freestanding SNFs appear to have responded to incentives in the prospective payment system by reducing the average number of minutes of physical, occupational, and speech therapy they provide per week to patients in each of the rehabilitation RUG–III groups. In contrast to prospective payment systems for most other providers, payment rates under the SNF prospective payment system for patients requiring rehabilitation therapy are determined based on the number of minutes per week SNFs actually provide—or estimate they will provide—rather than on the patients’ characteristics. So, to a certain extent, SNFs can determine the amount they are paid by controlling the number of therapy minutes

they provide per week. Prospective payments to SNFs increase at certain threshold amounts of therapy provided, meaning that SNFs are paid one rate for providing between 45 and 149 minutes of therapy to a given patient and a higher rate for providing between 150 and 324 minutes for that same patient, all else being equal. Thus, under the SNF prospective payment system, facilities have strong incentives to provide levels of therapy that correspond to the lower end of each range, unless they can provide enough therapy to move the patient into the next highest RUG–III group (Figure 2C–2).

The way the RUG–III payment rates are structured provides greater incentives for SNFs to treat patients needing moderate to high levels of therapy than patients in other groups because these types of patients tend to be more profitable for SNFs than patients in other groups. Studies have generally found that, since the SNF prospective payment system was implemented, SNFs increased the proportion of patients they care for in RUG–III groups requiring moderate to high levels of therapy and reduced the proportion of patients in the groups requiring either extremely high levels of therapy or no therapy (GAO 2002c, White 2002c).

Despite substantial evidence that the costs of caring for Medicare patients in freestanding SNFs have decreased, we can find no evidence of decreases in the quality of care delivered to beneficiaries in SNFs. This may be because SNFs’ costs were so high before the SNF prospective payment system that they had room to reduce their costs without reducing quality. Preliminary research examining national data from 1997 to 2000 has found no change in crude measures of quality—such as activity of daily living (ADL) scores, walking scores, rates of rehospitalizations, or incidence of

mortality (White 2002b). In addition, preliminary evidence from a study of 84,000 Medicare SNF patients in Ohio between 1997 and 2000 indicates that quality of care either remained the same or improved slightly over the period (Gifford and Angelelli 2002). Researchers found that rehospitalization rates improved among beneficiaries in certain Ohio SNFs, walking scores improved slightly, and other measures of quality remained relatively constant. They concluded that these findings were not attributable to changes in the case mix of patients.

Furthermore, studies point to a positive relationship between increased nursing staff times and nursing home quality of care (Abt 2001, HCFA 2000), and we find no evidence of declines in the overall amount of nursing staff time provided to beneficiaries since the SNF prospective payment system began. Studies by GAO and by the American Health Care Association (AHCA) both indicate that slight increases in nursing staff time may have occurred in SNFs between 2000 and 2002 (AHCA 2002, GAO 2002a). GAO reported that nursing staff time per patient per day increased by about 1.9 minutes; AHCA reported an increase of 4.8 minutes per patient day in freestanding facilities, with no change in hospital-based facilities. However, both studies indicate a shift in the mix of nursing staff time provided, with the proportion of time delivered by registered nurses declining and the proportion of time delivered by licensed nurse practitioners and nurse aides both increasing. Because we do not know what implications these changes might have for quality, it will be important to continue to monitor the quality of care in SNFs over time to ensure that changes in staff mix do not lead to decreases in quality in the future.

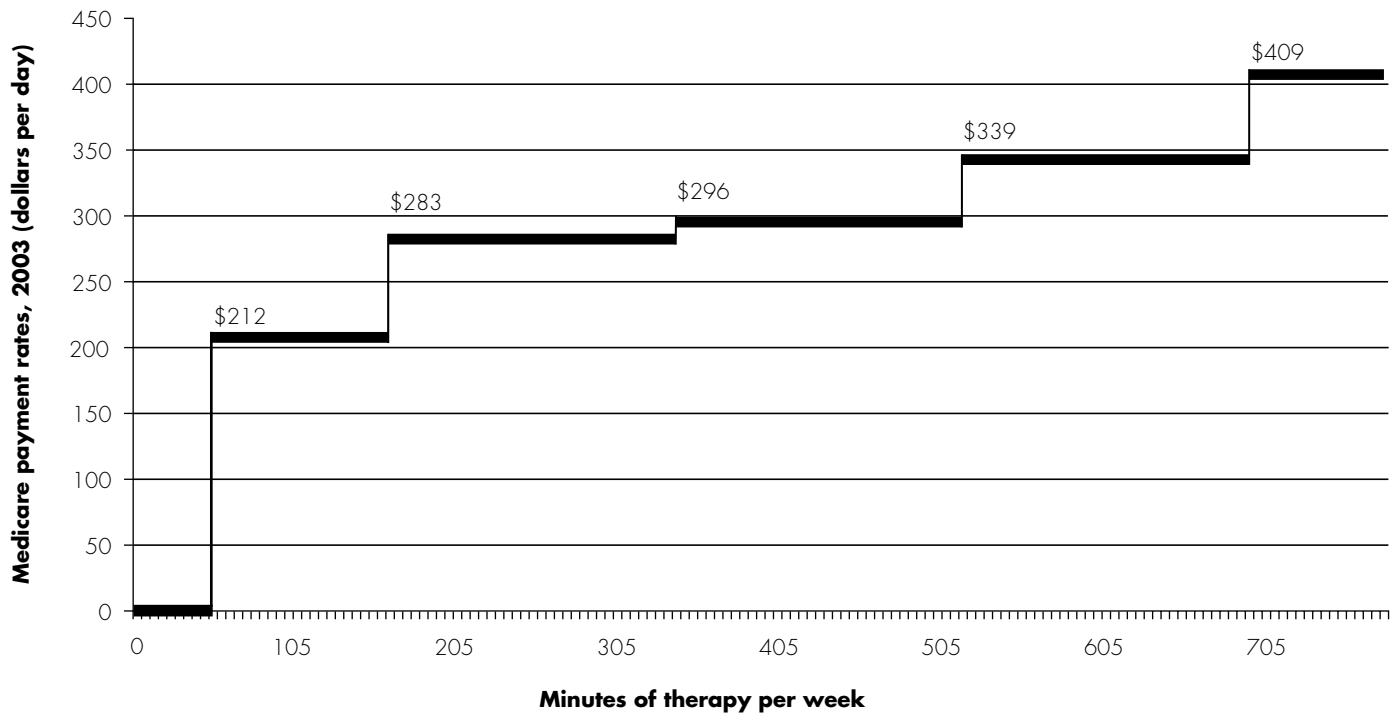
SNFs may have additional incentives to improve quality regardless of cost

10 In addition, during the 1990s, the OIG found that some SNFs were billing Medicare for therapy that was not medically necessary, that was provided by staff without the proper skill level to perform the therapy, and that may not have been provided at all. They also found that, in some cases, Medicare may have been paying SNFs as much as 86 percent more than the SNFs actually paid their contractors to provide the therapy. These improper billing practices likely contributed to Medicare’s spending increases for SNFs over the period (OIG 1999b).

11 Although freestanding SNFs appear to have lowered their costs significantly since the implementation of the SNF prospective payment system, evidence indicates that costs for hospital-based SNFs actually increased from 1997 to 1999. In fact, GAO reported that hospital-based SNF costs increased by \$29 per day from 1997 to 1999, while freestanding facilities’ costs decreased by \$49 per day over the same period (GAO 2002a).

**FIGURE
2C-2**

Skilled nursing facility payments and minutes of therapy for rehabilitation patients, 2003



Note: Payment rates are based on 2003 urban payment rates for a Medicare skilled nursing facility patient with Activities of Daily Living score of 9. The 6.7 percent payment add-on is included.

Source: CMS. Medicare program: prospective payment system and consolidated billing for skilled nursing facilities—update. Federal Register. July 31, 2002, Vol. 67, No. 147, p. 49802.

pressures because CMS has recently begun to publish nationwide reports with quality measures at the individual nursing facility level. CMS is also devoting resources to help nursing facilities that wish to improve their scores on these nationally reported measures. Nursing facilities generally indicate that they are aware of the public reporting of the quality measures and that they would like to improve their scores on future reports. Thus, this public reporting may serve as a countervailing force to maintain quality in nursing facilities even as the incentives of the prospective payment system encourage facilities to reduce costs.

We therefore conclude that SNFs have lowered the costs of inputs to providing care to Medicare beneficiaries. At the same time, we find no reductions in the

quality of care. Together, this points to an improvement in productivity in the SNF sector because SNFs appear to have been able to reduce the resources needed to produce SNF services while maintaining service quality.

Relationship of payments to costs

Although our estimate of the Medicare margin for SNFs provides one important piece of information regarding the adequacy of Medicare’s payments for SNF services, we look to other available evidence from market factors to ensure that Medicare payments are generally adequate to meet the needs of providers and beneficiaries. From this analysis, we can find no indications of overall problems with Medicare payments to SNFs.

Entry and exit of providers

The total number of SNFs participating in Medicare remained relatively stable between 1998 and 2002, declining by less than 1 percent in each of the first three years of the period and increasing by less than 1 percent between 2001 and 2002 (Table 2C-2). The patterns of entry and exit vary among different types of SNFs, however. From 1998 to 2002, the number of freestanding SNFs participating in Medicare increased by about 3 percent, while 26 percent of hospital-based SNFs have exited the program over the same period.

Recent research examining the entry and exit of SNF providers using average daily census measures and inflows and outflows of providers finds similar patterns in entry and exit (White 2002a). This research also

**TABLE
2C-2**

Change in the number of certified skilled nursing facilities, by type, 1998–2002

	1998	2001	2002	Percent change 1998–2002	Percent change 2001–2002
Hospital-based	2,173	1,762	1,611	-26%	-9%
Freestanding	12,862	12,993	13,204	3	2
All facility types	15,035	14,755	14,815	-1	<1

Source: MedPAC analysis of Online Survey, Certification, and Reporting (OSCAR) system data from CMS.

indicates that post-prospective payment system changes in SNF payment rates may be one of many factors determining whether facilities remained in the program or exited, though perhaps not the most important factor. Freestanding SNFs were more likely to close if they were new to the market, nonprofit, and smaller, with a smaller fraction of Medicare beds. They were less likely to exit if they had more patients needing high levels of rehabilitation therapy (more profitable under the prospective payment system) or fewer patients requiring expensive pharmaceutical services (which are not reimbursed outside of the per diem payment). Similarly, hospital-based SNFs were more likely to exit if they were new to the market, if they were for profit (especially members of chains), or if a greater proportion of their patients had high inhalation therapy costs. For the most part, only facilities experiencing more than a 40 percent decline in payments

after the implementation of the SNF prospective payment system had a higher than average exit rate from the program between 1998 and 2000.

The continuing entry of freestanding SNF providers—particularly for-profit freestanding providers—to the Medicare program may indicate that these providers find the flow of revenues from Medicare to be at least adequate. However, hospital-based SNF providers continue to leave the program. Analysis by MedPAC and others shows that hospital-based SNFs have a substantially higher case mix of patients than freestanding SNFs and may treat a disproportionate number of patients with expensive, nonrehabilitation therapy needs (Dalton and Howard 2002, Liu and Black 2002, MedPAC 2001). Because the SNF classification system appears to do a poor job of allocating resources according to the expected resource needs of rehabilitation and nonrehabilitation

patients, hospital-based SNFs may have more difficulty making a profit under the SNF prospective payment system than freestanding SNFs.

In addition, hospital administrators may be responding to increased demand for acute care services. Acute care hospital occupancy rates have increased in recent years at the same time that the nation is experiencing a shortage of nurses. Some hospital administrators report an increase in demand for hospital beds and nurses on the acute care side and may have shifted beds and nurses from the SNF to the acute care units. In some cases, this may have meant closing the SNF unit altogether.

Other possible reasons for hospital-based SNFs to exit may include large changes in Medicare reimbursements before and after the SNF prospective payment system and state and federal regulatory burden issues.

Changes in the volume of services

Changes in the volume of services delivered by a particular set of Medicare providers may indicate whether payments to those providers are too high or too low relative to providers' costs. If we see increases in the volume of services, this likely indicates that payments are at least adequate. Large increases may signal that payments are too high relative to costs.

The most recent available data from 2000 suggest that the volume of SNF services has increased overall (Table 2C-3).

**TABLE
2C-3**

Payment and use of skilled nursing facilities, 1996–2000

	1996	1997	1998	1999	2000	Percent change, 1999–2000
Payment (billions)	\$ 9.3	\$ 11.0	\$ 11.3	\$ 9.5	\$ 10.4	10%
Average payment/day	208	233	250	223	236	6
Discharges (1,000s)	1,318	1,582	1,588	1,450	1,439	-1
Covered days (1,000s)	44,639	47,295	45,240	42,535	44,103	4
Average days/discharge	33.9	29.9	28.5	29.3	30.7	5

Note: Data include facilities in Puerto Rico, Virgin Islands, and "unknown." Data do not include swing bed units.

Source: CMS.

The total number of discharges from SNFs remained essentially stable between 1999 and 2000, decreasing by less than 1 percent. Over this same period, the average length of stay in SNFs increased by more than one day. Hence, total Medicare covered days increased by about 4 percent from 1999 to 2000. Total Medicare payments to SNFs and average payments per day also increased, by 10 and 6 percent respectively, from 1999 to 2000. These payment increases reflect, at least in part, the payment add-ons that took effect in April 2000 (a 4 percent increase in payments for all RUG groups and a 20 percent increase in payments for 12 complex care groups).

Beneficiaries' access to care

In 2001, the OIG reported that beneficiaries generally did not have problems obtaining SNF care. However, the findings suggested that patients requiring costly services might have experienced delays in accessing SNF care (OIG 2001). These findings were consistent with those from a similar study in 2000 (OIG 2000).

In October 2002, MedPAC convened a focus group of 15 hospital discharge planners to continue to monitor patients' access to SNF care. These discharge planners told us that beneficiaries needing rehabilitation therapy services generally had no problem accessing SNF services. Certain beneficiaries needing expensive, nonrehabilitation services might remain in the acute care hospital longer than before the SNF prospective payment system. Hospitals are concerned about this because they do not receive additional Medicare reimbursement for the additional time these patients spend in the hospital (decreasing the profit hospitals can make on these patients). However, it is not clear that the additional time in the hospital is an inappropriate outcome for these patients. Overall, we did not find evidence of widespread access problems.

Because beneficiaries' access to care is such an important indicator of the adequacy of Medicare payments, it is imperative that we continue to monitor this market factor using the most current and reliable information possible. From 1999 to 2001, the Department of Health and Human Services' Office of Inspector General conducted an annual series of studies assessing beneficiaries' access to SNF services (OIG 1999a, OIG 2000, OIG 2001). The OIG did not issue a report on SNF access in 2002, and has indicated that it does not plan to continue these reports in the future. We believe these studies are an important and relevant addition to the policy process.

RECOMMENDATION 2C-1

The Secretary should continue a series of nationally representative studies on access to skilled nursing facility services (similar to studies previously conducted by the Department of Health and Human Services' Office of Inspector General).

IMPLICATIONS 2C-1

Spending

- This recommendation should not affect Medicare benefit spending.

Beneficiary and provider

- To the extent that future OIG studies allow us to monitor beneficiaries' access to SNF services closely and to react quickly if problems develop, they contribute to preserving beneficiaries' access to care. We believe this recommendation represents a minimal burden to providers.

In MedPAC's report to the Congress in March 2000, we recommended that the Secretary conduct annual studies to identify potential problems in

beneficiaries' access to care that may arise in the evolving Medicare program, particularly from the implementation of new payment systems in the various sectors (MedPAC 2000). The SNF payment system continues to evolve, indicating a need for continued monitoring of beneficiaries' access to SNF services.

Future reports do not need to be done on an annual basis; they may be necessary only every few years as long as no adverse trends in access are observed and as long as Medicare payments to SNFs remain relatively stable over the course of a few years. Primarily, it is important that a consistent knowledge base be built up over time in this area. We expect that the length of time between studies would generally be left to the discretion of the Secretary, as would the best operating division to conduct these studies (for example, OIG or CMS).

SNFs' access to capital

Overall, SNFs' access to capital may have been affected by recent bankruptcies, payment uncertainties, and the costs of liability insurance and lawsuits. However, the evidence does not suggest systematic problems with SNFs' access to capital that would pose problems for beneficiaries' overall access to SNF services.

Whereas Medicare payments for inpatient hospitalizations, for example, represent a relatively large share of hospitals' revenues, Medicare payments for SNF care represent a small share of both hospitals' and nursing facilities' revenues.¹² Thus, Medicare payments to SNFs have a less important role in determining whether SNFs are able to access capital than other factors, such as whether SNFs are associated with acute care hospitals or nursing facilities and the amount of funding SNFs receive from

¹² Medicare payments, on average, comprise about 10 to 12 percent of revenue for nursing facilities and about 2 percent for hospitals. Large for-profit nursing facility companies derive the largest share of revenues from Medicare, about 25 percent.

other sources. Given that Medicaid payments generally comprise the largest share of nursing home revenues, investors' views of the nursing home industry may be driven largely by perceptions of the adequacy of Medicaid payments. Current fiscal pressures and state budget cuts may be leading to decreases in Medicaid payments, which would tend to make investors more wary of investing in this sector than they have been in the past. However, to the extent that this may be happening, all indications are that this is more a reflection of the adequacy of Medicaid payments than Medicare payments to nursing homes (see text box below).

As mentioned earlier, hospital-based SNFs represent about 10 percent of all SNFs. They generally have access to capital through their parent hospital organizations; the extent to which they are able to access capital depends on the financial condition of the hospital as a

whole. (Hospitals' access to capital is discussed in more detail in Chapter 2A.)

About 90 percent of all SNFs are located within nursing facilities. The nursing facility industry consists of many small companies, with the top 10 nursing facility companies (as measured by the number of beds) controlling only about 18 percent of the market. Nursing facilities' access to capital may have been affected by recent bankruptcies, uncertainties about government revenues, and the cost of liability lawsuits and insurance.

Five of the 10 biggest for-profit publicly-held companies are either restructuring under Chapter 11 or have recently emerged from bankruptcy. Both GAO and CMS found that these bankruptcies resulted from extensive investment in ancillary service lines of business and high capital-related costs (such as depreciation, interest, and rent) (CMS 2002, GAO 2000). Some of these companies appear to be regaining

competitive ground as they emerge from bankruptcy (CMS 2002).

Most smaller- and mid-sized for-profit companies appear to have been able to respond to lower Medicare revenues under the prospective payment system by lowering their costs (Fitch 2001). If this fact is recognized by lenders, those facilities may have reasonable access to capital.

Uncertainty about government revenues and liability insurance rates and lawsuits continues to be a concern for the nursing facility sector. Uncertainty about whether or not the Congress intends to reinstate two temporary payment add-ons that expired on October 1, 2002 has caused investors to be generally cautious. In addition, nursing facilities have had a number of recently publicized problems with liability and lawsuits. One for-profit nursing facility chain sold 49 Florida nursing facilities last January in part because of liability concerns; another large nursing facility chain's stock price fell by over 16 points, to \$11.36, when it announced it was recording about \$55 million in additional costs for professional liability claims (Charles Schwab 2002, Standard & Poor's 2002).

Nonprofit SNFs had difficulty getting investment grade ratings both before and after the SNF prospective payment system.

The evidence regarding demand for capital in this sector is mixed. Some evidence indicates that the demand for capital to finance new construction may be low because of large capital investments in the late 1990s and nursing facility occupancy rates that average about 81 percent (National Investment Center 2001). On the other hand, we should be mindful of the need to replace old buildings and equipment, which may require additional capital to finance renovations and improvements to the existing capital stock.

Medicaid payments to nursing facilities

Many are concerned about potential inadequacies in Medicaid payments to nursing facilities. For this reason, many representatives of the nursing facility industry and others have suggested that Medicare should maintain higher payments—that far exceed the costs of caring for Medicare beneficiaries—in order to compensate for the lower Medicaid payments and maintain the financial stability of the industry.

However, MedPAC believes that using high Medicare payments to compensate for any inadequacies that may exist in Medicaid payments is an inefficient way of improving the financial situation of this industry for three reasons. First, Medicare payments represent about 10 to 12

percent of total revenues for the average nursing facility; with such a small base of revenues, Medicare cannot be expected to assume responsibility for the financial welfare of the whole industry. Second, if Medicare does assume this responsibility, states may be encouraged to reduce their Medicaid funding even further. Finally, using high Medicare payments to compensate for low Medicaid payments targets the money to the wrong facilities (i.e., more money would go to facilities with fewer Medicaid patients, instead of those facilities that presumably would need additional funding the most—those with a high proportion of Medicaid patients). ■

Accounting for cost changes in the coming year

MedPAC's update recommendations depend on two assessments: the adequacy of current payments for care in SNFs and expected changes in the costs of providing care in the coming year. As in other settings, when considering changes in costs in the coming year, we start with a forecast of the market basket index. The SNF market basket index, currently projected to be 2.9 percent for fiscal year 2004, provides a measure of how prices change for a fixed set of inputs to provide SNF care.

In predicting expected changes in costs for the coming year, we look for evidence of the adoption of quality-enhancing new technologies that put substantial upward pressure on the costs of care. We do not find evidence of quality-enhancing technological advances in the SNF sector that would significantly increase costs. The largest component of SNF costs is labor. The SNF market basket index is designed to account for any cost increases for labor and other inputs to the provision of services in SNFs.¹³

Similarly, we look for evidence of productivity growth that typically lowers the cost of providing care. Evidence shows that SNFs have lowered the costs of caring for Medicare beneficiaries in SNFs substantially since the SNF prospective payment system was implemented. This appears to have occurred without a reduction in the quality of care provided, indicating an overall improvement in productivity in the SNF sector. We expect this trend to continue into fiscal year 2004, with SNF productivity at least matching the economy-wide growth in multifactor productivity—about 0.9 percent per year—over the coming year.

Because we do not anticipate quality-enhancing advances in new technology that will significantly increase costs in this sector, our update recommendation is based primarily on our assessment of the adequacy of current payments to SNFs and our assumption that growth in productivity will continue over the next year.

Update recommendations

We estimate that overall Medicare payments to SNFs are adequate to cover the costs of caring for Medicare SNF patients, but the evidence indicates that the distribution of payments in the system may make it more difficult for facilities to profit from treating a higher proportion of patients with expensive, nonrehabilitation therapy needs. MedPAC therefore recommends two changes: one affecting the base payment amount and the other one affecting payments for SNF patients with expensive, nonrehabilitation therapy needs.

In our March 2002 recommendations, we recommended differential updates to freestanding and hospital-based SNFs because we believed that the development and implementation of a new SNF patient classification system would take too much time. We recommended differential updates as an interim measure. This year, we recommend more immediate measures to balance the distribution of payments in the system so they better track the expected resource needs of SNF patients. Differential updates are no longer necessary, unless the recommended changes do not occur rapidly enough.

RECOMMENDATION 2C-2

The Congress should eliminate the update to payment rates for skilled nursing facility services for fiscal year 2004.

Spending

- Because this recommendation provides no update to payments for skilled nursing facility services, whereas current law updates payments for these services by the SNF market basket index, this provision is expected to reduce Medicare spending relative to current law by between \$200 million and \$600 million for fiscal year 2004 and between \$1 billion and \$5 billion over 5 years.

Beneficiary and provider

- Because we estimate current Medicare payments to be substantially above the costs of caring for Medicare beneficiaries in SNFs, we expect little if any effect of this provision on beneficiaries' access to care. Similarly, we do not anticipate major problems for providers of SNF services, particularly in combination with Recommendation 2C-3.

Given that the overall Medicare margin for all SNFs is about 5 percent and that market factor evidence indicates no major problems in this sector, the base rate for all SNFs appears to be adequate and no update to payment rates is necessary at this time.

However, while we find overall Medicare payments to SNFs to be adequate, we remain concerned about the distribution of expenditures resulting from a SNF patient classification system that makes certain types of Medicare beneficiaries more profitable for SNFs to treat than others. For this reason, we combine this recommendation with a recommendation designed to improve the allocation of resources in the SNF payment system so that it will recognize and better balance the resource needs of SNF patients with respect to rehabilitation therapy and nonrehabilitation therapy needs.

¹³ In the years since the SNF prospective payment system was implemented, the projected SNF market basket index used to determine SNF payment rate updates has understated the actual SNF market basket index. Had CMS been able to go back and correct for this error in forecasting the market basket index, fiscal year 2003 Medicare payments to SNFs would exceed the costs of caring for Medicare SNF patients by more than the 5 percent we estimate.

RECOMMENDATION 2C-3A

Consistent with previous MedPAC recommendations, the Secretary should develop a new classification system for care in skilled nursing facilities.

Because it may take time to develop this system, the Secretary should draw on new and existing research to reallocate payments to achieve a better balance of available resources between the rehabilitation and nonrehabilitation groups.

To allow for immediate reallocation of resources, the Congress should give the Secretary the authority to:

- remove some or all of the 6.7 percent payment add-on currently applied to the rehabilitation RUG-III groups.
- reallocate money to the nonrehabilitation RUG-III groups to achieve a better balance of resources among all of the RUG-III groups.

RECOMMENDATION 2C-3B

If necessary action does not occur within a timely manner, the Congress should provide for a market basket update, less an adjustment for productivity growth of 0.9 percent, for hospital-based skilled nursing facilities to be effective October 1, 2003.

IMPLICATIONS 2C-3

Spending

- Because part A of this recommendation suggests a redistribution of resources already in the system, this provision is expected to be spending neutral.
- Part B of this recommendation would increase spending relative to the combination of Recommendation 2C-2 and Recommendation 2C-3A. However, it would not change the expectation of a reduction in spending for Recommendation 2C-2 of between \$200 million and \$600

History of skilled nursing facility payment add-on

In the Balanced Budget Refinement Act of 1999 (BBRA), the Congress mandated a 20 percent increase to the payment rates for 12 RUG-III groups covering medically complex cases in the extensive services, special care, and clinically complex groups, as well as 3 select rehabilitation RUGs. This payment increase began on April 1, 2000, and was designed to remain in effect until CMS announced a revised skilled nursing facility (SNF) classification system. MedPAC indicated at the time that this add-on was not a perfect solution, although it might help offset some provider expenses for these patients. MedPAC continued to be concerned, however, that Medicare's reimbursement rates for the rehabilitation RUGs were too high.

The following year in the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA), the Congress altered the payment increase mandated by BBRA

such that all 14 rehabilitation RUG-III groups, including those previously receiving the 20 percent add-on, would receive a 6.7 percent payment add-on until CMS announced a refinement to the classification system. BIPA left in place the 20 percent add-on to payment rates for the nonrehabilitation RUG-III groups. The revised payment add-ons became effective April 1, 2001.

The 6.7 percent payment rate add-on to the rehabilitation RUGs and the 20 percent payment add-on to the nonrehabilitation RUGs both remain in effect until CMS announces a refinement to the SNF classification system. At the moment, it is unclear when CMS might announce such a refinement, although they are required by law to report to the Congress on alternatives to the existing RUG-III payment system by January 1, 2005. ■

million over 1 year and between \$1 billion and \$5 billion over 5 years, relative to current law.

Beneficiary and provider

- To the extent that payments track more closely the expected resource needs of different types of SNF patients and increase the incentives for providers to accept patients with high nontherapy ancillary service needs, beneficiaries' access to care is expanded.
- To the extent that this provision redistributes payments to providers that care for a disproportionate number of SNF patients with high nontherapy ancillary service needs, Medicare payments may be more equitably distributed among SNF providers according to the costs of the patients they treat. To the extent that hospital-based SNFs treat more

of these types of patients, this redistribution should provide them with more resources.

The Commission remains concerned that the current SNF patient classification system does not appropriately distribute resources among patients with different types of resource needs. SNFs who care for more patients with expensive, nonrehabilitation therapy needs may not be able to operate as profitably under the SNF prospective payment system as SNFs that care for a higher proportion of patients with short-term rehabilitation needs. In addition, patients with expensive, nonrehabilitation therapy needs may experience longer delays in accessing SNF services than other types of patients. The Commission recommends a series of long-, intermediate-, and short-term steps to address these problems and better balance the available resources among patients with different types of resource needs.

In the long term, the problems described here cannot be fully addressed with the current SNF patient classification system. The best solution, therefore, is to develop a new system that distributes resources more appropriately among patients with different expected service needs.

However, a new payment system will almost surely take time to develop and implement. Therefore, as an intermediate step, we feel it is important to look to all currently available sources of information for ways to improve payments until a new classification system can be adopted.

Two key conditions must be met before the Secretary significantly restructures the current SNF patient classification system or implements any new SNF patient classification system:

1. Any changes must be demonstrated to be effective on a nationally representative sample of Medicare beneficiaries.
2. The new system must be more effective than the current system, in that it must explain more of the variation in SNF patients' expected resource needs.

Substantial improvements may still be years away, so a more immediate redistribution of resources is needed within the current payment system. Such redistribution involves adjusting the payment add-on that the Congress implemented in BBRA (and revised in BIPA) to give CMS time to refine the RUG-III payment system (see text box previous page).

Accordingly, the Congress should give the Secretary the authority to redistribute some or all of the 6.7 percent payment increase from the rehabilitation RUG-III groups to the nonrehabilitation groups. This has no effect on the 20 percent add-on to payment rates for the nonrehabilitation RUGs in current law. Payments to SNFs for rehabilitation patients appeared more than adequate even before the Congress implemented the 6.7 percent payment add-on to the rehabilitation RUGs, and payments to SNFs for nonrehabilitation patients appear not to be adequate even with the 20 percent add-on currently in effect. ■

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SECTION
2D

**Assessing payment adequacy
and updating payments
for home health services**

R E C O M M E N D A T I O N S

2D-1 The Secretary should continue a series of nationally representative studies on access to home health services (similar to studies previously conducted by the Department of Health and Human Services' Office of Inspector General).

***YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1**

.....
2D-2 The Congress should extend for one year add-on payments at 5 percent for home health services provided to Medicare beneficiaries who live in rural areas.

YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1

.....
2D-3 The Congress should eliminate the update to payment rates for home health services for fiscal year 2004.

YES: 15 • NO: 0 • NOT VOTING: 1 • ABSENT: 1

***COMMISSIONERS' VOTING RESULTS**

SECTION 2D

Section 2D: Assessing payment adequacy and updating payments for home health services

In this section

- Assessing payment adequacy
 - Accounting for providers' cost changes in the coming year
 - Update recommendation
-

Our review of the evidence finds that aggregate Medicare payments for home health services are more than adequate relative to costs, even after accounting for the reduction in the base payment for fiscal year 2003. Our estimate of the Medicare margin for home health services in fiscal year 2003 is 23.3 percent. Changes in the home health product over the past five years have reduced the costs of producing an episode of home health services. Our evidence suggests that the costs of producing an episode of home health services will continue to decrease, at a slower pace, over the coming year. Medicare spending for home health is projected to increase due to growth in both the number of users and payments per user. Other broad indicators also suggest that payments are adequate: access to care is generally good, the rate of decline in the number of users has decreased, and the entry and exit of agencies has remained stable for the third year in a row.

Background

Assessing payment adequacy and making an appropriate update for home health services requires consideration of the benefit itself, how providers are paid for the services, and the context of recent trends in spending.

Home health care is skilled nursing, aide service, medical social work, or therapy provided to beneficiaries in their places of residence. To qualify for Medicare's home health benefit, beneficiaries must meet the program's eligibility criteria: they must need part-time or intermittent skilled care to treat their illness or injury, and they must be homebound. Medicare's coverage does not include unskilled care to maintain a person's health unless it is required in conjunction with medical treatment by a skilled medical professional. In some instances, skilled care over a long period of time would be covered. Also in some instances, skilled care for patients whose medical condition is stable would be covered. However, patients who need more or less full time skilled nursing care over an extended period of time generally would not qualify for Medicare home health benefits (CMS 2001). To qualify for coverage, beneficiaries must also be unable to leave their homes without considerable effort.

Throughout the early 1990s the use of the home health benefit changed. A growing proportion of the home health benefit was directed toward beneficiaries' long term care needs, and less to the medical services necessary for the diagnosis and treatment of illness or injury that are covered under other Medicare post-acute care benefits. By 1996, one-third of all visits were provided to beneficiaries who received over 300 visits a year (MedPAC 1998). Legislative changes to Medicare in the Balanced Budget Act of 1997 (BBA) included refinements to the eligibility standards and two new payment systems that made home health care more similar to Medicare's other post-acute care

services. The continuing impact of the changes made in 1997 is evident in 2001 in substantially slower but continuing declines in the number of home health users, the duration of their care, and the number of visits they use. This chapter examines the change in the home health product, and the implications for our assessment of payment adequacy.

Home health services payment system

The current structure of the payment system continues to have a profound effect on home health services (see text box). Under Medicare's prospective payment system (PPS) for home health care implemented in October 2000, home health agencies receive payment for 60-day episodes of care. Neither copayments nor deductibles apply to home health. The base payment amount for an episode of care is \$2,160 for fiscal year 2003. The base payment is adjusted to account for differences in patients' expected resource needs, as reflected by their clinical and functional severity, recent use of other health services, and therapy use. Payment also is adjusted for differences in local market conditions by the hospital wage index. Adjustments for several other special circumstances, such as outliers or episodes with four or fewer visits, can also modify the payment (see Appendix A for more information on the home health payment system).

The structure of the home health PPS provides financial incentives for home health agencies to reduce the number of visits delivered in an episode of care. So long as high quality of care persists, we can infer that such declines increase the efficiency of the provider, rather than adversely affect patients' outcomes. Concern about the incentives that the PPS would introduce once it was implemented led CMS to develop the Outcome and Assessment Information Set (OASIS) to monitor the quality of home health care. We have used OASIS measures as part of our assessment of payment adequacy to

indicate whether high quality of care has persisted.

Trends in Medicare payments for home health services

Over the past 10 years, Medicare spending for home health has changed from unprecedented growth to rapid decline, only to return to projections of rapid growth for the next 5 years. Between 1990 and 1996, spending grew nearly 400 percent, with some year-to-year growth as high as 50 percent (Figure 2D-1, p. 6).

Previous research (Komisar and Feder 1998) disaggregated the components of growth in spending from 1990 to 1996 and attributed it to increases in the:

- number of Medicare beneficiaries, 7 percent
- proportion of home health users among Medicare beneficiaries, 36 percent
- visits per home health user, 49 percent
- average payment per visit, 9 percent.

This research suggests that the level of payment per unit of service is only one influence among several that affect the spending and use of the home health benefit. At its high point in 1997, Medicare spent \$18 billion on home health services for beneficiaries.

Changes to the home health benefit—especially changes to the system of paying for home health—led to a rapid decline in use, and hence spending, after 1997 (see text box). In 2001, Medicare spent between \$9 and \$11 billion¹ on home health services; as a sector, home health represented about 4 percent of total Medicare fee for service spending (Figure 2D-1, p. 106). Spending for home health services is composed entirely of program spending; beneficiaries have no cost-sharing obligations for home health services.

¹ Estimates from the Congressional Budget Office and Office of the Actuary vary.

Changes in use of the Medicare home health benefit

Use of Medicare's home health benefit has changed considerably over the past 10 years. In 1990, fewer than 2 million beneficiaries used the home health benefit. Between 1990 and 1996, the number of users grew 85 percent, adding over one million beneficiaries to the number of users of the benefit. The trend was reversed in 1997; by 2001 the number of users had fallen to around 2.2 million.

Three influences—changes in the criteria for beneficiaries' eligibility to receive home health services, enforcement of the rules of the program for providers, and the structure of the payment system and incentives associated with it—have shaped the trends in use and spending for Medicare's home health benefit over the past 10 years as much or more than the level of payment for a unit of home health service.

Leading to growth

- **Eligibility.** In 1989, a legal decision (*Duggan v. Bowen*) made the Health Care Financing Administration (HCFA, now CMS) change its interpretation of eligibility for the benefit so that persons who needed daily, long-term-care—often beneficiaries with chronic conditions—could qualify.
- **Enforcement.** That legal decision also constrained HCFA's ability to deny coverage and payment in many instances. Pursuant to the decision, HCFA could no longer deny payments for some marginal visits

for a given beneficiary based upon general inferences about patients with similar diagnoses, but instead had to review the entire case of each beneficiary individually.

- **Incentives.** Prior to the PPS, home health agencies were paid for each visit according to visit types—generally therapy, nursing, or home health aide. Per-visit payments encouraged agencies to provide as many visits as possible as long as their costs were less than the per-visit payment limits for that type of visit.

Following these changes, use of the benefit grew. In 1996, over 3.5 million beneficiaries used the home health benefit. Concern over the rapid rate of growth and the changing nature of the services led to legislation and other actions intended to reverse the trends.

Changing direction

- **Eligibility.** In 1997, the BBA clarified the acceptable frequency of visits and removed the drawing of blood as a qualifying service. By defining the term “part-time or intermittent,” the BBA narrowed coverage of very frequent or nearly full-time care from 56 hours per week of nursing and home health aide service to 35 hours per week (Komisar and Feder 1998). Agencies reported that excluding the drawing of blood decreased the number of users “significantly” in at least six high-use states (GAO 1999).

- **Enforcement.** The Secretary initiated Operation Restore Trust,¹ which scrutinized Medicare home health, prompted the involuntary closure of hundreds of agencies that were not in compliance with the program's integrity standards, and established civil liabilities for physicians who knowingly falsely certified the eligibility of a beneficiary.

- **Incentives.** The structure of the interim payment system (IPS) implemented in 1997 gave incentives for agencies to maintain a mix of patients who needed few visits and inexpensive visits to stay below the cost limits. Under IPS, agencies were paid the lesser of actual costs, aggregate costs per beneficiary subject to an agency-specific limit, or aggregate costs per visit subject to an agency-specific limit. There were no outlier payments for high cost patients. In MedPAC's survey of changes in provider behavior, providers stated that many tried to avoid costly patients under the IPS (Stoner et al. 1999).

In the wake of these changes, the number of Medicare beneficiaries using home health care decreased by about one million. The decrease in use was caused by decreases in the number of eligible beneficiaries, a decline in the number of beneficiaries who needed continuous care using the benefit, a decline in fraudulent or questionable use of the benefit, and the structure and incentives of the IPS. Fifteen percent of

(continued next page)

¹ Operation Restore Trust began as a demonstration project in 1995 in California, Florida, Illinois, New York, and Texas and was expanded to additional states in 1997. It included skilled nursing facilities and other sectors of Medicare in addition to home health.

Changes in use of the Medicare home health benefit (continued)

users in 1996 had more than 150 visits in the year; the decline in the average visits per user from 1997 to 2001 (see “Changes in volume,” p. 110) suggests that such heavy use is no longer common.

Though there were fewer Medicare home health users in 2001 than in 1999, the rate of decline has slowed. Use of home health is projected to return to its pattern of growth as the effects of the PPS are more fully felt (CBO 2002). The PPS creates an environment that allows providers to care for costlier, more complex patients with less financial risk than under the IPS.

Anticipating growth

- **Incentives.** The PPS removes some of the features of the IPS that contributed to the decline in home health users. Under PPS, agencies

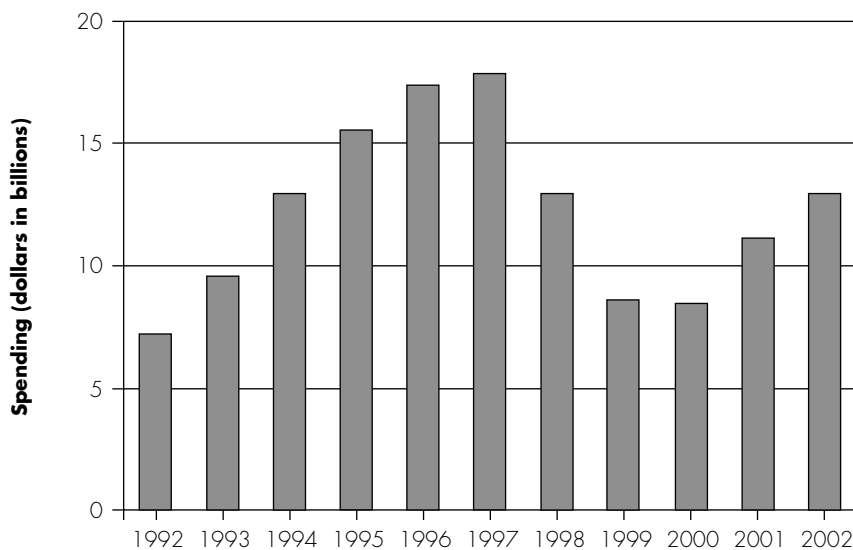
can maximize margins by keeping costs per episode below the payment and by maximizing the number of episodes they provide. The PPS reflects the clinical and functional severity of the patient in the episode payment; thus an episode that is likely to be costly receives a higher reimbursement than one for a beneficiary with lower expected resource needs. Reflecting the anticipated needs of the patient in the payment removes the disincentive to care for patients with costly care needs.

The PPS pays more for patients who need therapy (as long as at least 10 therapy visits are provided) and for multiple episodes of home health care use. It also has an outlier policy to pay for the costliest patients. While one could expect more dramatic changes in use than have been observed thus far, the new system may require some refinements and it may take some time for providers to adapt.

- **Eligibility.** The “homebound” criteria was loosened by BIPA. Some beneficiaries who would have been ineligible due to their participation in religious services or adult day care will now be eligible to receive the benefit. This could increase the number of beneficiaries using the home health benefit, though the General Accounting Office estimates that the impact will be negligible (GAO 2002a).
- **Enforcement.** The Office of Inspector General continues to monitor this sector for fraudulent or abusive behavior. Physicians remain cautious due to what they perceive to be harsh penalties for improper home health referrals. Due to the continued diligence, it seems unlikely that inappropriate use of the benefit will increase. ■

FIGURE 2D-1

Estimated spending for home health, 1992-2002



Source: Office of the Actuary, CMS, 2002.

In its March 2002 detailed baseline estimate, the Congressional Budget Office (CBO) projected an average annual growth for Medicare home health of 17 percent from 2002 to 2007. In August, the CBO indicated that they will revise their March estimate downward for home health spending because of a new, more moderate projection of the growth in use of the benefit. CBO’s updated projections for home health services have not yet been released.

Assessing payment adequacy

Our analysis of current payments and costs for Medicare home health services concludes that payments are more than adequate. This conclusion is based on

estimates of a substantial, positive aggregate margin; a high ratio of payments to charges for claims for both urban and rural beneficiaries' services; evidence of product change; declining visit volume; generally good access to care; and a stable number of providers with little entry or exit.

Current payments and costs

We used three different approaches to estimate the current relationship of payments to efficient provider's costs. First, we estimated the aggregate Medicare margin using reported costs and payments from a sample of agencies' cost reports from fiscal year 2001. Next, we combined reported costs from 1999 with claims from 2001 and 2002 to estimate the impact of changes in visit volume on costs. Combining the first and second estimates allowed us to project margins for the current year. Finally, we used claims from 2001 and 2002 to calculate the ratio of payments to charges for different types of episodes as well as for urban and rural beneficiaries. We also reviewed the General Accounting Office's estimate of payments and costs per episode.

Together, these estimates show that current payments are more than adequate when compared to costs.

Medicare margin

One method the Commission uses to evaluate the adequacy of current payments is calculating the relationship between payments and costs (Table 2D-1). Current costs and payments are estimated by updating the most recent available data. For the home health sector, the most recent available cost reports cover fiscal year 2001 (October 1, 2000 to September 31, 2001), the period immediately following the implementation of the PPS.

Seven hundred freestanding agencies' cost reports were available; as a sample they represent about 10 percent of all Medicare certified agencies. These margins do not include hospital-based home health agencies because their cost reports for

fiscal 2001 were not yet available. About 30 percent of all agencies were hospital-based in 2000. The sample was not random, though it did contain a proportional number of urban and rural providers and a proportional number of providers by type of control (voluntary, private, and government).

In modeling 2003 payments and costs, we incorporate both policy changes that went into effect in 2003 and those scheduled to be in effect in 2004. For the home health sector, the 2003 estimate includes the effect of the so-called "15 percent cut" implemented on October 1, 2002 and the expiration of the 10 percent rural add-on for services provided to beneficiaries living outside metropolitan areas. Though the add-on is not scheduled to expire until April 2003, in our estimate we removed it for all of 2003 to better inform our decision regarding the 2004 update.

We estimate that the aggregate financial Medicare margin for all home health agencies is 23 percent in fiscal year 2003. The estimate of margins in 2003 incorporates the increase in the base rate of payment in fiscal year 2002, the decrease in the base rate due to the "15 percent cut" in fiscal year 2003, the effects of the expiration of the rural add-on, and continuing small declines in the cost of producing an episode of care.

The current estimated Medicare financial margin of 23 percent suggests that aggregate payments are more than adequate when compared to costs. We were able to measure some variations in margins two ways: by the total volume of visits for each agency and by the urban or rural location of the agency. We calculate the total number of episodes provided by an agency and divide all the agencies into one of five equal-sized groups. The 20 percent of agencies with the lowest volume are in the "lowest 20th percentile" group; the 20 percent with the highest volume are in the "highest 100th percentile" group, and so on. All estimated margins are positive; and the highest percentile group's margin is five times that of the lowest percentile group.

TABLE 2D-1 Freestanding home health Medicare margin, by agency group, 2001 and estimated 2003

Agency group	2001	2003
All agencies	21.9%	23.3%
Urban	22.0	23.9
Rural	21.6	19.1
Volume of episodes		
Lowest 20 th percentile	5.2	7.5
40 th percentile	7.9	10.2
60 th percentile	14.3	16.5
80 th percentile	16.4	18.5
Highest 100 th percentile	26.3	28.1

Note: Data for 2001 are preliminary, based on 10 percent of all agencies covered by prospective payment. Data for 2003 are estimated.

Source: MedPAC analysis of Medicare cost report data from CMS.

Our analysis cannot exclude factors other than visit volume that could explain differences among the margins for the agencies in these percentiles. However, it does suggest that visit volume may have an impact on margin. The small size of the current sample—10 percent of all agencies reporting—suggests caution in interpreting the results we do have and tends to preclude further disaggregation.

Though margins are more than adequate in aggregate, there may be variations in the experience under PPS among some types of agencies. For example, lower margins for rural agencies suggest that some variation in their costs is not accounted for by the current payment system. Similarly, voluntary agencies that are likely to be the provider of last resort may have lower margins. Moreover, there may be other groups of agencies whose margins are significantly higher or lower than the aggregate margin that we have not yet been able to identify. Finally, we know that there is variation in how the benefit is provided across the country. If distributional issues are present and

persist, it will be difficult for financially stressed agencies to meet the needs of an aging population (see Chapter 3).

Impact of changes in volume on per unit costs

In our estimate of the current aggregate margin, we applied an estimate of cost changes rather than assuming that costs would rise at the same rate as input prices as measured by the market basket. Our second analysis of the relationship between payments and costs—designed to measure the cost changes associated with declining visit volume—determined that costs per episode fell by 16 percent from 1999 to 2001. Much of the 16 percent decline occurred before the PPS; the decline over the course of 2001 was 5 percent. Taking into account the steep decline that preceded the PPS as well as evidence that the decline continued at a slower pace after the PPS, we assumed that costs fell 2.5 percent each year between 2001 and 2003. We used this estimate of the changes in costs in our estimate of margins for 2003 instead of assuming that costs rose at the same rate as the market basket.

To estimate the change in costs, we began with costs² as reported on home health agencies' cost reports for 1999. First, we divided total costs into fixed and variable costs. Next, we inflated both by the market basket for 2000 and 2001. Then we applied the inflated variable costs to the number of visits by type in the beginning of 2001 and the end of 2001. This allowed us to account for both changes in the number of visits as well as the more costly, higher intensity mix of therapy and nontherapy visits in 2001 compared to 1999. Finally, we added fixed and variable costs to estimate total costs.

We made two assumptions that lead our model to err on the side of producing high costs per episode and underestimating the decreases in costs. First we assumed that fixed costs did not decline as volume

**TABLE
2D-2**

Ratio of payments to charges, by type of home health episode, 2001 and 2002

	January– June 2001	July– December 2001	January– June 2002
All episodes	1.03	1.09	1.12
Urban	1.02	1.08	1.11
Rural	1.04	1.12	1.16
Episodes with four or fewer visits	0.76	0.77	0.76
Outlier episodes	0.47	0.46	0.48

Note: Urban episodes include services delivered to beneficiaries who reside within a metropolitan statistical area (MSA). Rural episodes include services provided to beneficiaries who reside outside an MSA. Episodes with four or fewer visits are paid per visit by visit type, rather than by the episode; this is the low-utilization payment adjustment.

Source: MedPAC analysis of the 5 percent Standard Analytic File of home health claims from CMS.

declined but instead rose by the full rate of increase in input prices. Second, we assumed that variable costs per visit rose by the full rate of increase in input prices; that is, productivity had no impact on costs per visit while such influences as rising wages would increase costs. A caveat is warranted: this estimate can not account for changes in the visit itself—such as activities performed during a visit, supplies used, or the length of the visit—that may have had an impact on costs per visit beyond changes in input prices.

Ratio of payments to charges

In addition to our estimate of the aggregate margins, we used claims from all of calendar year 2001 and the first six months of 2002 to calculate the ratio of aggregate payments to charges. This ratio is not the typical ratio of payments to costs that MedPAC uses in other sectors. However, we believe it is illuminating because it allows us to use very recent data, to look at different episode types, and to compare urban and rural beneficiaries.

From this analysis we concluded that the ratio of payments to charges was greater

than 1.0 in the beginning of 2001 and was still rising by the middle of 2002 (Table 2D-2).

This ratio of payments to charges implies that the program currently pays more in the aggregate for services than it would have been charged under the previous system of charges per visit by visit type.

The ratio reinforces the conclusion that payments are more than adequate compared to costs. To arrive at this conclusion, we made two assumptions. First, we assumed that charges are as high or higher than costs. Basic economics would suggest that this is usually true. Second, we assumed that current charges are accurate. Under the cost-based system, Medicare paid agencies the lesser of their reasonable costs or customary charges. Thus, there was a strong incentive to set charges higher than costs. At that time, the ratio of payments to charges was about 0.73.³ The current payment to charge ratios for low utilization payment adjustment (LUPA) episodes—wherein services are paid per visit by visit type—is almost the same as the ratios under the cost-based payment system when

2 Costs included visits, supplies, and outpatient therapy provided to home health users.

3 Under the cost-based system, the ratios were 0.74 in 1994 (Leon et al. 1997) and 0.73 in 1997 (HCFA 2000).

**TABLE
2D-3**

Use of home health after the PPS

	January– June 2001	July– December 2001	January– June 2002
Average visits per episode	22	21	20
Median visits per episode	16	15	15
Average length of stay (days)	46	47	44

Note: PPS (prospective payment system). Excludes episodes subject to the low utilization payment adjustment (LUPA) that contain four or fewer visits and are reimbursed differently from regular episodes. Beneficiaries' length of stay may span several episodes.

Source: MedPAC analysis of the 5 percent Standard Analytic File of home health claims from CMS.

be in line with costs because current payments are based on previously measured costs of production.

There are two caveats to using the average number of visits per episode as an indicator of product change. First, the decline in the number of visits per episode has not been similar from state to state. State by state average visits per episode vary widely. Although all states' averages have declined since 1997, the average number of visits per episode in some states remains high. In the first six months of 2001, home health users in Washington State received 13 visits per episode while those in Utah received 28 (GAO 2002b). Heavy use in some states pulls the national average well above the median number of visits per episode (Table 2D-3).

Second, counting the number of visits does not give us complete information about the amount of time that nurses, therapists, and others are spending in their patients' homes during a visit. If the time spent per visit is changing along with the number of visits per episode, then measuring the number of visits may fail to capture real changes in the amount of service beneficiaries receive.

Declines in the average number of visits per episode are one indicator that the product may be changing. In 1997, home health users, on average, received 36 visits in 60 days. In 1999 that number dropped to 29 visits. Over the course of the most recent year and a half, the average number of visits per 60-day episode has continued to decline at a slower rate than before the PPS, from 22 to 20 (Table 2D-3).

Another indication of the changing product is the dramatic decline in the average length of stay (LOS) of home health patients. The LOS measures the number of days between the day beneficiaries receive their first home health visit and the day upon which they are discharged from treatment.⁴ Unlike patients in other settings (e.g., acute care hospitals or skilled nursing facilities), home health patients rarely receive visits

incentives to set charges higher than costs were in place (Table 2D-2).

These aggregate charges included charges for visits, medical supplies, and drugs used during the episode of care. We calculated the ratio for full episodes as well as high-cost outlier episodes, episodes that include a beneficiary's significant change in condition and reclassification, and episodes with four or fewer visits that are paid by the visit.

We compared claims for services provided to urban and rural beneficiaries. In each of the three periods, the rural ratio was higher than the urban one. For example, in the first six months of 2002, agencies were paid \$1.11 for each dollar in charges for services provided to urban beneficiaries, while agencies were paid \$1.16 for each dollar in charges for services provided to rural beneficiaries. In the latter two periods, the impact of the 10 percent add-on for services provided to beneficiaries living in rural areas was evident. If the add-on were not in effect, the rural ratio would still have been greater than one, and greater than the urban ratio. The relationship between urban and rural ratios was the same even when we distinguish rural beneficiaries by types of rural areas.

General Accounting Office's analysis

This past summer, the General Accounting Office (GAO) also examined

CMS claims data. They estimated that the average episode payment of \$2,700 was \$700 above the average episode cost in 2001, an overpayment of about 35 percent. To create the estimate, GAO began with CMS's estimated visit costs by visit type for 1999 (based upon an audited sample of 1997 cost reports). GAO used the home health market basket to inflate costs to 2001. To estimate episode costs, they used half a year of home health claims (January to June 2001) to calculate the average number and type of visits in each type of episode and multiplied the estimated visit costs by those averages. GAO concluded that the magnitude of the disparity between payments and estimated costs demonstrated that a reduction in payment rates—such as the implementation of the “15 percent cut”—would not harm the industry.

Appropriateness of current costs

Medicare home health services have changed consistently with the implementation of the PPS. The prevailing mode of Medicare home health care post-PPS is changing from the maintenance of consistently ill or disabled people over time at low intensity to recovery from an acute illness or injury over a short period of time with a concentration on therapy. The change began in 1997 and continued with the implementation of the PPS in 2000. Due to this change, payments may no longer

4 Under the PPS, a beneficiary may receive multiple 60-day episodes of home health services, as long as they remain eligible for the benefit. Thus, a single stay is the amount of time between the start of care and discharge; it may be one 60-day payment episode or several payment episodes.

on every day during their stay; and on some days patients may receive more than one visit. However, the home health LOS measures the duration of the observation, evaluation, and treatment of the patient's condition, even though the visits are intermittent. In 1997, the LOS was 106 days; by 1999, that number had fallen to 69 (McCall et al. 2001). In the first six months of 2002, the average length of stay for a Medicare beneficiary was 44 days (Table 2D-3). When episodes that contain 4 or fewer visits are included in the LOS calculation, the latest LOS falls further to 41 days, less than half the duration of care only 2 years earlier.

The mix of visit types has also been changing. As Table 2D-4 indicates, home health care under the PPS after October 2000 has a greater concentration of therapy compared with the payment systems that preceded the PPS. In 1997, the prevailing pattern was more typical of maintaining consistently ill or disabled persons in their homes over a long period of time, with much of the service provided by home health aides.

One aspect of home health services that surprisingly has not changed under the PPS is the provision of very short duration care. Because of strong incentives in the payment system, it was predicted that episodes of care consisting of four or fewer visits (LUPAs or low utilization

payment adjustments) would dwindle under prospective payment. HHAs that make at least five visits qualify for an episode payment and avoid the LUPA; even the highest LUPA payments are much lower than the lowest episode payment. In 1997, these very short episodes comprised about 15 percent of all episodes. In its construction of the new payment system, CMS predicted that the proportion of very short episodes would fall to 5 percent (CMS 2000). However, our analysis of claims in 2001 indicates that 14 percent of all episodes for that year had four or fewer visits.

This section has discussed three home health indicators that suggest that the home health product is changing in the wake of the implementation of the PPS and one indicator that (surprisingly) has not changed. The average number of visits per episode and the LOS have declined. The mix of visits by type has shifted toward therapy and away from home health aide services. However, the incidence of LUPA episodes, despite the incentives in the payment system to avoid them, has remained about the same. The persistence of LUPA episodes suggests that one widely anticipated behavioral response to the PPS has not yet occurred. Otherwise, HHAs have responded to the incentives of the new payment system.

Relationship of payments to costs

Our analysis indicates that home health agencies are paid more than adequately under the PPS, even after accounting for the impact of the 7 percent payment reduction (the "15 percent cut"). Indeed, aggregate margins under the home health PPS are higher than those we estimated for any other sector in Medicare. Also we do not observe measurable reductions in the quality of care—although data on this point are limited. Other market factors also indicate that payments are at least adequate compared to costs.

Changes in volume

The volume of home services in terms of the total number of visits provided has continued its post-1997 decline because a drop in the number of users has compounded the decrease in the average number of visits per user.⁵ In 1997, 3.3 million beneficiaries used home health services during the year. By 1999, that number had fallen to 2.5 million (McCall et al. 2001). Following the implementation of the PPS, the number of users has continued to decline. Our analysis of CMS's claims database identified 2.2 million beneficiaries using home health care in 2001.

Many factors explain both the increase and the decrease. Examples include the level of fraud and abuse oversight; the stringency of eligibility and medical necessity criteria; and the incentives of the prevailing payment systems. To the extent that users left the system as a result of fraud and abuse oversight; tighter applications of eligibility and medical necessity requirements; and the elimination of payment incentives that rewarded the inefficient use of services, reductions in the numbers of users may be warranted. However, to the extent that users who qualify for the benefit cannot access home health services, declines in the number of users are cause for concern.

TABLE 2D-4

Share of visits per home health episode, by type of visit

Type of visit	Pre-PPS			Post-PPS
	1997	1998	1999	
Therapy	9%	11%	15%	23%
Home health aide	49	42	35	27
Skilled nurse	41	45	48	49

Note: The prospective payment system (PPS) began in October 2000. "Post-PPS" refers to October 2000 through September 2001. Columns do not sum to 100 percent because data were not available for all visit types.

Source: CMS analysis of the national claims history file.

⁵ Estimates of use are based on fee-for-service claims and do not include Medicare+Choice enrollees.

Under the PPS, there are mechanisms that should encourage agencies to take high complexity patients—a case mix measure that adjusts payments based on complexity, multiple episodes if patients need extended care, and an outlier payment mechanism for high-cost patients. Nonetheless, the number of users continues to decline. These declines have occurred even though demographic and clinical indicators would lead us to expect an increase in home health use; in fact, estimators have repeatedly predicted annual increases in utilization. MedPAC plans to extend its current analysis of cost and use data to explore the variation in agencies' experiences and the impact of the payment system. Additionally, we note that CMS has plans to refine the PPS and to that end is:

- developing a database of claims associated with the start-of-care and discharge OASIS assessments so that outcomes and utilization can be linked,
- developing a tool for medical review of claims to detect evidence of stinting,
- providing case mix and adverse event reports to agencies so that they can monitor their processes and outcomes at the individual patient level, and
- planning to report quality information to home health care consumers.

With respect to elements of the payment system, CMS is looking into:

- the therapy threshold,
- the structure of the outlier payment mechanism, and
- refinements to the case mix system.

The Commission strongly supports this research and looks forward to its timely completion so that it can be considered in developing refinements to the PPS. The payment system should be amended to

accurately capture the costs of an efficient provider.

Quality of care

The OASIS provides some evidence that the product changes in home health following the PPS have not had a detrimental effect on the quality of care. OASIS measures patients' clinical severity and functional limitations at the beginning and end of an episode of home health care. It allows HHAs to track their patients' outcomes and to change their use of resources, care planning, or other processes to improve their services. CMS also uses OASIS to produce reports for agencies' own quality improvement efforts and plans to publish OASIS-based quality information to guide consumers to choose high quality providers.

The decline in volume of visits per episode has prompted many to question the impact of low volume on the quality of care. Many studies have found that the relationship between volume and quality is weak (Bishop et al. 1999, Fortinsky and Madigan 1997, Penrod et al. 1998, Welch et al. 1996). However, one study of a rural population before the implementation of the PPS found a correlation between very low visit volume and quality (Schlenker et al. 2002). After adjusting for case mix and agency differences, the study indicated that rural home health users met the goals of their care less frequently than comparable urban home health users. CMS is testing a system of standards to relate outcomes for common diagnoses and functional limitations to visit volume (HCFA 2001).

Relating visit volume to quality presents two challenges: the home health visit remains something of a "black box," and it is difficult to measure other sources of care, especially informal care, that are available to patients at home. First, unlike the coding system for physician services, for example, home health claims data do not differentiate visits by purpose, e.g.,

evaluation or follow-up, teaching, or medical procedure. Without information on the content of the visit, it is very difficult to relate available measures of the number of visits to the quality of outcomes. Second, unlike institutional settings, patients at home may have other sources of care that can have a significant impact on the outcomes of care. One study that failed to find a correlation between Medicare home health use and outcomes (Penrod 1998) did find a correlation between greater use of informal care and better outcomes.

An index based upon patients' scores on the home health outcomes assessment tool suggests that quality has not declined over the first year of the PPS (Outcome Concept Systems 2002). The index captures improvement, decline, or stabilization in the patients' ability to perform activities of daily living and the severity of their clinical condition, measured by scores on the OASIS at the start of care and again at the end of care. Between the final three months of 2000 and the final three months of 2001, the median score had not moved significantly up or down.⁶

The stability of this quality index provides some evidence that quality has not declined under the PPS despite the decline in the volume of visits and the corresponding decrease in costs per episode. This reinforces our conclusion that home health agencies have improved their productivity and current costs are appropriate. However, our analysis cannot dismiss the possibility that the patient population has changed; consistent quality at lower visit volume could also be achieved by serving a less-complex mix of patients.

Entry and exit of providers

As of October 1, 2002, about 7,000 Medicare certified home health agencies were serving beneficiaries. Following a decline of about 3,000 agencies between

6 This index was developed by researchers at Outcome Concept Systems, Inc., a private firm that collects data from 700 Medicare-certified HHAs to benchmark their performance. The index was developed by a team of statisticians, researchers, and clinicians. The index was based upon 350,000 patient episodes of home health care. Participating agencies include a cross-section of sector, geographic area, and type of control (voluntary, proprietary, and others).

1998 and 2000, this number has been steady over the past several years (Figure 2D-2).

The limited exit of home health agencies over the past three years may suggest that most agencies' payments are equal to or greater than their costs. In 1996, under the cost-based payment system, about three new agencies entered for each exiting agency. During 1999 under the IPS, exiting agencies outnumbered entering ones 8 to 1. Between October 2001 and October 2002, a little over 300 agencies entered the program while nearly 200 exited; the near-equilibrium of entry and exit led to almost no change in the total number of agencies.

Entry and exit may be sensitive to less-than-adequate payments while not providing information about over adequate payments. Exits from the program seem to correspond to the implementation of the IPS, though some of those exits were involuntary. Agencies that involuntarily exited the program were unable to meet one or some of the

program's integrity standards and may have left the program due to Operation Restore Trust's activities rather than the IPS. Some entries to the program may have been prevented or delayed by state regulations that limit the number of participating agencies. Comparing entry pre- and post-PPS may be misleading because the structure of the PPS may favor larger agencies with the ability to average profit and loss over a large and varied patient population. Also, though home health is not a capital-intensive sector, starting a home health agency may be more expensive than it was in the past due to tighter financial standards and greater need for computerization to manage the patient data collection requirements implemented in 1999.

A reduction in the number of Medicare-certified agencies does not necessarily indicate a reduction in home health care capacity. Some observers have suggested that having only a small number of agencies per Medicare beneficiary in an area may impair access, but no evidence exists to suggest that the number of

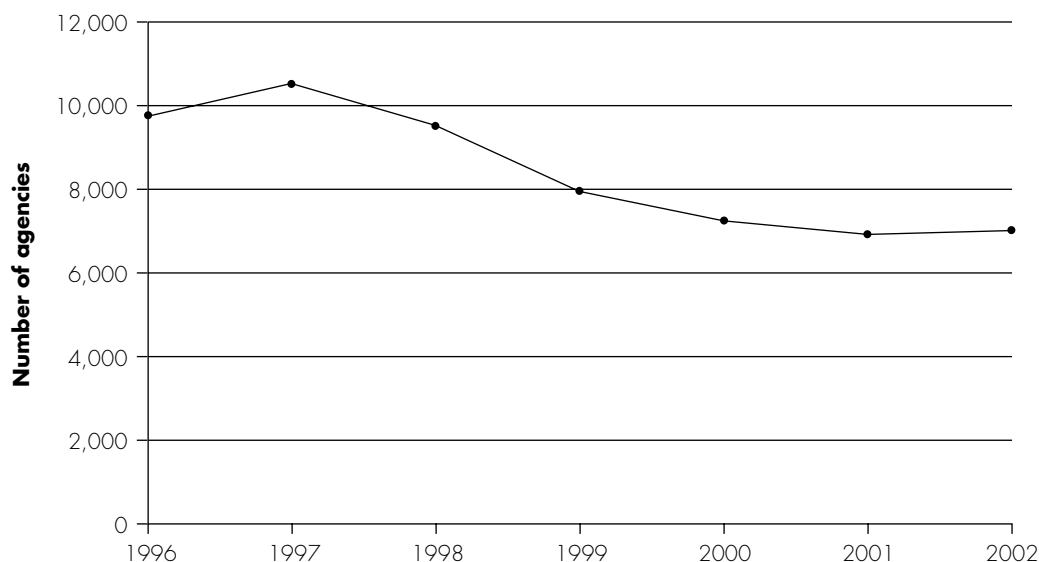
agencies is a meaningful measure of access. GAO found that neither closures nor changes in practice patterns were indicative of access problems (GAO 1999). In fact, "In those counties that lost their only HHA, hospital discharge planner supervisors as well as managers of nearby HHAs [reported] that access is not a problem because services are available from HHAs in neighboring counties or from branch offices located in the county" (GAO 1999, p. 20). Furthermore, because the home health industry has been experiencing acquisition and consolidation, the agencies still participating in Medicare may be larger than their predecessors.

Beneficiaries' access to care

This year, our analysis of access has the advantage of using very recent information, but also has two disadvantages. First, the nationally representative, focused work of the Office of Inspector General on access to home health care for Medicare beneficiaries that we have used in the past is not available this year. Also, neither we nor they

FIGURE 2D-2

Certified home health agencies, 1996–2002



Source: MedPAC analysis of Online Survey, Certification, and Reporting (OSCAR) system data from CMS.

currently have adequate means to assess beneficiaries' access to home health care without a preceding hospital stay.

MedPAC is developing resources to provide more information on access to care. Our episode database will be able to track patterns and changes in home health use by beneficiaries referred from the community or from a skilled nursing facility. The OIG's work, or a regular study with a similar methodology and sample, would continue to be an important parallel effort to MedPAC's access monitoring because a consistent series of studies spanning the start of the PPS provides a crucial baseline and comparisons over time.

RECOMMENDATION 2D-1

The Secretary should continue a series of nationally representative studies on access to home health services (similar to studies previously conducted by the Department of Health and Human Services' Office of Inspector General).

IMPLICATIONS 2D-1

Spending

- This recommendation should not affect Medicare benefit spending.

Beneficiary and provider

- To the extent that future OIG studies allow us to monitor beneficiaries' access to home health care, the Commission may make recommendations to preserve or improve their access to care.

One year ago, the OIG found that beneficiaries continue to maintain good access to care (OIG 2001a, OIG 2001b), suggesting that payments are at least adequate to induce agencies to serve Medicare beneficiaries. The OIG surveyed hospital and nursing home discharge planners in early 2001, after the PPS had been in place for about six months. Most discharge planners reported placing beneficiaries in home care without difficulty. Of the few planners who reported difficulties, most were unable to

place only a small fraction of discharged beneficiaries.

MedPAC convened a panel of hospital discharge planners in October to continue to monitor patients' access to home health care. Generally, they offered no evidence of increased difficulties with placing most patients in home health care since the implementation of the PPS in October 2000.

The discharge planners did experience some difficulty—ranging from a one-day delay in placement to no services available—with a few patients in certain subgroups. They told us that services are more difficult to access in rural areas, especially if therapy is needed, and that since the implementation of PPS home health agencies are substituting physical therapy visits for occupational therapy, limiting social work visits, and providing fewer services for training diabetics in self-care. Patients requiring wound care, daily care, or expensive medication or supplies were among those more difficult to place, as were patients with mental illness or cognitive impairment. Members of the panel did not indicate which, if any, of the hard-to-place subgroups were newly difficult to place or more difficult to place in home health care following the implementation of the PPS. They also did not conclude that the lack of prompt home health placement necessarily led to clinically inappropriate care for patients.

Home health in rural areas

For most rural agencies, payments will more than adequately cover costs in 2003. The Medicare margin for all rural agencies in 2003 was 19.1, nearly the same as the margin for urban agencies, even accounting for the sunset of the rural add-on in April 2003. However, examining agencies in more or less densely populated rural areas reveals a wide variation in the experience of rural agencies under the PPS; some rural agencies have low margins.

At this point in time, our analysis cannot explain the variation among rural providers—low margins are not explained

by what we know about volume or ownership of the agencies in the group. The very low margin group had a proportionate share of voluntary, private, and other types of control agencies. The sample had somewhat more low volume providers and fewer high volume providers than the entire sample generally; but the group also contained several very high volume providers. The sample of low margin rural providers was not geographically representative due to limitations of the sample. Costs per patient could be higher in rural areas than in urban because of the small scale of operations, the distances to travel among rural clients, and differences in the use of therapy.

The difference between the ratio of payments to charges for urban and rural beneficiaries suggests that special treatment of beneficiaries in rural areas is not necessary. As discussed earlier, claims for services provided to all rural beneficiaries, as well as claims grouped by the rural characteristics of the beneficiaries' county of residence, show that payments are higher than charges by a greater ratio than they are for urban beneficiaries' services.

Two access indicators provide mixed evidence for the special treatment of rural areas. In 2001, the OIG found that discharge planners at urban and rural hospitals were able to place Medicare beneficiaries in home health at similar rates (OIG 2001a). However, in our panel of discharge planners, five of the fifteen panelists had observed hospitals taking special measures to provide rural beneficiaries with home care. They were aware of hospitals that rented hotel rooms and owned apartments in metropolitan areas to temporarily house rural beneficiaries who could not access services at their homes. The panel's perceptions may have differed somewhat from the OIG's because the panel's much-smaller sample of discharge planners may be less representative of discharge planners generally and rural hospitals were overrepresented on our panel.

In summary, our analysis cannot dispel concerns about some rural providers. Our analysis of payment-to-charge ratios (with a large sample of recent data) tends to suggest that payments for the care of rural beneficiaries are adequate. However, variations among margins for some rural agencies and the observations of some members of the discharge planners' panel contradict this conclusion and suggest that additional payments for care provided to rural beneficiaries are appropriate.

RECOMMENDATION 2D-2

The Congress should extend for one year add-on payments at 5 percent for home health services provided to Medicare beneficiaries who live in rural areas.

IMPLICATIONS 2D-2

Spending

- This would increase spending compared to current law between \$50 million and \$200 million for fiscal year 2004 and less than \$1 billion over five years. The current add-on of 10 percent is scheduled to expire on April 1, 2003.

Beneficiary and provider

- There is concern that payments under the PPS may not be appropriately distributed for some rural providers. Temporarily extending the add-on will provide some time for additional data and analysis to explore the variation. The lower amount of the add-on acknowledges, however, that the margins of rural providers are not very different from the aggregate margins of home health agencies as a whole.

Adjustments to current payments

Three adjustments are relevant to payments for fiscal 2003: a 7 percent reduction in the base episode rate for fiscal year 2003 ("15 percent cut"), an update, and a rural payment provision.

The Balanced Budget Act of 1997 set in motion many changes for the home health sector, including the replacement of the cost-based payment system with the IPS, and a contingency for a 15 percent reduction in the payment limits under the IPS system if CMS did not replace the IPS with a PPS. When the PPS did replace the IPS in October 2000, the reduction in the IPS limits was postponed rather than eliminated. When this cut was implemented on October 2002 under the PPS, CMS had to model the effect that a 15 percent reduction in IPS limits would have had, build in assumed behavioral changes by HHAs, and project the effect onto current spending. Due largely to the behavioral assumptions in the model, CMS estimated that a 7 percent reduction in PPS rates would be needed to achieve the reduction anticipated in the original legislation.

In addition to this reduction, rates for FY2003 were also adjusted by a market basket update. The legislated update was the percent change in the market basket minus 1.1 percent; the change in the market basket was 3.2 percent, so the base rate was increased by 2.1 percent. Thus, the net effect of the 7 percent reduction and the update was a 5 percent reduction in the base rate for an episode, to \$2,160 for FY2003.

After the decreases in the number of home health users and providers in the late 1990s, concerns about access to home health services in rural areas led the Congress to provide an additional 10 percent payment for home health services provided to beneficiaries living in rural areas.⁷ This addition is scheduled to expire in April 2003. Our model of current payments and costs (fiscal year 2003) incorporates the expiration of the add-on. To be conservative, the model incorporates the effects as if the add-on were unavailable for the entire fiscal year rather than only half of the fiscal year.

Accounting for providers' cost changes in the coming year

In addition to accounting for the adequacy of current payments, a payment update should account for changes in costs in the coming year. Because the home health product has changed, we have not adjusted for changes in productivity or the impact of scientific and technological advances in projecting next year's cost changes. Our estimate of the impact of visit volume on costs per episode (see discussion p. 108) suggests that costs will continue to decline over the coming year.

Home health, perhaps more so than other sectors, may feel the impact of a shortage of nurses or therapists because a large portion of its total costs are for labor. The market basket weights reflect this labor share; labor is 80 percent of home health input costs, compared to 60 percent in hospitals or 70 percent for physician services. The market basket for home health uses the same proxies for the impact of changing wages, salaries, and benefits used by the hospital sector. Within the update framework, we assume that the market basket captures changes in input prices, such as those created by a nursing shortage. At this time, we have no evidence to suggest that home health labor costs increased faster than the input prices in the market basket.

Although home health agencies are likely to face increasing input prices during the coming year, we expect a decline in the costs per episode because continuing declines in the number of visits per episode will offset the effects of rising prices. We conclude that neither a positive nor a negative adjustment should be made to the update to account for cost changes over the coming year.

⁷ Under the legislation, rural beneficiaries are those who reside outside a metropolitan statistical area.

Update recommendation

To summarize, MedPAC has considered the update framework in the current context for home health payment decisions. We considered the current relationship of payments and costs. Aggregate Medicare margins and the ratio of payments to charges suggest that current payments are more than adequate compared to costs. Market factors suggest that current payments are at least adequate in relation to costs: access to care is generally good, the rate of decline in the number of users has decreased, and the entry and exit of agencies has remained stable for the third year in a row.

When we considered likely changes in cost over the coming year we found that the chief influences over costs will be the price of labor and the volume of visits within an episode. These influences will work in opposite directions: prices will provide upward pressures on costs while declining visit volume will depress costs. These factors provide evidence that

payments will continue to be more than adequate over the coming year.

In our March 2002 recommendations, we handled the home health payment update differently. This was because, at this time last year, no cost report data from the PPS were available. We did not have sufficient claims data to estimate whether decreases in visit volume would continue under the PPS or information on changes in quality to assess the impact of lower volume on care. Though market factors were generally positive, the Commission erred on the side of caution. Sensitive to the dramatic changes that had preceded the PPS, we recommended a year of stability. Over the course of the past year, no unforeseen changes have been made to Medicare's home health benefit and time has allowed data to become available.

RECOMMENDATION 2D-3

The Congress should eliminate the update to payment rates for home health services for fiscal year 2004.

Spending

- Since current law provides a full market basket update for the base payment for home health services, this recommendation would decrease spending relative to current law between \$200 million and \$600 million for fiscal year 2004 and between \$1 billion and \$5 billion over 5 years.

Beneficiary and provider

- Because we estimate that current Medicare payments are well over the costs of caring for Medicare home health users, and evidence suggests that the level of payment is only one of several influences on the use of the home health benefit, we would expect little if any effect of this provision on beneficiaries' access to care. ■

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SECTION
2E

**Assessing payment adequacy
and updating payments
for outpatient dialysis services**

R E C O M M E N D A T I O N

The Congress should update the composite rate payment by the projected change in input prices, less 0.9 percent, for calendar year 2004.

***YES: 15 • NO: 0 • NOT VOTING: 1 • ABSENT: 1**

***COMMISSIONERS' VOTING RESULTS**

SECTION 2E

Section 2E: Assessing payment adequacy and updating payments for outpatient dialysis services

Current aggregate Medicare payments for outpatient dialysis services appear to be adequate. Together, payments for composite rate services and injectable drugs exceeded providers' costs by about four percentage points in 2001. We conservatively estimate that the aggregate payment-to-cost ratio will be no lower than 1.01 in 2003. However, aggregate payments relative to costs will probably decline by less than three percentage points between 2001 and 2003 because payments for injectable drugs and their profitability relative to composite rate services will continue to increase during this period. Market conditions—such as continued entry of for-profit freestanding providers, increases in the volume of services provided, lack of evidence of beneficiaries facing systematic problems in accessing care, continued improvements in the quality of dialysis care, and adequate access in providers' access to capital—strongly suggest that Medicare's outpatient dialysis payments are adequate, relative to efficient providers' costs. Based on this evidence, we see no need to adjust the base rate for composite rate services. To account for changes in providers' costs in the coming year, the Congress should update the composite rate for outpatient dialysis services by the change in input prices, currently estimated at 2.5 percent, less an 0.9 percent adjustment for growth in multifactor productivity, for calendar year 2004.

In this section

- Assessing payment adequacy
 - Accounting for cost changes in the coming year
 - Update recommendation
-

End-stage renal disease (ESRD) is a chronic illness characterized by permanent kidney failure. Occurring at the last stage of progressive impairment of kidney function, the illness is caused by a number of conditions including diabetes, hypertension, glomerulonephritis, and cystic kidney disease. Persons with ESRD require either chronic dialysis or a kidney transplant to maintain life. Because of the limited number of organs available for transplantation, the majority of ESRD patients receive chronic dialysis. The 1972 amendments to the Social Security Act extended Medicare benefits to people with ESRD, and more than 350,000 patients were enrolled in 2001.¹

Medicare pays dialysis providers a prospective payment—the composite

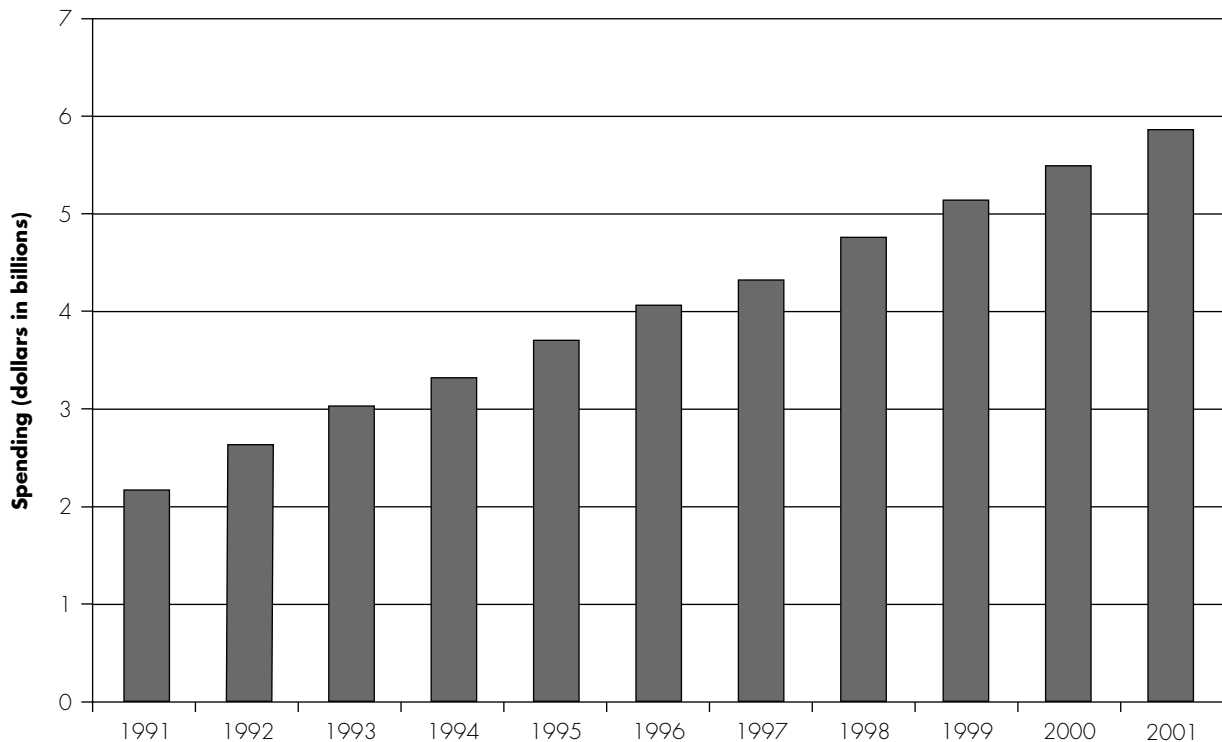
rate—for each dialysis treatment they provide in dialysis facilities (in-center) or in patients' homes.² The average composite rate in 2002 was about \$130 for freestanding facilities. Providers receive a separate payment for furnishing certain injectable drugs during dialysis. The Congress has set the payment for erythropoietin, the costliest of these drugs in terms of spending by Medicare and beneficiaries, at \$10 per 1,000 units whether it is administered in dialysis facilities or in patients' homes. Providers receive 95 percent of the average wholesale price (AWP) for separately billable injectable medications other than erythropoietin administered during in-center dialysis. Medicare's payments for injectable drugs averaged about \$80 per dialysis treatment in 2001.

Medicare spending for outpatient dialysis services furnished by freestanding facilities increased by about 10 percent per year between 1991 and 2001 (Figure 2E-1).³ Two factors that contribute to the growth in Medicare spending are the increasing size of the ESRD population and the diffusion of new technologies.

- Incident rates per million population have been increasing steadily since 1980 (United States Renal Data System [USRDS] 2002). For example, the number of new ESRD patients increased by about 7 percent annually between 1992 and 2000. Increasing incident rates have been linked to improvements in survival, as well as increases in the number of

FIGURE 2E-1

Medicare spending for outpatient dialysis services furnished by freestanding dialysis facilities, 1991–2001



Source: CMS, Office of the Actuary, 2002.

1 To qualify for the ESRD program, individuals must be fully or currently insured under the Social Security or Railroad Retirement programs, entitled to monthly benefits under the Social Security or Railroad Retirement programs, or the spouse or dependent child of an eligible beneficiary.
 2 The composite rate was designed in 1983 to include all nursing services, supplies, equipment, and drugs associated with a single dialysis session.
 3 Medicare spending includes program outlays and beneficiary cost-sharing.

people with diabetes, which is a risk factor for ESRD.

- New technologies—particularly injectable drugs, such as erythropoietin, iron supplements, and vitamin D analogues that were not available when the outpatient dialysis payment system was implemented in 1983—have also increased Medicare’s spending for dialysis services. MedPAC estimates that spending for injectable drugs increased from \$1.3 billion in 1998 to \$2.3 billion in 2001.

The growth in spending for all Medicare-covered services for ESRD patients has increased from about \$10 billion in 1994 to more than \$15 billion in 2001. Because Medicare has kept the nominal price for composite rate services essentially fixed since the inception of the payment rate in 1983, spending for other services—particularly inpatient hospital services and care for vascular access complications and other chronic conditions (e.g., diabetes)—has significantly contributed to the growth in total spending.⁴ Thus, it is important also to consider these services when thinking about ways to improve the quality of care and to control total spending for ESRD patients.

In addition, the growth in spending has been fueled by the increase in the number of people in the two most costly ESRD cohorts: (1) older beneficiaries, and (2) beneficiaries with multiple chronic comorbidities such as diabetes, hypertension, and congestive heart failure. The proportion of new ESRD patients who are 75 years and older grew from 18 percent in 1991 to about 25 percent in 2001; the proportion of new ESRD patients with diabetes grew from 36 percent of all new patients to 46 percent in the same period. Both of these cohorts are heavy users of the health care system. The USRDS found that total payments were 23 percent higher for older ESRD beneficiaries (75 years and older) than for younger beneficiaries (0 to 19 years of age). They also found that total Medicare

payments were 18 percent higher for dialysis beneficiaries with renal failure caused by diabetes than for beneficiaries without diabetes (USRDS 2002).

Assessing payment adequacy

The first question in applying MedPAC’s approach to updating payments is whether the current level of Medicare’s payments for outpatient dialysis services is at least adequate. The Commission answers this question by assessing aggregate Medicare payments and costs for both dialysis services and injectable medications administered during dialysis treatment for which providers receive separate payments from Medicare. Our assessment includes the payments and costs for injectable medications because their use has increased significantly throughout the 1990s and their effect on the financial performance of dialysis providers is significant. Including payments and costs for separately billable medications gives a more accurate picture of the financial performance of dialysis providers.

MedPAC concludes that total payments for outpatient dialysis services will be adequate in 2003 and that no adjustment for payment adequacy is needed as part of the 2004 update for outpatient dialysis services. To estimate current Medicare payments and costs, we assessed aggregate 2001 payments and costs for outpatient dialysis services and then projected both to 2003. We adjusted the unaudited 2001 cost data based on our findings that the allowable cost per treatment was about 96 percent of the reported costs in 1996, the most recent year for which audited cost data are available. Current payments for composite rate services and separately billable drugs combined exceeded costs of freestanding facilities by about 4 percentage points in 2001, and our estimate of the payment-to-cost ratio for 2003 is that it will be no more than 3 percentage points lower than

the 2001 level (reflecting 2002 to 2004 payment rules).

To further study the question of payment adequacy, we looked at several market indicators, including the growth in the capacity of providers to furnish dialysis and changes in the financial health of dialysis providers. Because Medicare is the largest purchaser of outpatient dialysis services, Medicare payment adequacy should be reflected in these broad indicators. The findings from this analysis strongly suggest that aggregate Medicare payments appear to be sufficient relative to efficient providers’ costs. Between 1994 and 2001, the number of facilities and in-center hemodialysis stations increased by about 7 percent annually. There was a net increase of 156 facilities between 2000 and 2001. The number of for-profit freestanding facilities continues to increase, suggesting that furnishing dialysis services to ESRD patients is financially attractive to for-profit providers. Data from the Centers for Medicare & Medicaid Services (CMS) show that providers continued to improve the quality of care furnished to beneficiaries, as assessed by measures of dialysis adequacy and anemia management. Furthermore, the large for-profit, multicenter dialysis companies (chains) that account for 65 percent of all facilities appear to have adequate access to capital, as shown by the continued growth in the number of facilities.

Current payments and costs

The Commission assesses current payments and costs for dialysis services by comparing Medicare’s payments for composite rate services and injectable medications with providers’ Medicare-allowable costs. Cost reports submitted by providers provide data on the costs they incur to furnish dialysis services and injectable drugs. We use data from cost reports to estimate Medicare’s payments for dialysis services and erythropoietin and claims data to estimate Medicare’s payments for separately billable injectable

4 In constant dollars, the composite rate has decreased by more than half of its original 1983 base rate of \$127 for hospital facilities and \$123 for freestanding facilities.

drugs other than erythropoietin. The Commission has traditionally expressed the relationship of aggregate payments to costs as a payment-to-cost ratio.

As described in the opening of this chapter, MedPAC's analysis of current costs uses only Medicare-allowable costs. Each year, CMS's contractors—fiscal intermediaries (FIs)—regularly audit cost reports submitted by certain institutional providers to ensure that the costs reported by providers are Medicare allowable. The Balanced Budget Act of 1997 (BBA) required the Secretary to audit the cost reports of each dialysis provider at least once every three years beginning in 1996. CMS's recent review of the 1996 data resulted in 62 percent of submitted costs reported being reopened and audited. The auditing of more recent cost reports is currently underway but not complete.⁵

MedPAC compared the audited cost report data for 1996 to unaudited 1996 data. Our analysis showed that the allowable cost per treatment for composite rate services and injectable drugs for freestanding facilities was about 96 percent of the reported cost of treatment.

As shown in Table 2E-1, all types of facilities were affected by the audit. For example, allowable costs as a percentage of reported costs were 96 percent for medium-sized facilities and 97 percent for small and large facilities. Our finding that allowable costs are less than reported costs is consistent with an audit performed by CMS in 1988 that determined that the allowable cost per treatment for freestanding facilities was 88 percent of the reported cost per treatment (Prospective Payment Assessment Commission 1993).

If history is any guide, a portion of the reported costs for services furnished between 1997 and 2001 will most likely be found nonallowable when these reports are audited by CMS. MedPAC believes it is important to consider the effect of the difference between reported and allowable

TABLE 2E-1 Payment-to-cost ratios for composite rate services and separately billable drugs for freestanding dialysis facilities, 1996 and 2001

Facility type	1996		2001	
	Not audited	Audited	Not audited	Adjusted for audit effect
Composite rate services only				
All	1.04	1.09	0.93	0.97
Small	0.94	0.97	0.85	0.89
Medium	1.02	1.08	0.91	0.95
Large	1.08	1.12	0.97	1.01
Nonprofit	1.02	1.04	0.86	0.89
For profit	1.05	1.09	0.94	0.98
Urban, in an MSA	1.04	1.09	0.93	0.97
Rural	1.03	1.07	0.92	0.96
Composite rate services and injectable drugs				
All	1.10	1.14	1.01	1.04
Small	1.02	1.05	0.96	0.99
Medium	1.09	1.13	1.00	1.03
Large	1.12	1.16	1.03	1.06
Nonprofit	1.07	1.09	0.95	0.98
For profit	1.10	1.14	1.02	1.05
Urban, in an MSA	1.10	1.14	1.01	1.04
Rural	1.10	1.13	1.02	1.05

Note: MSA (metropolitan statistical area). These mean payment-to-cost ratios are weighted by the number of in-center and home dialysis sessions furnished by each facility. The size of the facility is defined in each year based on the 25th and 75th percentiles of dialysis sessions. Small facilities are those reporting dialysis sessions ≤ the 25th percentile of all dialysis sessions; medium facilities are those reporting dialysis sessions between the 25th and 75th percentiles of all dialysis sessions; and large facilities are those reporting dialysis sessions ≥ the 75th percentile of all dialysis sessions.

Source: Data compiled by MedPAC from 1996 and 2001 cost reports and the outpatient institutional file from CMS.

costs when assessing the relationship between current payments and costs. Consequently, we assessed providers' costs for services furnished between 1997 and 2001 in two ways. First, we used the actual costs reported by providers that have not yet been audited by CMS. Second, we adjusted the actual costs reported by providers by the ratio of allowable costs to reported costs derived from the analysis of the 1996 cost reports, the most recent year for which audited

data are available. We calculated the ratio of allowable costs to reported costs in 1996 by each type of facility and applied this adjustment to the 1997 to 2001 costs of the corresponding facility type. Our approach assumes that the ratio of allowable costs to reported costs for 1997 to 2001 will be the same as 1996; this relationship may or may not be the case once the cost reports for this period are audited. However, based on the results of the earlier audits of providers' cost

5 For example, the proportion of 1997 to 2001 cost reports that have been reopened or audited range from 0.1 percent in 2001 to 11 percent in 1998. During fiscal year 2003, the FIs will audit one third of facilities with cost report years ending between January 1, 2001 and December 31, 2001. In fiscal years 2004 and 2005, the FIs will audit the remaining ESRD cost reports for this time period (CMS 2002).

reports, we believe that once the cost reports for 1997 to 2001 have been audited, the ratio of allowable costs to reported costs will be less than 1.0.

For 2001, we estimate that Medicare’s payments for composite rate services and injectable medications exceeded providers’ costs by about 4 percentage points when the effect of the audit is considered (Table 2E-1). There is little variation in the aggregate payment-to-cost ratios for urban and rural facilities. Our finding that the payment-to-cost ratios vary considerably based on a facility’s size and profit status stems from differences in the cost per dialysis treatment.

As shown in Figure 2E-2, aggregate payments for composite rate services and injectable drugs relative to providers’

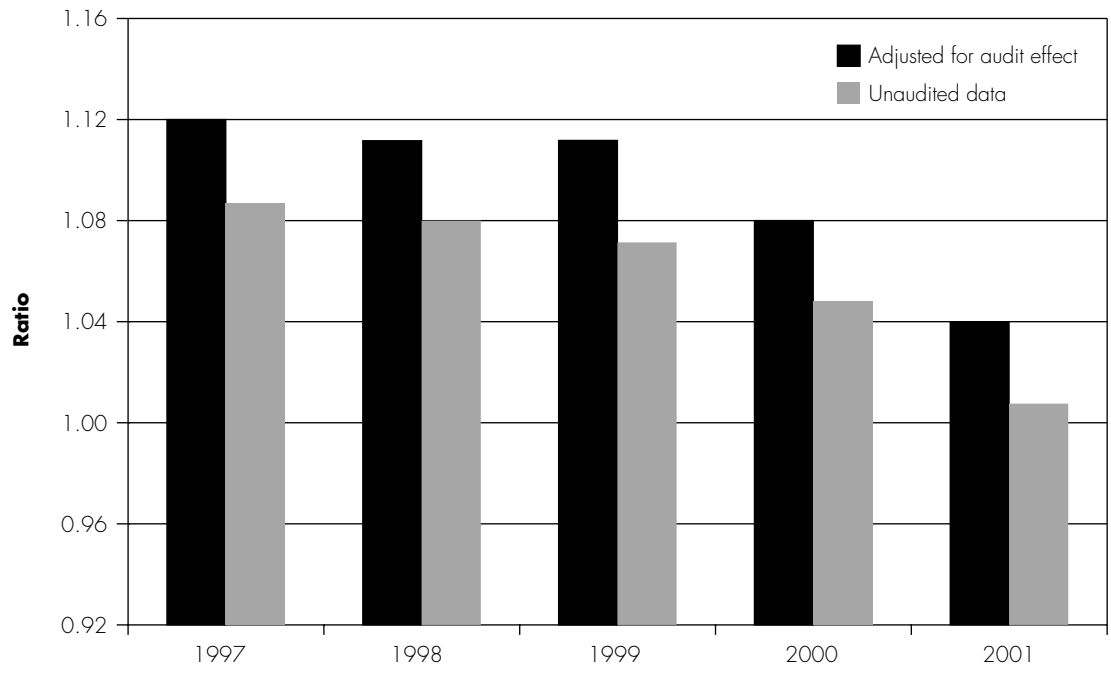
costs have steadily declined during the most recent five-year period available, 1997 to 2001. This decline is occurring because the composite rate was updated twice during this time period, 1.2 percent in 2000 and 2.4 percent in 2001. During this time period, providers’ costs for composite rate services have increased by about 3.0 percent annually. In addition, the manufacturer of erythropoietin raised the price in 2000 and 2001, while the per unit payment of this injectable drug has remained unchanged by the Congress.

A different picture of financial performance emerges when we isolate composite rate services. In 2001, Medicare’s payments for composite rate service costs did not cover the costs of providing dialysis services. This finding, when taken together with the earlier one

about the aggregate payment-to-cost ratio, demonstrates that payments for separately billable drugs significantly exceed providers’ costs.⁶ Additionally, this finding strongly suggests that the profitability of erythropoietin and other separately billable drugs is subsidizing the lower margins under the composite rate.

To estimate the aggregate payment-to-cost ratio for 2003, we assumed that providers’ costs will grow at the same rate predicted by MedPAC’s dialysis market basket index in 2002 and 2003, less an adjustment for productivity improvements. This assumption seems reasonable given our analysis showing that providers’ average per unit costs increased at a rate lower than the increase in the dialysis market basket index between 1997 and 2000. Our payment

FIGURE 2E-2 Aggregate payment-to-cost ratios for dialysis services, adjusted and unadjusted, 1997–2001



Note: The aggregate payment-to-cost ratio includes payments and costs for composite rate services and injectable drugs.
 Source: MedPAC analysis of 1997–2001 cost reports and outpatient institutional claims of freestanding dialysis facilities from CMS.

6 Two studies by the Office of Inspector General (OIG) concluded that Medicare’s payment rates for these drugs were high relative to providers’ costs and the rates paid by the Department of Veterans Affairs and state Medicaid programs (OIG 2000, OIG 1997).

estimate for 2003 reflects current law, which does not provide any update for dialysis services between 2002 and 2004. Based on these assumptions, payments for composite rate services and injectable medications relative to providers' costs in 2003 are likely to be no more than 3 percentage points lower than the 2001 level. This estimate is conservative because we also assumed that revenue from injectable medications relative to that from composite rate services would not change between 2001 and 2003. However, based on historical trends, the percentage of revenue from injectable drugs relative to composite rate services will most likely increase between 2001 and 2003. Assuming the increasing use of injectable drugs and their continued profitability between 2001 and 2003, the average aggregate payment-to-cost ratio will probably decline by less than three percentage points in 2003.

Although the payment-to-cost ratio for composite rate services and injectable medications is the most comprehensive measure we have to assess the financial performance of dialysis facilities, it does not account for the potential profitability of other services associated with outpatient dialysis. For example, several national dialysis chains own laboratories and receive Medicare payments for laboratory tests outside the composite rate payment bundle. In addition, providers have begun to provide diabetes outpatient self-management training services, payment for which was implemented by the BBA. In the future, MedPAC will regularly monitor the extent to which these training services are furnished by dialysis providers.

Appropriateness of current costs

At issue is whether aggregate dialysis costs provide a reasonable representation of the costs that efficient providers would incur in furnishing high-quality care. Because the composite rate is predetermined, providers have an incentive to restrain their costs for composite rate services. In contrast, because injectable medications are paid

per unit, providers have little incentive to improve efficiency.

To address this issue, MedPAC assessed the factors explaining the growth in providers' costs for furnishing composite rate services and injectable medications. It is too soon to tell whether the spike in average costs for composite rate services in 2001, which exceeded the increase in providers' costs predicted by the dialysis market basket, will continue in future years. Our analysis of selected productivity measures showed little change in the composite rate services furnished to beneficiaries between 1997 and 2000–2001. MedPAC generally expects average cost growth to approximate the rate of increase in the market basket index given little change in the services furnished to beneficiaries.

Costs for composite rate services

Providers' costs for composite rate services increased by 5.7 percent between 2000 and 2001. This rate of increase exceeded the 3.8 percent increase predicted by the dialysis market basket index for this same time period. MedPAC's analysis shows that two categories of costs spiked in 2001:

- Labor costs increased by about 7 percent, compared with a 2 percent increase between 1997 and 2000.
- General and administrative costs increased by about 9 percent, compared with a 2 percent increase between 1997 and 2000.

Historically, dialysis providers have been able to adopt efficiencies in service delivery, enabling them to keep their costs at or below the dialysis market basket index. It is too soon to tell whether the growth in providers' labor and administrative costs between 2000 and 2001 is an anomaly. Like other health care providers, dialysis providers contend that their labor costs have increased because they face increased competition for recruiting registered nurses and technicians (driven by the possible emergence of labor shortages). In addition, providers claim that recent

changes in licensure and scope of practice laws in certain states means that certain services previously furnished by dialysis technicians must be provided by either registered nurses or licensed practical nurses. Finally, providers contend that since 2000 they have faced significant increases in the cost of utilities and of liability and property insurance. Unfortunately, the cost report data do not allow for an analysis of the specific components comprising the costs reported as general and administrative.

Thus, it is too soon to draw conclusions about the appropriateness of the composite rate cost base. To conclude that providers' costs are not appropriate, the Commission would need to see that the long-term growth in cost per case continues to significantly exceed the growth predicted by the market basket. MedPAC will monitor future trends in providers' costs and also changes in the dialysis product, which we discuss in the following section.

Changes in composite rate services

One way to assess whether the cost base for composite rate services is appropriate is to examine changes in the services furnished by providers. MedPAC examined possible changes in the product by looking at changes over time in the staff furnishing in-center hemodialysis care and the productivity of the staff in 1997 to 2000–2001.

From 1997 to 2001, few changes were made in the composition of the staff furnishing in-center dialysis care (Table 2E-2). The proportion of technicians to patient care staff has not significantly changed between 1997 and 2001, and the ratio of patients to registered nurses and technicians has remained relatively constant between these two years. Also, the productivity of patient care staff was fairly stable during this period. For instance, the average duration of hemodialysis sessions slightly increased from 210 minutes in 1997 to 215 minutes in 2000. The productivity of patient care staff, as measured by the number of

**TABLE
2E-2**

Indicators to assess changes in services furnished during in-center hemodialysis treatments, 1997 and 2001

Indicator	1997	2001
Ratio of:		
Patients to technicians	19.2	18.0
Patients to registered nurses	17.6	15.7
Technicians to patient care staff	0.54	0.54
Length of hemodialysis treatment (minutes)	210	215*
Number of:		
Treatments per in-center hemodialysis station	654	658
In-center hemodialysis treatments per patient care staff member	695	742
In-center hemodialysis shifts per week	12.3	12.0

*The average length of an in-center hemodialysis session in 2000.

Source: MedPAC analysis of 1997, 2000, and 2001 cost reports and data on clinical performance measures from CMS.

in-center hemodialysis treatments per station and the total number of hemodialysis treatments per staff, also remained relatively constant between 1997 and 2001.

The cost of incremental changes in the technologies used during dialysis are probably not significantly contributing to the growth in providers' costs. Data from providers' cost reports show that the two categories that probably include the costs of new technologies, capital and other direct costs, increased by only 2 percent between 2000 and 2001. In comparison, labor costs increased by 7 percent, and general and administrative costs increased by 9 percent during this time period.

Costs for separately billable medications

Based on MedPAC's previous findings, we expect that the costs of separately billable drugs have grown more rapidly than the costs of composite rate services. Costs for separately billable drugs increased by about 12 percent between 2000 and 2001. This change is consistent

with the trends between 1998 and 2000.

The payment method for separately billable drugs gives providers no incentives to improve efficiency. In contrast, prospective payment methods provide incentives to control costs because payment is based on a predetermined rate unaffected by incurred costs or posted charges. Substituting new, more costly drugs for older, less expensive medications may be another reason why providers' costs for injectable medications per dialysis treatment increased during the 1997 to 2001 period. For example, the price of a vitamin D analogue (paricalcitol) newly approved in 1998 is twice that of the older agent it has displaced (calcitriol). Between 2000 and 2001, spending for paricalcitol increased from \$172 million to \$386 million; in contrast, spending for calcitriol decreased from \$127 million to \$67 million during this same time. Finally, a 3.9 percent increase in the price charged by the manufacturer of erythropoietin in 2000 and 2001 also increased providers' costs per treatment.

Relationship of payments to costs

Next we assess the relationship of payments to appropriate costs for outpatient dialysis services and find that aggregate Medicare payments appear to be sufficient. We base this conclusion, in part, on the following evidence about market conditions throughout the 1990s: (1) the average annual growth in the number of hemodialysis treatments has kept pace with the average annual growth in the number of hemodialysis patients; (2) the number of for-profit freestanding dialysis facilities is increasing; (3) there has been no widespread access problem for beneficiaries; (4) the quality of dialysis care has improved; and (5) there has been no change in providers' access to capital, as evidenced by continued growth in the number of providers and their capacity to furnish dialysis.

Changes in volume

Between 1993 and 2001, the growth in the number of in-center hemodialysis treatments generally kept pace with the growth in the number of dialysis patients. The number of dialysis treatments increased, on average, by 8 percent annually; in comparison, the number of dialysis patients increased, on average, by 7 percent during this time period.

The growth in payments for injectable drugs increased more rapidly than the growth in payments for dialysis treatments in the 1990s.⁷ Between 1998 and 2001, total payments for erythropoietin furnished by freestanding dialysis facilities increased by about 15 percent per year, and total payments for other injectable drugs increased by about 30 percent per year. In contrast, payments for composite rate services increased by 9 percent per year during this same period. The Commission anticipates that the growth in the use of injectable drugs paid for outside the composite rate will continue to increase. For example, CMS recently made a national coverage

7 We express volume in terms of total Medicare payments because each injectable drug has its own unit of measurement.

decision to cover injections of levocarnitine for patients with ESRD beginning in January 1, 2003.⁸

Use of injectable medications has grown for several reasons. First, many of the agents—including erythropoietin and iron supplements—were only approved by the Food and Drug Administration in the early 1990s. Since their approval, their use has been advocated in clinical guidelines set forth by the National Kidney Foundation (NKF). The use of many of these medications has enhanced the quality of care furnished to dialysis beneficiaries. For example, the increased use of erythropoietin has reduced the proportion of dialysis patients suffering from anemia, which contributes to morbidity if not treated effectively. However, the profitability of certain injectable medications has provided incentives in how they are used. For example, Medicare pays \$10 per 1,000 units for erythropoietin administered either intravenously or subcutaneously (under the skin). Paying on a per unit basis promotes the use of the intravenous form of this medication, which requires higher average doses (more units) to achieve target hematocrit levels.⁹ The predominant use of intravenous erythropoietin persists despite the publication of the NKF's Dialysis Outcome Quality Initiative Clinical Practice Guideline for the treatment of anemia, which advocated subcutaneous administration (NKF 1997).

Revenue from injectable medications has become more important relative to revenue from composite rate services during the past five years. For freestanding dialysis providers, revenue from injectable medications relative to that from composite rate services has increased from about 33 percent of total payments in 1997 to 40 percent of total payments in 2001. As noted earlier, the

positive payment margins for injectable drugs are subsidizing the lower payment margins under the composite rate.

Broadening the payment bundle to include frequently used injectable drugs that are now paid for separately would provide a strong incentive for providers to furnish these services more efficiently. In our March 2001 report, MedPAC recommended that the Congress require the Secretary to: (1) include in the prospective payment bundle services that are frequently used for dialysis but currently excluded from this bundle, and (2) revise the payment system to account for factors that affect providers' costs, including dialysis method, dose, frequency, and patient acuity.

Entry and exit of providers

Reports of facility closings tend to be linked to local issues, such as rising real estate prices in certain areas, shortages of technicians and nurses, and states' certificate of need regulations. MedPAC examined the characteristics of dialysis facilities that closed during 2001 using data from CMS's facility survey. Between 2000 and 2001, there was a net increase of 156 facilities. Facilities that closed were more likely to be smaller, in terms of both the number of patients they treated and the number of in-center hemodialysis stations they maintained, than facilities that remained in business in 2001. In addition, facilities that closed were more likely to be nonprofit and hospital-based. Some providers contend that they are limiting their exposure to Medicare patients. However, our data show little correlation between proportions of facility patient loads attributable to Medicare and facility closings between 2000 and 2001.

Our finding—that facilities that closed were more likely to be small, nonprofit, and hospital-based than facilities that remained open—is consistent with the

changes in the characteristics of dialysis providers in the 1990s. As shown in Table 2E-3, freestanding and for-profit facilities grew at the expense of hospital-based and nonprofit facilities. Between 1993 and 2001, freestanding facilities increased from 70 percent to 83 percent of all facilities, while for-profit facilities increased from 61 percent to 79 percent of all facilities. In addition, dialysis chains continue to acquire independently operated facilities. MedPAC estimates that about 65 percent of all facilities were operated by the four national for-profit chains in 2001. Our finding that freestanding facilities have steadily increased as a share of the total throughout the 1990s suggests that dialysis facilities are sufficiently profitable to stand on their own. Our finding that for-profit facilities continue to grow at the expense of nonprofit facilities suggests that furnishing dialysis services to ESRD patients is financially attractive to for-profit providers.

Beneficiaries' access to care

A review of the published literature shows no evidence of beneficiaries facing systematic problems in obtaining needed dialysis care in 2001 and 2002. MedPAC's analysis of data from CMS's facility survey shows that the capacity of providers to furnish care has increased steadily between 1993 and 2001. The total number of dialysis facilities grew by about 7 percent during this time, as did the number of in-center hemodialysis patients (Table 2E-3). With about 25 percent of all facilities located in rural areas between 1993 and 2001, the capacity to furnish dialysis in rural areas appears to have stayed relatively constant during this time period.

The Commission finds that providers have kept up with the demand for dialysis by increasing the number of facilities rather than increasing capacity within facilities.

8 Levocarnitine supplements the loss of carnitine, a naturally occurring body substance that helps transport long-chain fatty acids for energy production by the body. Patients on hemodialysis can suffer carnitine deficiencies from dialytic loss, reduced renal synthesis, and reduced dietary intake. Patients must show improvement from the levocarnitine treatment within six months of initiation of treatment for Medicare to continue to pay for the treatment.

9 Some providers contend that erythropoietin is predominately furnished intravenously because patients experience less discomfort than when it is furnished subcutaneously.

**TABLE
2E-3**

Characteristics of dialysis facilities, 1993–2001

	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total number of dialysis facilities	2,343	2,502	2,732	2,940	3,172	3,394	3,619	3,805	3,961
Percent of all facilities									
For profit	60.8%	62.2%	64.6%	67.4%	71.1%	75.0%	77.3%	78.3%	79.4%
Nonprofit	33.4	32.2	30.3	28.1	25.2	21.9	19.8	19.1	18.1
Government	5.8	5.6	5.0	4.4	3.8	3.2	2.9	2.7	2.5
Freestanding	70.0	71.6	73.7	75.1	77.0	78.8	80.7	81.6	82.6
Hospital-based	30.0	28.4	26.3	24.9	23.0	21.2	19.3	18.4	17.4
Urban, in an MSA	77.3	76.8	76.8	76.2	75.6	75.1	75.1	75.1	74.8
Rural, total	22.7	23.2	23.2	23.8	24.4	24.9	24.9	24.9	25.2
Adjacent to an MSA									
Includes a town with at least 10,000 people	6.7	6.8	6.5	6.8	6.7	6.6	6.6	6.5	6.4
Does not include a town with at least 10,000 people	5.0	5.4	5.5	5.8	6.1	6.5	6.6	6.8	7.0
Not adjacent to an MSA									
Includes a town with at least 10,000 people	6.6	6.4	6.4	6.3	6.1	6.1	5.9	5.7	5.7
Does not include a town with at least 10,000 people	4.4	4.5	4.8	5.0	5.5	5.8	5.9	5.9	6.1

Source: MSA (metropolitan statistical area). Data compiled by MedPAC from the 1993–2001 facility survey file from CMS. Numbers may not total exactly because of rounding.

We based this finding on our analysis of trends in the following:

- average hemodialysis stations per facility
- average in-center hemodialysis treatments per facility
- average in-center hemodialysis treatments per dialysis station¹⁰

The total number of in-center hemodialysis treatments provided by dialysis facilities has increased by about 8 percent per year between 1997 through 2001, but the average number of hemodialysis stations per facility has remained relatively constant at about 21 per facility. Average total dialysis treatments also have remained relatively

constant, ranging from 15,500 to 16,000 during this time period. Finally, average hemodialysis treatments per station have remained relatively constant during this time period, ranging from 648 to 658.

Opening new facilities may improve access to care by reducing the time that beneficiaries have to travel to obtain care three times per week. Researchers have noted that transportation to and from the dialysis facility can affect patients' compliance with their prescribed treatment, with some patients shortening their dialysis treatments or skipping treatments (Rocco and Burkart 1993, Sehgal et al. 1998, USRDS 1997). However, the sustained growth in the number of dialysis facilities raises questions about the optimal efficiencies of

scale and the tradeoff between opening new facilities versus increasing the capacity of existing facilities.

Quality of care

Clinical performance indicators collected by CMS show continued improvements in the quality of dialysis care, as measured by the percentage of hemodialysis patients receiving adequate dialysis and suffering from anemia (Table 2E-4, p. 130). For example, the proportion of in-center hemodialysis patients receiving inadequate dialysis declined from 26 percent in 1996 to 14 percent in 2000. However, no clinically important changes or improvements were found in the percentage of hemodialysis patients with adequate or optimal serum albumin levels in 2000 compared to previous years.¹¹

¹⁰ Average hemodialysis stations per facility, treatments per facility, and treatments per dialysis station are weighted by the number of dialysis sessions at each facility.

¹¹ Mean serum albumin levels have been shown to be a marker for diminished patient survival.

**TABLE
2E-4****Clinical performance indicators, 1994–2000**

Performance indicator	1994	1995	1996	1997	1998	1999	2000
Percent of hemodialysis patients receiving inadequate dialysis	N/A	N/A	26%	22%	20%	16%	14%
Percent of hemodialysis patients with low hematocrit levels	N/A	N/A	N/A	57	41	32	26
Percent of hemodialysis patients who are malnourished	20%	16%	19	16	18	20	20

Note: N/A (not available), Kt/V (urea clearance multiplied by the time normalized by total body water divided by the volume of distribution of urea), gm/dL (grams per deciliter). Patients receiving inadequate dialysis are those with Kt/V < 1.2. Patients with low hematocrit levels are those with hemoglobin levels < 11 gm/dL. Patients malnourished are those with serum albumin levels < 3.5 gm/dL.

Source: MedPAC analysis of 1994–2000 data on clinical performance measures from CMS.

Some providers and researchers contend that increased use of certain types of medical interventions, particularly parenteral nutrition, would improve the outcomes of certain patients. Medicare's coverage policies limit the number of dialysis patients who qualify for these interventions.¹²

A recent study raised important issues about the quality of dialysis care in the United States (Devereaux et al. 2002). The authors reported a death rate 8 percent higher among kidney failure patients receiving dialysis at for-profit centers than among those treated at nonprofit facilities, for an estimated 2,500 additional deaths each year. This conclusion was based on a meta analysis of 8 retrospective studies that examined the risk of mortality for more than 500,000 patients. Seven of these studies used data from 1990 through 1997; one study was based on data from 1973 to 1982.

Past research by CMS, USRDS, and others has shown that many factors, including patients' clinical characteristics and providers' characteristics, affect outcomes of dialysis patients. Studies

underway using more recent data are evaluating whether patient outcomes vary by facility profit status and other provider characteristics. Two abstracts recently published using post-1997 data show no significant difference in mortality at for-profit versus nonprofit facilities (Held et al. 2002, Wolfe et al. 2002).

Two MedPAC studies currently underway will partly address the issue of the quality of care furnished to dialysis patients. The first study will explore the use of incentives—both financial and nonfinancial—for Medicare to encourage providers to improve care. Strategies for encouraging more-focused provider attention to improving quality are being discussed in national forums such as the Institute of Medicine and the National Quality Forum and in numerous purchaser coalitions across the country. The second study will examine the relationship between quality of care and providers' costs per treatment. No published information is available regarding the influence of dialysis facility costs on patient outcomes. Previous MedPAC analysis has shown significant variation in the cost per dialysis treatment among freestanding dialysis facilities.

The findings by Devereaux et al. on quality demonstrate the importance of Medicare's continuing efforts to monitor the quality of care furnished by dialysis providers. Beginning in 1993, CMS has annually published information about the quality of care furnished to dialysis patients, including adequacy of dialysis and anemia management. The USRDS also collects, analyzes, and distributes information on different aspects of the care of patients with ESRD, including trends in disease incidence and prevalence, patient survival and causes of death, modality of treatment, and use of hospital services.

Providers' access to capital

Dialysis facilities need access to capital to improve their equipment and to open new facilities to accommodate growth in the number of patients requiring dialysis. About 80 percent of all dialysis facilities are for-profit, and the four largest for-profit chains account for about 65 percent of all facilities. These for-profit chains appear to have adequate access to capital, as demonstrated by growth in the number of clinics, the number of patients they treat, and their earnings. Data from industry sources show that the growth in revenues between 1996 and 2000 for these four chains ranged from 36 to 62 percent. A bond analyst described the sector as having no problems with access to capital and ratings for the bonds of two of the largest chains, although below investment grade, are neutral going forward. In addition, industry reports have stated that revenues for dialysis service are fairly predictable, given the recurring requirement for treatment. However, they also have noted that dialysis providers face potential pressures from private payers, and are highly susceptible to any future changes in Medicare's payment policies. Finally, the stocks of these for-profit chains have in large part enjoyed positive ratings by financial analysts over the last year.

12 Daily parenteral nutrition is limited to patients "with severe pathology of the alimentary tract which does not allow absorption of sufficient nutrients to maintain weight and strength commensurate with the patient's general condition" (CMS 2003).

Accounting for cost changes in the coming year

As noted earlier, the Commission accounts for expected cost changes in the coming year primarily through the forecast of input price inflation. CMS has not developed a market basket index for outpatient dialysis services.¹³

Consequently, MedPAC uses an index for dialysis services comprising price indexes for hospitals, skilled nursing facilities, and home health agencies. MedPAC's index indicates that the prices dialysis facilities pay for their inputs included in the composite rate will rise an estimated 2.5 percent between 2003 and 2004.

Another factor considered by MedPAC's update framework that may affect providers' costs in the next payment year is scientific and technological advances. This factor is designed to reflect only those new technologies that are quality enhancing and costly, and have progressed beyond the initial stage of use but have not yet fully diffused into medical practice. Based on our review of the literature, we believe that the costs of most medical advances will be accounted for primarily through payments for separately billable drugs. Therefore, there is no need for an addition to the update for medical advances.

Finally, MedPAC's update framework reflects the expectation that, in the aggregate, providers should be able to reduce the quantity of inputs required to produce a unit of service while maintaining service quality. Prospective payment is designed to promote efficiency, and productivity increases should be expected from providers. To estimate productivity increases, MedPAC uses the 10-year moving average of multifactor productivity in the economy as a whole, which is 0.9 percent.

Update recommendation

Based on our review of the adequacy of payments for outpatient dialysis services and expected cost changes in the coming year, the Commission recommends the following:

RECOMMENDATION 2E

The Congress should update the composite rate payment by the projected change in input prices, less 0.9 percent, for calendar year 2004.

As noted earlier, MedPAC's dialysis market basket projects that input prices will rise by 2.5 percent between 2003 and 2004. The Congress should consider using

CMS's dialysis market basket index to update the composite rate payment once it becomes available because it may be a more current projection than the Commission's market basket index.

IMPLICATIONS 2E

Spending

- This recommendation would increase spending between \$50 and \$200 million in one year. Over 5 years, spending would increase between \$250 million and \$1 billion.

Beneficiary and provider

- This recommendation would result in a payment increase sufficient to cover expected increases in efficient providers' costs for dialysis services in 2004. Dialysis providers should be able to realize productivity gains to partially offset the increases in input prices reflected in the dialysis market basket index.
- To the extent that adequate payment allows providers to meet beneficiaries' health care needs, beneficiaries will continue to have access to medically necessary care of high quality. ■

13 In our March 2000 report, MedPAC recommended that the Congress instruct CMS to consider a periodic update for outpatient dialysis services. The Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 instructed the Secretary to submit a report on methods to update the outpatient dialysis payment system, including a market basket for dialysis services, by July 2002. This study is currently being reviewed within the agency.

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SECTION
2 F

**Assessing payment adequacy
and updating payments
for ambulatory surgical
center services**

R E C O M M E N D A T I O N S

2F-1 The Secretary should expedite collection of recent ASC charge and cost data for the purpose of analyzing and revising the ASC payment system.

***YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1**

.....
2F-2 The Congress should eliminate the update to payment rates for ASC services for fiscal year 2004.

YES: 15 • NO: 0 • NOT VOTING: 1 • ABSENT: 1

.....
2F-3 Until the Secretary implements a revised ASC payment system, the Congress should ensure that payment rates for ASC procedures do not exceed hospital outpatient PPS rates for those procedures, after accounting for differences in the bundle of services covered.

YES: 15 • NO: 0 • NOT VOTING: 1 • ABSENT: 1

***COMMISSIONERS' VOTING RESULTS**

SECTION 2F

Section 2F: Assessing payment adequacy and updating payments for ambulatory surgical center services

An ambulatory surgical center (ASC) is a distinct entity that exclusively furnishes outpatient surgical services. The most recent data on the cost of providing ASC services to Medicare beneficiaries are from a 1994 survey by CMS of ASCs' costs and charges. Because we lack recent data on ASCs' costs, our analysis of the adequacy of current Medicare payments for ASC services is based only on market factors, such as entry and exit of providers, changes in the volume of services, and providers' access to capital. Through our analysis of these factors, we find that current payments for ASC services are more than adequate. There has been rapid growth in the number of ASCs; between 1991 and 2001, the number of Medicare-certified ASCs more than doubled. The volume of procedures provided by ASCs to beneficiaries increased by over 60 percent between 1997 and 2001. In addition, ASCs have sufficient access to capital. We estimate that ASCs' per-service costs will increase during the coming year at the rate of inflation in input prices, less an adjustment for expected productivity growth. Current Medicare payments for ASC services are at least adequate to cover this estimated increase in unit cost. The Commission is concerned that the existence of ASC payment rates that exceed hospital outpatient department rates for the same procedures could create financial incentives to shift services between settings.

In this section

- Collecting recent ASC cost data
- Assessing payment adequacy
- Accounting for cost changes in the coming year
- Update recommendation
- Variations in payment for ambulatory surgical procedures by setting

Background

Since 1982, Medicare has covered the facility costs of certain surgical procedures provided in freestanding or hospital owned and operated ambulatory surgical centers (ASCs). An ASC is a distinct entity that exclusively furnishes outpatient surgical services. The procedures that are eligible for Medicare payment when provided in an ASC are also furnished to Medicare beneficiaries in inpatient and outpatient hospital settings, and sometimes in physician offices. In 2001, ASCs provided almost 3 million surgical procedures to Medicare beneficiaries and received about \$1.6 billion in related payments. Medicare accounts for 20 to 30 percent of revenues received by the largest for-profit ASC chains.

To receive payments from Medicare, ASCs must meet Medicare's conditions of

coverage for ASCs, which require compliance with state licensure law and specify minimum standards for: administration of anesthesia, quality evaluation, operating and recovery rooms, the medical staff, nursing services, and other areas. ASCs are deemed to be in compliance with the conditions of coverage if they are licensed by a state agency or accredited by a private accreditation body.¹ Most Medicare-certified ASCs are for-profit, freestanding (as opposed to hospital owned and operated) facilities located in urban areas (Table 2F-1). Almost 40 percent of Medicare-certified ASCs are concentrated in four states that account for 25 percent of beneficiaries: California, Florida, Maryland, and Texas (Figure 2F-1).

ASC procedures eligible for Medicare payment

The Centers for Medicare & Medicaid Services maintains a list of surgical

procedures eligible for Medicare facility payment when performed in an ASC. CMS is required by law to update the list every two years in consultation with appropriate medical organizations. Since 1995, however, with the exception of updates resulting from coding changes, the list has not been modified. The most common categories of procedures furnished to Medicare beneficiaries in ASCs in 2001 were cataract removal/lens insertion, colonoscopy, and other eye procedures (Table 2F-2, p. 138).²

Surgical procedures must meet several criteria to be added to the list of procedures eligible for Medicare payment when performed in an ASC:

- **Site-of-service volume.** Procedures must meet two site-of-service volume standards to be added to the list: (1) The procedure must be performed in hospital inpatient settings at least 20 percent of the time but can also be

**TABLE
2F-1**

Characteristics of Medicare-certified ambulatory surgical centers, 1991–2001

	1991	1996	1997	1998	1999	2000	2001
Number of facilities	1,460	2,265	2,462	2,644	2,786	3,028	3,371
New facilities			237	228	162	295	446
Exiting and merged facilities			40	46	20	53	103
Net percent growth from previous year			8.7%	7.4%	5.4%	8.7%	11.3%
Percent of all centers							
For profit	94%	93%	93%	94%	94%	94%	94%
Nonprofit	6	6	6	6	6	6	5
Freestanding	99	99	99	99	99	99	99
Hospital owned and operated	1	1	1	1	1	1	1
Urban, in MSA	88	90	90	89	89	88	88
Rural	12	10	10	11	11	12	12

Note: MSA (metropolitan statistical area, as defined by the Office of Management and Budget).

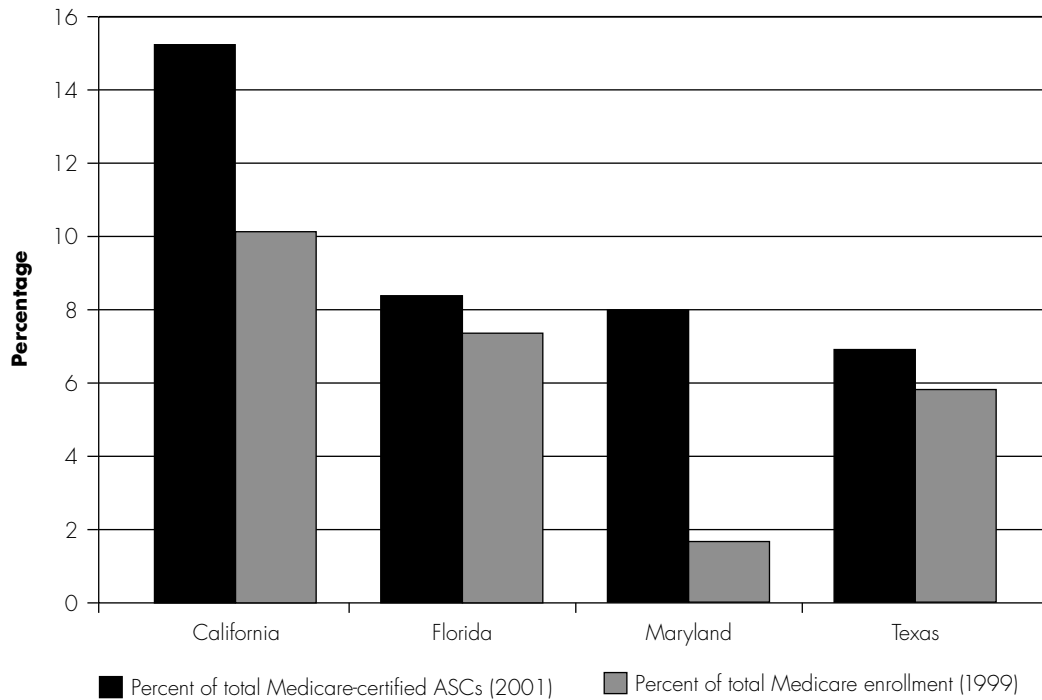
Source: MedPAC analysis of provider of services file from CMS.

1 If an ASC is privately accredited, it must still comply with state licensure requirements. The Centers for Medicare & Medicaid Services has approved four private accreditors: the American Association for Accreditation of Ambulatory Surgical Facilities, the Accreditation Association for Ambulatory Health Care, the American Osteopathic Association, and the Joint Commission on Accreditation of Healthcare Organizations.

2 These procedure categories are based on CMS's Berenson-Eggers Type of Service classification scheme, which groups several related procedures in each category. The category of other eye procedures includes after cataract laser surgery (Healthcare Common Procedure Coding System (HCPCS) code 66821).

**FIGURE
2F-1**

States with the most Medicare-certified ASCs, 2001



Note: ASC (ambulatory surgical center).

Source: MedPAC analysis of provider of services file from CMS and Health Care Financing Administration, Department of Health and Human Services. Health Care Financing Review, Medicare and Medicaid Statistical Supplement, 2000. Baltimore (MD), HCFA. June 2001.

safely performed in outpatient facilities. (2) The procedure can not be performed more than 50 percent of the time in physician offices (procedures usually provided in physician offices are generally assumed not to require the more elaborate facilities of an ASC).³

- **Time needed to perform procedure.** To be payable by Medicare in an ASC, a procedure must not exceed 90 minutes of surgery or 4 hours of recovery time; anesthesia for the procedure cannot last longer than 90 minutes.
- **Clinical criteria.** A procedure is excluded from Medicare payment in an ASC if it (1) generally results in extensive blood loss, (2) requires

major or prolonged invasion of body cavities, (3) directly involves major blood vessels, or (4) is generally emergent or life-threatening in nature.

In 1998, CMS proposed revising its criteria for determining which procedures are eligible for Medicare facility payment when provided in an ASC and expanding the list of procedures approved for payment (Health Care Financing Administration 1998). CMS proposed eliminating the surgery, anesthesia, and recovery time limits but continuing to use specific clinical standards for determining whether a procedure could safely be performed in an ASC. CMS also proposed eliminating site-of-service volume as a principal criterion of approval for the ASC

list but proposed continuing to consider it as one of the factors in the approval process. This change would have allowed procedures that are frequently performed in physician offices to be considered for addition to the ASC list. Thus, it could have led to the shift of some procedures to ASCs from the physician office setting, where the practice expense fee is generally less than the ASC facility fee. CMS has been planning to release a partial final rule that would update the ASC list (but not modify the criteria for determining eligibility for the list) in early 2003 (Scully 2002). Expanding the list of procedures payable by Medicare in ASCs would likely increase the volume of procedures provided to beneficiaries in ASCs.

³ There are different site-of-service criteria applied to procedures that are already on the list of services eligible for Medicare payment. To remain on the list, procedures must have combined inpatient, hospital outpatient, and ASC volume greater than 46 percent, physician office volume of less than 50 percent, and inpatient hospital volume of greater than 10 percent (Health Care Financing Administration 1998).

**TABLE
2F-2**

Most common categories of procedures provided to Medicare beneficiaries in ASCs, 2001

Procedure category	Volume (as percent of total)	Medicare payments (as percent of total)	Medicare payments (millions)
Cataract removal/lens insertion	29.1%	49.5%	\$799
Colonoscopy	18.0	13.4	217
Other eye procedures	12.0	9.7	156
Upper gastrointestinal endoscopy	10.1	6.6	106
Minor procedures—musculoskeletal	10.1	5.2	84
Other ambulatory procedures	4.5	3.0	48
Ambulatory procedures—musculoskeletal	3.5	2.8	42
Cystoscopy	3.1	2.0	32
Arthroscopy	1.9	1.7	27
Ambulatory procedures—skin	1.8	1.3	21
Total	94.1	95.2	\$1,532

Note: ASC (ambulatory surgical center). Each category includes several procedure codes. Table does not include all procedures provided to beneficiaries in ASCs.
 Other eye procedures include after cataract laser surgery.
 Minor procedures—musculoskeletal include interventional pain management procedures (such as epidural injection and facet joint block), soft tissue biopsy, tumor excision, and closed treatment of certain fractures.
 Other ambulatory procedures include services such as breast biopsy, nasal polyp excision, abscess drainage, dilation of esophagus, and septoplasty.
 Ambulatory procedures—musculoskeletal include services such as hammertoe operation, tendon sheath incision for finger, arthrotomy, tenotomy, and tendon repair.
 Ambulatory procedures—skin include services such as skin debridement, excision of lesion, wound repair, and skin graft.

Source: MedPAC analysis of the 5 percent Standard Analytical File of ASC facility claims, 2001, and the Berenson-Eggers Type of Service classification scheme from CMS.

ASC payment system

Medicare uses a fee schedule to pay for facility services provided in an ASC, such as nursing, recovery care, anesthetics, and supplies (see Appendix A for more information on the ASC payment system). The ASC fee schedule divides procedures into nine payment groups based on similar costs.⁴ For fiscal year 2003, the payment rates for these groups range from \$333 to \$1,399. Medicare pays for related

physician services separately under the physician fee schedule.

CMS is statutorily required to conduct a survey of costs and charges for individual procedures from a sample of ASCs every five years. These data are used to revise ASC payment rates. Although the most recent cost survey was conducted in 1994, the payment rates based on this survey were never implemented because of

legislative action (see discussion below). Thus, current payment rates are based on a 1986 cost survey and are probably no longer consistent with ASC costs.

Between revisions to the payment system, the payment rates generally are required to be updated annually using the consumer price index for all urban consumers (CPI-U). From fiscal year 1998 through fiscal year 2002, however, the Balanced Budget Act of 1997 (BBA) limited annual updates to the CPI-U minus 2 percentage points (but not less than zero).⁵ ASC rates were updated by 3 percent for fiscal year 2003.

In 1998, CMS proposed restructuring the ASC payment system to make it more consistent with the outpatient hospital prospective payment system (PPS), which was then under development. The agency proposed replacing the 8 ASC payment groups with 105 ambulatory payment categories (APCs) that classified procedures based on cost and clinical characteristics.⁶ The payment rates for the APCs would have been based on data from the 1994 cost survey.

In response to CMS’s proposed rule, the Congress included a provision in the Medicare, Medicaid, and State Children’s Health Insurance Program Benefits Improvement and Protection Act of 2000 that required CMS to do the following:

- delay implementing the new payment system until 2002;
- phase in the payment system over four years; and
- base payment rates on cost survey data from 1999 or later.⁷

4 The highest payment group (\$1,399) currently has only one code (HCPCS code 50590, Extracorporeal Shock Wave Lithotripsy). Payments have not yet been made for this procedure due to a court order (*American Lithotripsy Society v. Sullivan*) that required CMS to reconsider the payment rate. CMS is planning to add several procedures to the ASC list that will be placed in this payment group (CMS 2002).

5 The Omnibus Budget Reconciliation Act of 1993 had eliminated the annual CPI-U update for 1994 and 1995.

6 The APCs proposed for the ASC payment system were those included in the outpatient payment system proposed in 1998. Subsequently, CMS modified the APC definitions for the outpatient PPS and expanded the number of APCs.

7 In the first year of the new payment system’s implementation, 25 percent of the payment would be based on the new system and 75 percent on the current system. The proportion of the payment from the new payment system would increase to 50 percent in the 2nd year of implementation, 75 percent in the 3rd year, and 100 percent in the 4th year.

As of early 2003, CMS has not conducted the new cost survey that is needed to revise the ASC payment system.

Trends in Medicare payments for ASC services

Between 1996 and 2001, Medicare payments (program spending and beneficiary cost sharing) for ASC facility services doubled while payments to physicians increased by 25 percent and payments to outpatient departments grew by 17 percent. Medicare payments to ASCs more than quadrupled between 1991 and 2001, increasing from \$375 million to \$1.6 billion (Figure 2F-2). Payments to ASCs are projected to increase at an average annual rate of 11 to

12 percent between 2002 and 2007.⁸ Payments to ASCs were less than 1 percent of total Medicare spending in 2001.

Factors affecting growth of ASC services

In addition to Medicare payment policy (discussed in the next section), several other factors have influenced the rapid growth in Medicare payments for ASC services:

Shift of services from inpatient settings to ambulatory care settings

To some extent, the growth in ASC services is part of the general shift of

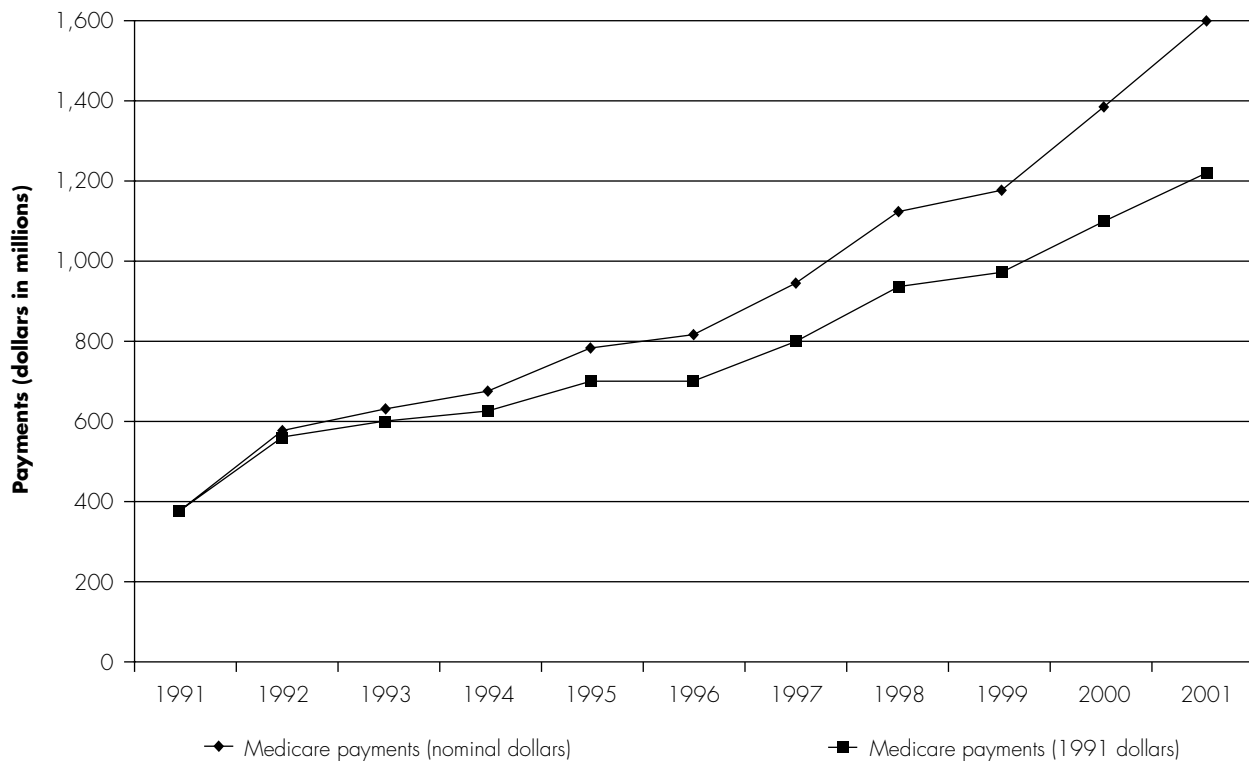
services from inpatient hospital to ambulatory care settings. Between 1994 and 1998, several high-volume procedures that can be provided in multiple settings—such as upper gastrointestinal (GI) endoscopy, colorectal endoscopy, and arthroscopy—migrated from the inpatient setting to one or more ambulatory care settings (MedPAC 2000).

Growth in ASCs' share of ambulatory services

ASCs' share of certain ambulatory surgical procedures has been increasing in comparison to that of hospital outpatient departments and physician offices. For example, our analysis of Medicare claims data found that between 1997 and 2000,

FIGURE 2F-2

Growth in total Medicare payments for ASC services, 1991–2001



Note: ASC (ambulatory surgical center). Medicare payments include program spending and beneficiary cost sharing for ASC facility services. Average annual growth of nominal payments (1991–2001) = 15.6 percent. Average annual growth of payments in 1991 dollars (1991–2001) = 12.5 percent.

Source: CMS, Office of the Actuary.

⁸ This estimate is based on projections from the Congressional Budget Office's March 2002 baseline and the 2002 annual report of the Boards of Trustees of the Medicare trust funds.

ASCs' share of cataract removal/lens insertion procedures increased from 37 percent to 42 percent. ASCs' share of colonoscopies, upper GI endoscopies, and other eye procedures (such as after cataract laser surgery) also grew.

Changes in practice patterns and medical technology

Changes in clinical practice and health care technology have expanded the use of ambulatory procedures. For example, colonoscopy and upper GI endoscopic procedures, which together account for 20 percent of Medicare payments to ASCs (Table 2F-2, p. 138), have increased because of the development of flexible fiberoptic scopes and expanded Medicare coverage of colon cancer screening. The growth in cataract lens replacement, which accounts for about half of Medicare payments to ASCs, has been spurred by advances in microsurgery and ultrasound techniques and the aging of the population (MedPAC 2000).

Benefits to patients

An ASC may offer patients more convenient locations, shorter wait times, and lower coinsurance than a hospital outpatient department (20 percent in an ASC compared with up to 55 percent in an outpatient department).

Benefits to physicians

Because ASCs are specialized settings for ambulatory surgery, physicians may be able to perform procedures more efficiently than in a hospital outpatient department. For example, the surgical environment in an ASC is often customized for a specific procedure, such as cataract lens replacement. In addition, it may be easier for physicians to reserve surgical time in an ASC than an outpatient department that may be subject to unpredictable demands.

Physicians also may be able to increase their revenues by investing in ASCs. There are fewer legal restrictions on physician ownership of ASCs than on other types of health care facilities, such as clinical laboratories. The laws prohibiting physicians' referral to health care entities with which they have financial relationships (Section 1877 of the Social Security Act) do not apply to surgical services provided in an ASC (Health Care Financing Administration 2001). In addition, the Department of Health and Human Services Office of Inspector General has published safe harbor regulations that protect physicians who invest in ASCs from prosecution under the anti-kickback statute, if certain conditions are met.⁹ Among other conditions, the safe harbor regulations generally protect physician investors for whom the ASC is an extension of their office practice (Office of Inspector General 1999). Physicians who invest in an ASC can receive a share of the ASC's profits that is related to their portion of the investment. The CEO of a large ASC chain has claimed that a physician's ASC revenues can "replace . . . the decline in his or her professional fee that has occurred in the last three to five years because of pressure from managed care, insurance companies, and Medicare" (Physician Compensation Report 2002).¹⁰ However, data on the relative profitability of ASCs and the extent of physician ownership of ASCs are difficult to obtain.

Collecting recent ASC cost data

As discussed earlier, CMS is statutorily required to conduct a survey of ASCs' costs and charges every five years. These data are used to revise the ASC payment rates. However, CMS has not conducted a new cost survey since 1994. The collection of recent ASC cost data would

allow the Congress and CMS to evaluate current ASC payment rates and to revise the ASC payment system. Once they are collected, MedPAC would use recent cost data to assess the adequacy of ASC payment rates.

RECOMMENDATION 2F-1

The Secretary should expedite collection of recent ASC charge and cost data for the purpose of analyzing and revising the ASC payment system.

IMPLICATIONS 2F-1

Spending

- The collection of ASC charge and cost data would not affect Medicare benefits spending. However, the revision of ASC payment rates based on recent data would probably affect Medicare spending. Until new rates are developed, however, we are unable to project whether they would increase or decrease spending.

Beneficiary and provider

- The collection of recent charge and cost data should not affect beneficiaries. There could be small administrative costs for ASCs to provide the data to CMS.

Assessing payment adequacy

The first question in applying MedPAC's approach to evaluating payment adequacy is whether the current level of Medicare's payments for ASC services is adequate relative to providers' costs. However, there is no recent information on the cost of ASC services that would allow us to compare Medicare's payments to ASCs' costs. The revised ASC payment rates

9 The anti-kickback statute prohibits health care providers from receiving or paying anything of value to influence the referral of services covered by Federal health programs.

10 The Medicare payment changes to which this statement refers may include the phase-in of the resource-based practice expense relative value units, which ended in 2002 and reduced payment rates for surgical services, on average, and the 5.4 percent cut in physician payment rates in 2002.

proposed by CMS in 1998 (which were based on data from the 1994 ASC cost survey) would have reduced 1998 payment rates for high-volume services such as cataract-related procedures and gastrointestinal endoscopies, which suggests that 1998 payments exceeded costs for these procedures.¹¹ Although we lack recent data on ASC costs, information on market factors allows us to judge the adequacy of Medicare payments for ASC services. Rapid growth in the number of ASCs and the volume of procedures they provide to beneficiaries, together with ASCs' sufficient access to capital, lead us to conclude that current Medicare payments to ASCs are more than adequate.

Entry and exit of providers

Rapid growth in the number of providers furnishing services to beneficiaries may indicate that Medicare's payment rates are at least adequate and potentially too high. Conversely, rapid provider withdrawals from Medicare could suggest that rates are too low.

The number of Medicare-certified ASCs more than doubled between 1991 and 2001, from 1,460 to 3,371 (Table 2F-1, p. 136). After slowing down in 1998 and 1999, growth in the number of facilities accelerated in 2000 and 2001. Each year from 1997 through 2001, an average of over 270 new facilities entered the market, while an average of only 52 closed or merged with other facilities. Most of the new and existing ASCs are for-profit entities.

Changes in the volume of services

Large increases in the volume of services provided could indicate that payment rates are at least adequate and potentially too high, and small increases could signal unfavorable rates. The volume of procedures provided by ASCs to Medicare beneficiaries increased by over

60 percent between 1997 and 2001. This growth occurred despite annual updates to ASC payment rates of less than 1 percent between 1998 and 2002, as mandated by the BBA.

The growth in the volume of ASC procedures has paralleled increases in the number of ASCs (Figure 2F-3, p. 142). The growth in the number of facilities, volume of procedures, and Medicare payments to ASCs appears to be accelerating.

Beneficiaries' access to care

Although ASCs are growing in number, they are not available in all areas. Beneficiaries who are unable to access an ASC may receive ambulatory surgical services in a hospital outpatient department, and, in some cases, a physician's office. Thus, even though some beneficiaries do not have access to surgical services in an ASC, they can receive the same services in other settings.

Providers' access to capital

Rapid growth in the number of both independently-owned ASCs and ASCs that are part of investor-owned chains implies that they have sufficient access to capital. The relatively small start-up costs of ASCs and their quick returns on investment have made them attractive to physicians and other investors (Versel 2002).

Several ASCs acquire capital, as well as management expertise, by partnering with for-profit ASC chains. Companies that invest in or manage ASCs have increased their acquisition of new facilities and experienced strong revenue and earnings growth in the last few years. The four largest investor-owned ASC chains had a financial stake in about 13 percent of all ASC facilities in 2001. New ASC chains have recently entered the market and others are poised to follow. The stock value of at least two large chains has been growing faster than that of the overall health care industry (Borden 2002).

Although the stock value of the largest owner of ASCs has recently fallen because of factors unrelated to its ASC line of business, other ASC firms have received positive investment ratings by financial analysts over the past year.

Accounting for cost changes in the coming year

Given the information about the adequacy of the current level of Medicare payments, the next step in determining payment updates is to ask how much providers' unit costs will change in the coming year. Several factors will affect the change in the unit cost of ASC services.

The most important factor that will affect the cost of ASC services is inflation in input prices. Medicare's payment system for ASCs uses the CPI-U to approximate changes in input prices per unit of service faced by ASCs. Currently, CMS projects that the CPI-U will increase by 2.7 percent in fiscal year 2004.¹²

ASC costs also may increase because of scientific and technological advances that enhance the quality of care but also raise costs. The ASC payment system, unlike the hospital outpatient PPS, has no pass-through payment mechanism to account for the cost of new technologies.

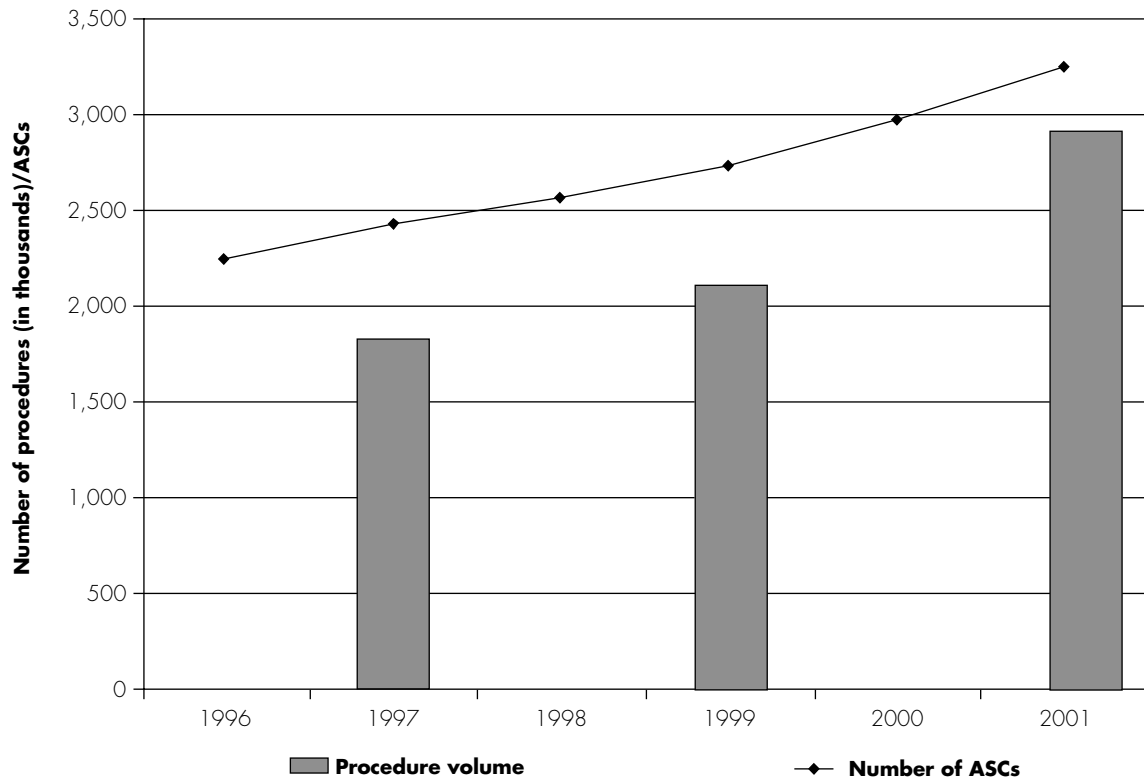
However, among procedures eligible for Medicare payment in an ASC, we lack evidence that the ASC payment system has created barriers to the use of new technologies. For example, procedures that use new technologies have not experienced reductions in the volume of services provided to beneficiaries. Thus, we do not make an allotment for cost increases due to scientific and technological advances when estimating ASC cost changes in the coming year. We plan to continue monitoring changes in the volume of ASC procedures associated with new technologies to ensure that

11 The revised 1998 payment rates proposed by CMS would have increased payments for several lower-volume procedures, such as arthroscopic surgery and hernia repair, which suggests that actual 1998 payment rates were less than the costs of these services.

12 This estimate is subject to revision by CMS as more recent CPI-U data become available.

**FIGURE
2F-3**

Growth in the number of ASCs and volume of procedures provided to Medicare beneficiaries in ASCs, 1996–2001



Note: ASC (ambulatory surgical center).

Source: MedPAC analysis of provider of services file and 5 percent Standard Analytical File of ASC facility claims from CMS.

payments are adequate to cover the cost of new technologies that enhance quality.

Productivity growth (the ratio of growth in outputs to growth in inputs) should reduce the cost of ASC services. Measuring productivity growth requires detailed information on the personnel, facilities, and other inputs used and on the quantity, quality, and mix of services (outputs) produced. Because such data are generally not available, MedPAC has adopted a policy standard for expected productivity growth that is based on growth in multifactor productivity in the national economy. The current estimate of growth in multifactor productivity from the Bureau of Labor Statistics is 0.9 percent.

By subtracting productivity growth from input price inflation (2.7 percent), it appears that the unit cost of ASC services will increase by about 1.8 percent during the coming year. We believe that current payments for ASC services are at least adequate to cover this cost increase.¹³

Update recommendation

RECOMMENDATION 2F-2

The Congress should eliminate the update to payment rates for ASC services for fiscal year 2004.

Under current law, CMS will update ASC payment rates for fiscal year 2004 by the

projected increase in the CPI-U. Our analysis of ASC market factors suggests that current Medicare payments for ASC services are more than adequate and should be at least adequate to cover the expected increase in ASC costs in fiscal year 2004. Thus, we conclude that no update to ASC payment rates is necessary for next year.

IMPLICATIONS 2F-2

Spending

- Because this recommendation would eliminate the current law update to ASC payment rates for fiscal year 2004, we estimate that it would reduce payments by less than \$50

¹³ Even if we were to assume that ASCs' input prices per unit of service will increase by the hospital market basket (projected to increase by 3.5 percent in fiscal year 2004), we believe that current payments for ASC services are at least adequate to cover this cost increase.

million in the first year and by less than \$250 million over 5 years.

Beneficiary and provider

- Because current Medicare payments for ASC services are more than adequate, we do not expect that this recommendation would reduce ASCs' ability to provide ambulatory surgical services to beneficiaries.

Variations in payment for ambulatory surgical procedures by setting

Procedures payable by Medicare when provided in ASCs are also performed in hospital outpatient departments and, in some cases, physician offices. As discussed in the accompanying text box, many other ambulatory services can be provided in multiple settings (see text box, p. 144). Generally, Medicare facility payment rates for the same surgical procedure vary depending on the site of care. For example, ASCs and hospital

outpatient departments receive different payment rates for the same surgical procedures. The 2003 ASC payment rate exceeds the 2003 outpatient department rate for 13 percent of the procedure codes for which ASCs received Medicare payments in 2001.¹⁴ These codes accounted for 35 percent of Medicare payments to ASCs in 2001. ASC rates are higher than outpatient department rates for 8 of the 10 procedure codes with the highest share of Medicare payments to ASCs (Table 2F-3). However, the ASC rate is lower than the hospital outpatient rate for cataract removal/lens insertion, the procedure that accounted for the largest share (half) of Medicare payment to ASCs in 2001.

Payment differences may reflect underlying cost differences among settings, such as levels of staffing or the mix of patients, or they may be due to the historical development of each payment system. If payment variations are due to factors other than differences in underlying costs, there could be financial incentives to shift services between

settings, which might increase costs to the program and beneficiaries.

Although ASCs receive higher payment rates than outpatient departments for certain procedures, it does not appear that ASCs incur higher costs, on average, than outpatient departments for these procedures. In fact, outpatient departments are probably more costly than ASCs for similar procedures because they must meet additional regulatory requirements and treat patients who are more medically complex. Unlike ASCs, hospitals are subject to the Emergency Medical Treatment and Active Labor Act, which requires outpatient departments to stabilize and transfer patients who believe they are experiencing a medical emergency, regardless of their ability to pay. In addition, Medicare's conditions of participation for hospitals require them to comply with patients' rights requirements, such as establishing a patient complaint process, and to implement quality improvement programs (CMS 2003). Medicare's conditions of coverage for ASCs, which have not been updated since

TABLE 2F-3

Hospital outpatient department and ASC payment rates for ambulatory surgery services, 2003

Procedure code	Description	Hospital outpatient rate	ASC rate	Percent difference	Share of Medicare payments to ASCs, 2001
66984	Cataract removal/lens insertion	\$1,160	\$973	-19%	49%
66821	After cataract laser surgery	246	446	81	7
45378	Colonoscopy, diagnostic	413	446	8	5
43239	Upper gastrointestinal endoscopy, biopsy	387	446	15	5
45385	Colonoscopy with removal of lesion by snare	413	446	8	3
62311	Epidural injection, lumbar or sacral	250	333	33	3
45380	Colonoscopy with biopsy	413	446	8	2
45384	Colonoscopy with removal of lesion by forceps	413	446	8	2
43235	Upper gastrointestinal endoscopy, diagnostic	387	333	-14	1
52000	Cystoscopy	329	333	1	1

Note: ASC (ambulatory surgical center). Procedures are arranged by share of Medicare payments to ASCs in 2001, from highest to lowest.

Source: CMS, program memo on update of rates and wage index for ambulatory surgical center payments effective October 1, 2002 (AB-02-124); CMS, Final rule: Medicare program; changes to the hospital outpatient prospective payment system and calendar year 2003 payment rates (CMS-1206-FC).

14 These figures are based on MedPAC's analysis of 2003 ASC and hospital outpatient payment rates and the 5 percent Standard Analytical File of ASC facility claims, 2001, from CMS.

Medicare payments for services provided in multiple settings: a larger issue

In addition to ambulatory surgical services, many other ambulatory services—including clinic visits, many diagnostic tests, and some therapies—can also be provided in multiple settings. The proliferation of settings that provide similar services can improve access to care for beneficiaries. Medicare should strive to ensure that clinical considerations, rather than financial incentives, drive decisions about the setting in which care is delivered.

What are some payment differences by setting?

Medicare payment differences by setting do not consistently favor one setting over another. For example, in 2002, the practice expense payment to a physician for a magnetic resonance imaging (MRI) of the brain was \$403, whereas a hospital outpatient department was paid \$365 for the same service.¹ In 2002, the practice expense payment for a low-level clinic visit in a physician's office was \$25, while the hospital outpatient department facility fee for the same visit was \$54.²

Hospital outpatient department payment rates for chemotherapy drugs, which are based on hospitals' reported costs, are lower than payment rates for chemotherapy drugs delivered in physician offices and clinics (which are based on 95 percent of the drug's average wholesale price).

Do payment policies influence the setting and organization of care?

Payment differences may affect providers' decisions regarding which organizational structures to adopt and which services to provide in a given setting. Differences in payment that are driven by differences in the cost of providing a service should not influence these decisions. However, differences in payment that affect the profitability of providing a specific service in one setting versus another may do so. Fully assessing the impact of payment differences on how care is organized and where it is delivered requires a better understanding of the costs of providing care in each setting, the types of patients who receive care in each setting, and how physicians and beneficiaries decide where care is received.

How is the provision of services changing?

In recent years, settings that specialize in certain services have grown. For example:

- The number of ambulatory surgical centers, which often specialize in particular surgical procedures, doubled between 1991 and 2001 (MedPAC analysis of provider of services file from CMS).
- Single-specialty hospitals, which provide both inpatient and outpatient care, are emerging for

cardiac care, orthopedics, and cancer care (Hospitals and Health Networks 2002).

- Providers are also developing specialized ambulatory facilities for oncology and cardiac care (Devers et al. 2001).

The growth of specialized settings could be driven by the higher profitability of certain services in one setting versus another or by providers' desire to specialize in higher profit services within a setting (such as cardiac care in an inpatient hospital). Particular services have shifted from one setting to another. For example, a recent MedPAC analysis shows that a number of more sophisticated services, including MRI, radiation therapy, and many cardiac services, are increasingly provided in physicians' offices or clinics rather than hospitals' outpatient departments.³

What are the implications for patient care?

A better understanding of the quality of care provided in alternative settings—including safety, regulatory oversight, and clinical considerations—is needed. Existing clinical guidelines typically do not address the site of care. Original research is required to develop the tools necessary to determine what impact the setting of care may have on quality and outcomes. ■

1 The practice expense payment accounts for the cost of office-based resources used in providing the service.

2 These are payments for Healthcare Common Procedure Coding System (HCPCS) code 70551, MRI of brain without contrast, and HCPCS code 99213, office/outpatient visit, established patient.

3 MedPAC analysis of the 5 percent Standard Analytical File, 1999 and 2000, from CMS.

1982, do not contain these requirements (Office of Inspector General 2002).¹⁵

By comparing the characteristics of patients who received similar procedures in ASCs or hospital outpatient departments, we found that outpatient departments serve patients who are more medically complex than ASCs. It is probably more costly to provide surgical procedures to patients with more health problems. For example, patients in worse health may require additional monitoring during the surgery and recovery period. We first compared the average risk scores of patients who received similar procedures in an ASC or outpatient department in 1999.¹⁶ The risk scores

represent beneficiaries' expected service use given their health status, relative to that of the national average beneficiary. Expected use is based on the beneficiary's risk category, which reflects age, sex, and diagnoses from hospital inpatient, hospital outpatient, and physician visits during the previous year (1998), and on the national average historical spending per beneficiary in each risk category.

Because outpatient departments are more likely than ASCs to perform services such as cardiovascular procedures that are associated with higher-risk patients, it is important to control for the type of surgical procedure provided when comparing risk scores between settings.

Thus, we calculated average risk scores for patients who received similar types of procedures, such as cataract removal or colonoscopy. For the 10 categories of procedures with the highest share of Medicare payments to ASCs, patients who were treated in outpatient departments had somewhat higher average risk scores than ASC patients (Table 2F-4).

We also compared average total Medicare payments for all services for beneficiaries who received similar procedures in ASCs and hospital outpatient departments in 1999. Total payments represent health care use and could reflect beneficiaries' health status: Use of services should increase as health status declines.

**TABLE
2F-4**

Average risk scores for Medicare beneficiaries receiving surgical procedures in ASCs and outpatient departments, 1999

Procedure category	Average risk score for beneficiaries in			Share of Medicare payments to ASCs, 1999
	ASCs	Outpatient departments	Percent difference	
Cataract removal/lens insertion	1.25	1.28	2%	54%
Other eye procedures	1.31	1.37	5	11
Colonoscopy	1.15	1.22	6	11
Other ambulatory procedures	1.33	1.38	4	7
Upper gastrointestinal endoscopy	1.32	1.44	9	6
Ambulatory procedures—musculoskeletal	1.09	1.22	12	3
Cystoscopy	1.43	1.50	5	2
Ambulatory procedures—skin	1.45	2.26	56	1
Arthroscopy	0.90	0.99	10	1
Minor procedures—other	1.58	1.73	9	1

Note: ASCs (ambulatory surgical centers). Procedure categories are based on CMS's Berenson-Eggers Type of Service classification scheme. Each category includes several procedure codes. This table includes the 10 procedure categories with the highest share of Medicare payments to ASCs in 1999. These categories accounted for 97 percent of payments to ASCs in 1999. This analysis includes only procedures that were payable by Medicare in ASCs in 1999. Risk scores are based on the hierarchical condition category risk adjustment model, which predicts beneficiaries' expected service use in 1999, given their health status, relative to that of the average beneficiary. Expected use is based on each beneficiary's age, sex, and diagnoses from inpatient, outpatient, and physician visits in 1998. The risk score differences between settings are statistically significant (1 percent level). The average risk score across all Medicare beneficiaries is 1.0. Other eye procedures include after cataract laser surgery. Other ambulatory procedures include interventional pain management procedures (such as epidural injection and facet joint block), dilation of esophagus, and septoplasty. Ambulatory procedures—musculoskeletal include services such as hammertoe operation, tendon sheath incision for finger, arthroscopy, tenotomy, and tendon repair. Ambulatory procedures—skin include services such as skin debridement, excision of lesion, wound repair, and skin graft. Minor procedures—other include certain nasal, oral, urological, and nerve procedures.

Source: MedPAC analysis of the 5 percent Standard Analytic File of Medicare claims, 1998 and 1999, from CMS, and CMS's Berenson-Eggers Type of Service classification scheme.

¹⁵ Medicare's conditions of coverage for ASCs require them to assess and maintain the quality of care they provide, which is less stringent than the requirement for hospitals to conduct specific performance improvement projects.

¹⁶ The risk scores were derived from the hierarchical condition category risk adjustment model.

However, health care use also could be affected by other factors, such as variations in supplemental coverage, access to providers, and regional practice patterns. Total Medicare payments include both Medicare spending and beneficiary cost sharing for all services used by the beneficiary, including inpatient, ambulatory, and post-acute care. We controlled for geographic adjustments to payment rates by using nationally standardized rates. As with our analysis of risk scores, we controlled for the different mix of services in each setting by separately calculating average total payments for beneficiaries who received services in each category of procedures.

For each of the 10 categories of procedures with the highest share of Medicare payments to ASCs, beneficiaries who received care in outpatient departments had substantially higher total service use than patients who were treated in ASCs (Table 2F-5). These results are

consistent with the results of our analysis of beneficiaries' average risk scores in each setting. Together, these studies indicate that, compared to ASCs, outpatient departments serve patients who are more medically complex.

Our comparison of regulatory requirements and patient characteristics in ASCs and outpatient departments indicates that outpatient departments are probably the more costly setting. Thus, the existence of ASC rates that are higher than hospital outpatient rates is probably not due to higher costs in the ASC setting but instead related to the separate development of the payment systems for each setting. The ASC payment system currently sets rates for 9 payment groups based on 1986 cost data, while the 2003 hospital outpatient PPS sets rates for 570 APC groups based on 2001 cost data. Because the higher payment rates for certain procedures performed in ASCs do not appear to be related to higher costs in

the ASC setting, these payment variations could create financial incentives to inappropriately shift services from outpatient departments to ASCs.

RECOMMENDATION 2F-3

Until the Secretary implements a revised ASC payment system, the Congress should ensure that payment rates for ASC procedures do not exceed hospital outpatient PPS rates for those procedures, after accounting for differences in the bundle of services covered.

IMPLICATIONS 2F-3

Spending

- Because this recommendation would lower ASC payment rates for procedures in which the ASC rate currently exceeds the hospital outpatient PPS rate, after adjusting for differences in the bundle of services covered, we estimate that it

**TABLE
2F-5**

Average total Medicare payments for all services for beneficiaries receiving surgical procedures in ASCs and outpatient departments, 1999

Procedure category	Average total payments for beneficiaries in			Share of Medicare payments to ASCs, 1999
	ASCs	Outpatient departments	Percent difference	
Cataract removal/lens insertion	\$6,948	\$8,044	16%	54%
Other eye procedures	6,584	7,796	18	11
Colonoscopy	6,254	7,088	13	11
Other ambulatory procedures	8,494	11,033	30	7
Upper gastrointestinal endoscopy	8,672	10,784	24	6
Ambulatory procedures—musculoskeletal	6,236	9,410	51	3
Cystoscopy	9,508	11,194	18	2
Ambulatory procedures—skin	9,759	24,990	156	1
Arthroscopy	5,539	8,109	46	1
Minor procedures—other	10,035	12,600	26	1

Note: ASCs (ambulatory surgical centers). Procedure categories are based on CMS's Berenson-Eggers Type of Service classification scheme. Each category includes several procedure codes. This table includes the 10 procedure categories with the highest share of Medicare payments to ASCs in 1999. These categories accounted for 97 percent of payments to ASCs in 1999. This analysis includes only procedures that were payable by Medicare in ASCs in 1999. Total payments include both Medicare spending and beneficiary cost sharing for all services used by beneficiaries, including inpatient, physician, ambulatory, and post-acute care. Medicare payments are based on nationally standardized payment rates. The differences in average total payments between settings are statistically significant (1 percent level). Other eye procedures include after cataract laser surgery. Other ambulatory procedures include interventional pain management procedures (such as epidural injection and facet joint block), dilation of esophagus, and septoplasty. Ambulatory procedures—musculoskeletal include services such as hammertoe operation, tendon sheath incision for finger, arthrotomy, tenotomy, and tendon repair. Ambulatory procedures—skin include services such as skin debridement, excision of lesion, wound repair, and skin graft. Minor procedures—other include certain nasal, oral, urological, and nerve procedures.

Source: MedPAC analysis of the 5 percent Standard Analytic File of Medicare claims, 1999, from CMS, and CMS's Berenson-Eggers Type of Service classification scheme.

**TABLE
2F-6**

Estimated impact of limiting ASC payment rates to hospital outpatient rates, by procedure category

Procedure category	Estimated percent reduction in 2003 ASC payments	Share of Medicare payments to ASCs, 2001	Average 2003 ASC rate (current law)	Average 2003 ASC rate (if rates limited)
Cataract removal/lens insertion	0%	50%	\$971	\$971
Colonoscopy	8	13	446	411
Other eye procedures	29	10	493	351
Upper gastrointestinal endoscopy	11	7	425	377
Minor procedures—musculoskeletal	19	5	335	273
Other ambulatory procedures	2	3	435	425
Ambulatory procedures—musculoskeletal	1	3	505	501
Cystoscopy	2	2	390	382
Arthroscopy	0	2	604	603
Ambulatory procedures—skin	15	1	480	410
Average across all procedures	7			

Note: ASC (ambulatory surgical center). Procedure categories are based on CMS’s Berenson-Eggers Type of Service classification scheme. Each category includes several procedure codes. This table includes the 10 procedure categories with the highest share of Medicare payments to ASCs in 2001. These categories accounted for 95 percent of payments to ASCs in 2001. Average ASC rates are the average of the rates for the procedure codes in each category, weighted by each code’s service volume. The estimated reductions in 2003 ASC payments assume that ASC payment rates would not exceed hospital outpatient base rates for the same procedure. The estimates do not include adjustments to account for differences in the bundle of services covered in each setting or changes in the provision of ASC services that might result from payment rate changes.

Other eye procedures include after cataract laser surgery.

Minor procedures—musculoskeletal include interventional pain management procedures (such as epidural injection and facet joint block), soft tissue biopsy, tumor excision, and closed treatment of certain fractures.

Other ambulatory procedures include services such as breast biopsy, nasal polyp excision, abscess drainage, dilation of esophagus, and septoplasty.

Ambulatory procedures—musculoskeletal include services such as hammertoe operation, tendon sheath incision for finger, arthrotomy, tenotomy, and tendon repair.

Ambulatory procedures—skin include services such as skin debridement, excision of lesion, wound repair, and skin graft.

Source: MedPAC model based on 2003 ASC and hospital outpatient payment rates and 2001 volume of ASC services from 5 percent Standard Analytic File of ASC facility claims, 2001, from CMS.

would reduce Medicare payments by between \$50 million and \$200 million in the first year and between \$250 million and \$1 billion over 5 years. These estimates are based on comparisons of the ASC and outpatient base rates for the same procedures. They do not include adjustments to account for differences in the bundle of services covered in each setting or changes in the provision of ASC services that might result from payment rate changes.¹⁷

Beneficiary and provider

- We estimate that this recommendation would lower rates for about half of ASC services

(weighted by the volume of services provided to beneficiaries in 2001). These procedures, which account for about 35 percent of Medicare payments to ASCs, would experience average payment reductions of 20 percent. Overall, ASC payments would be reduced by about 7 percent.

- The impact of this recommendation on individual ASCs would vary by the services offered by the facility. Table 2F-6 shows the payment impact of implementing this recommendation by procedure category. Each category includes several procedure codes. Although payments for cataract removal/lens insertion (the highest-volume

category of ASC services) would not be affected, payments for other eye procedures (primarily after cataract laser surgery) would be reduced by almost 30 percent. Almost half of ASCs provide ophthalmology procedures (Table 2F-7, p. 148). Payments for gastrointestinal procedures would be reduced by about 8 to 11 percent. About 40 percent of ASCs furnish these procedures. Single-specialty ASCs providing a limited range of services for which payments are reduced would be disproportionately affected compared to multispecialty ASCs, which could spread payment reductions across a broader service

¹⁷ The estimates are from a model of ASC payments that is based on 2003 ASC and hospital outpatient PPS payment rates and 2001 ASC service volume.

line. Single-specialty and multispecialty facilities each account for roughly half of all ASCs (Federated Ambulatory Surgery Association 2002).

- Based on our analysis of payment adequacy, we do not expect ASCs to provide fewer procedures as a result of this recommendation. However, even if ASCs provide fewer ambulatory surgical services, we do not expect beneficiaries' access to these services to be reduced because they can be received in alternative settings. Reductions to ASC payment rates also would lower beneficiary cost sharing.

This recommendation refers to the total Medicare payment received by ASCs and hospital outpatient departments (the program's portion of the payment plus the beneficiary's cost sharing). Because different payment systems apply to ASCs and outpatient departments, the service bundle for the same procedure may not be equivalent in each setting. Differences in the bundle of services should be taken into account when comparing ASC and outpatient hospital payments for the same procedure. For example, if a surgical procedure does not normally require an imaging or radiology service, the procedure's payment rate in each setting will not reflect the cost of this additional service. In some cases, however, the physician performing the procedure may decide that it is clinically important to use an imaging service (such as using fluoroscopy to enhance the surgeon's field of vision). Although an outpatient department could bill Medicare for both

the surgical procedure and the imaging service, an ASC is not permitted to bill separately for ancillary services, such as imaging or radiology services. Thus, an ASC that provided an imaging service in conjunction with a surgical procedure would not be separately reimbursed for its cost. Payments for services that are sometimes provided in connection with a surgical procedure but are not part of the procedure payment rate should be accounted for when comparing payment rates in ASCs and outpatient departments.

Another issue that affects the comparability of payment rates between settings is whether the cost of drugs or devices used in a procedure is part of the payment bundle. Outpatient departments may receive pass-through payments for certain new technology items, such as drugs and devices, that are used in the delivery of services (see Appendix A).¹⁸ Pass-through payments are provided in addition to the service's base payment. ASCs do not receive pass-through payments. To the extent that new technology items are used for procedures provided in ASCs, their costs are included in the procedure payment rate and not reimbursed separately. On the other hand, ASCs can receive separate payments for prosthetic devices used in conjunction with surgical procedures, whereas outpatient departments cannot. The cost of prosthetic devices is included in the outpatient PPS base payment rate. Separate payments for items used in connection with a surgical procedure should be considered when comparing ASC and outpatient rates.

**TABLE
2F-7**

**Distribution of
ambulatory surgical
centers by specialty
type, 2001**

Specialty type	Percent of ASCs
Ophthalmology	48%
Plastic surgery	45
Gastroenterology	40
Orthopedic	38
General surgery	35
Gynecology	35
Otolaryngology	35
Podiatry	35
Urology	28
Pain management	22

Note: ASC (ambulatory surgical center). ASCs may offer services in more than one specialty. Data include both Medicare-certified and non-Medicare-certified ASCs.

Source: SMG Marketing Group, Inc., 2002.

Because the outpatient PPS is relatively new and its payment rates have fluctuated in the last few years, there could be a concern with using these rates to set a ceiling for ASC payment rates. However, outpatient rates have recently fluctuated due to technical reasons and we expect rates to stabilize in future years.¹⁹ The use of cost data from hospitals operating under the outpatient PPS to set outpatient rates, which was done for the first time for 2003 rates, also should enhance the stability of the system. Previously, outpatient PPS rates were based on cost data from hospitals operating under the prior, cost-based, payment system. ■

¹⁸ Most of the payments for pass-through items have been incorporated into the outpatient PPS base rates for 2003.

¹⁹ In 2002, price information from manufacturers was used to incorporate some pass-through costs into base APC rates. In 2003, hospital cost data was used to calculate all payment rates. This change in methodology generally led to lower payment rates for services using pass-through items in 2003 than in 2002. CMS took steps to limit the change in payment from 2002 to 2003.

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CHAPTER

3

**Access to care in the
Medicare program**

Access to care in the Medicare program

A basic goal of Medicare is to ensure that elderly and disabled Americans have access to appropriate, high-quality health care. In this chapter, MedPAC evaluates beneficiary access along three dimensions: (1) the health system's capacity; (2) beneficiaries' ability to obtain care; and (3) access to appropriate care.

As noted in Chapter 2, our analysis finds no widespread problems with beneficiaries' access to care. Although more selective about their patients than in the past, most physicians are accepting at least some Medicare beneficiaries. Post-acute services are generally available, although it has become more difficult to place the most complex patients in skilled nursing facilities. Shortages of registered nurses could affect the availability or timeliness of certain services, however, and demographic trends raise concerns about the future capacity of the health system.

General measures of access show that elderly beneficiaries are more satisfied with access to care than other age groups. However, as is the case for other populations, certain beneficiaries—those in poor health, with low incomes, and without supplemental insurance—are more likely to report difficulty than others. In addition, some beneficiaries are not receiving appropriate preventive or primary care services.

In this chapter

- Evaluating access to care: an overview
 - The capacity of the health system to meet beneficiaries' needs
 - Beneficiaries' ability to obtain care
 - Beneficiaries' ability to obtain appropriate care
 - Conclusion
-

A basic goal of the Medicare program is to ensure that elderly and disabled Americans have access to appropriate, high-quality health care. As part of its congressional mandate, MedPAC monitors Medicare beneficiaries' access to care generally and the impact of Medicare payment policies on access to Medicare covered services.

Evaluating access is a complex and difficult task, in part because there is no agreed upon measure of what constitutes appropriate access. The Institute of Medicine (IOM) has defined access to care as “the timely use of personal health services to achieve the best possible outcome” (IOM 1993). In this chapter, MedPAC evaluates access using a framework that relies on three interrelated dimensions: (1) the capacity of the health system to provide health care for Medicare beneficiaries, (2) Medicare beneficiaries' ability to obtain health services, and (3) Medicare beneficiaries' experiences obtaining clinically appropriate health care.

Evaluating access to care: an overview

Measuring access requires analysts and policymakers to piece together many types of information to create a balanced picture. There is no simple definition of access because the concept involves questions about both the availability and the actual use of services. A sufficient supply of providers does not guarantee that beneficiaries will be able to obtain care. Further, knowing that beneficiaries are obtaining care does not tell us whether they are receiving the right mix of services.

In addition to access being multidimensional, it is difficult to find valid and precise measures of access. National data may mask problems in specific regions or for certain types of beneficiaries, while data focusing on

targeted areas may not reflect the situation in other areas. Conclusions about access depend greatly on the types of questions asked. And different people may answer the same questions differently. The limitations of data require policymakers to gather and evaluate information on access from a variety of viewpoints.

Dimensions of access

Taking these factors into account, MedPAC evaluates Medicare beneficiaries' access to care from as many perspectives as possible along three interrelated dimensions.

- **Capacity of the health system to meet Medicare beneficiaries' needs.** There is no generally accepted standard for the health system capacity needed to provide care for Medicare beneficiaries (e.g., a ratio of providers or specialists to beneficiaries). One alternative is to rely on indirect indicators of capacity (e.g., the supply of providers, rates of entry and exit of providers). The efficiency and productivity of individual providers may also affect the capacity of the health system. In addition, it is important to evaluate the geographic distribution of providers and to consider beneficiaries' anticipated health care needs in both the short term and the long term.
- **Medicare beneficiaries' ability to obtain health care.** Large numbers of hospitals or physicians nationally or in a specific region may indicate the presence of enough health professionals to provide access to the Medicare population. Such numbers do not, however, answer the question of whether beneficiaries are actually obtaining care. Even if capacity is sufficient, a variety of factors, such as financial barriers or the presence of complex medical needs, may pose barriers to beneficiaries' obtaining care.

- **Appropriateness of the care Medicare beneficiaries receive.**¹ The most complex dimension of access is appropriateness of care—that is, whether Medicare beneficiaries are receiving the right care in the right setting at the right time. Defining appropriate care is difficult, but evidence-based guidelines have been developed for an increasing number of clinical conditions. Such guidelines, which call for specific procedures or treatment regimens, can be used to measure appropriateness of care in some settings. They can also be used to determine if beneficiaries are receiving beneficial preventive services. In addition, certain conditions termed “ambulatory care sensitive conditions,” if treated appropriately in the ambulatory setting, need not result in hospitalizations. Hospital admissions or emergency department (ED) use for these conditions may indicate inadequate access to ambulatory settings or services, or inadequate care management.

Measures of access to care

Conclusions about access to care depend heavily on which data are used and which questions are asked. Some measures focus on whether beneficiaries can find any type of care, whereas others focus more on the willingness of physicians to accept Medicare patients. Other measures look at the care experience through waiting times or through delays in obtaining care.

Many current data are designed to produce national estimates—providing a general impression of access to care—but may mask local variation. For example, although a Center for Studying Health System Change (HSC) survey of physicians in 2001 found that 71.1 percent of physicians overall were willing to take all new Medicare patients—meaning that they accepted all new Medicare patients who wished to make appointments—only

1 Measures in this dimension of access overlap significantly with measures of quality. However, the reason behind identified problems could either be an access concern—the beneficiary did not take the time to obtain the necessary care or tried, but was not able to obtain it from a provider; or a quality concern—the beneficiary did obtain care, but was not given the right type of care.

55 percent of physicians in Seattle were willing to do so. Because access to care is often driven by local market conditions, it is also important to distinguish between isolated problems and those that could signal emerging systemic problems.

Different questions may lead to different conclusions. In the physician survey noted above, although only 55 percent of physicians in Seattle said they were willing to take all new beneficiaries, only 8 percent of Medicare beneficiaries said they delayed or put off obtaining care. So, it is unclear from these apparently conflicting findings whether beneficiaries have a problem obtaining care in Seattle.

Assessments of access to care are also subjective, to some degree. For example, in the MedPAC analysis discussed in a later section of this chapter, highly educated persons reported more problems accessing care than less educated persons. It seems unlikely, at least intuitively, that these self-reports capture a true difference in beneficiaries' ability to obtain care. Rather, they are more likely the result of different expectations.

Measures of use are also limited in what they can tell us about access. Data on these measures tell us more about how often beneficiaries use certain services than about the appropriateness of those services.²

Data on access to care

The ability to measure access also depends on the availability and utility of data. The three main sources of data on access for Medicare beneficiaries are administrative data on the use of services, data generated directly from providers, and data generated from beneficiaries. Each of these sources provides information useful for evaluating several dimensions of access.

A common concern across all these types of data is timeliness—it is often difficult to find data that are recent enough to allow unambiguous conclusions about

current beneficiaries' experience accessing care. While focus groups and smaller surveys provide more timely information, results from these sources are often not as generalizable as large, multiyear surveys or administrative data.

That said, administrative utilization data offer several advantages. First, such data are routinely collected, thus minimizing the costs of obtaining them. Second, the data are usually extensive and provide information on all beneficiaries using services, so they can often answer many questions in a statistically valid manner. On the other hand, because administrative data are collected for billing purposes, and for tracking beneficiary eligibility and enrollment information, such data are not always organized in a manner that addresses policy or research questions.

Administrative data on claims paid can provide information on the capacity of the health system and on the needs of beneficiaries over time. These data tell policymakers how often a certain service is being used, whether use has increased or decreased, and which type of beneficiaries used certain types of services. Finally, they can provide some information on appropriateness of care by revealing whether beneficiaries are using the right types of services. For example, they can tell policymakers how many beneficiaries received appropriate preventive services, such as immunizations, and whether diabetics in the program received a test to measure their glucose levels. When combined with medical record review and clinical judgement, administrative data can provide even richer information on appropriateness of care.

Data collected directly from beneficiaries or providers may be obtained through broad surveys, targeted surveys, structured focus groups, or focused interviews with individuals. These type of data provide information on beneficiaries' and providers' unique perceptions of access. Different types of these data have distinct

advantages and disadvantages. Large, carefully designed surveys may provide broad, valid information and—depending on size and sample design—make it possible to identify variations among groups within the surveyed population. However, large surveys can be very expensive and take time to administer and analyze.

Smaller surveys and focus groups or interviews can provide rapid response to targeted questions, but the results may be less reliable and, because samples are small, are not generalizable to the whole population. But, because smaller surveys and focus groups or interviews make it possible to gather more in-depth information, they are useful in learning more about the reasons behind access barriers. They can also be used to provide more detailed in-depth targeted analysis of subpopulations.

The capacity of the health system to meet beneficiaries' needs

The sector-by-sector analysis presented in Chapter 2 for purposes of determining the adequacy of payment generally finds that there are sufficient hospitals, physicians, skilled nursing facilities, home health agencies, outpatient dialysis facilities, and ambulatory surgical centers at the national level to provide Medicare beneficiaries with access to Medicare-covered services. In the discussion that follows, we expand on analyses presented in Chapter 2. In particular, we focus on three areas of particular concern to policymakers because of recent payment system changes or other reasons—the availability of:

- physicians,
- post-acute services, and
- registered nurses.

² For example, because many Medicare beneficiaries with supplemental coverage often have first dollar coverage, it is possible that these beneficiaries could be using some services of marginal value in addition to necessary care (MedPAC 2002).

We conclude, based on information currently available, that physicians and post-acute providers are available to most Medicare beneficiaries. Both provider types need to be monitored closely, however. Physicians appear to be growing more selective about the types of new patients they take from all insurance sources, including Medicare. Medicare beneficiaries' level of need for certain complex services seems to be a factor in skilled nursing facilities' decisions about accepting new patients. Our analysis also finds evidence of shortages in the availability of nurses, which may lead to access problems in the future.

In assessing the capacity of the health system to provide access in the coming years, it is important to consider the future needs of Medicare beneficiaries. Our analysis suggests that the Medicare program will face increasing pressures on resources as the numbers of beneficiaries increase and the needs of future beneficiary populations differ from those of current beneficiaries.

Availability of physicians

Physicians treat patients in all settings and are the major directors of health care. For that reason, their willingness to treat Medicare beneficiaries is a critical component of access. Recent reductions in Medicare physician payment rates have raised new concerns about beneficiary access to physicians.³ However, our analysis does not find widespread problems with Medicare beneficiaries' access to physician services. According to our findings:

- most physicians are still accepting Medicare beneficiaries in their practices;

- some physicians are being more selective, but they are also being selective about patients insured by other payers;
- physicians are as concerned about the administrative burden of Medicare as they are about reimbursement levels; and
- physician availability varies by regions.

Over the past several years, Medicare beneficiaries' access to physicians at the national level has been good. Pooled Medicare Current Beneficiary Survey (MCBS) data from 1996 to 1999 show that only 2.4 percent of beneficiaries said they had trouble getting care,⁴ and 91 percent said they had a usual doctor. While these beneficiary survey data are not yet available for more recent time periods, administrative and physician survey data through 2001 and 2002 do not suggest a decline in overall access to services.

As noted in Chapter 2B, the number of physicians furnishing services to beneficiaries has kept pace with the growth in the beneficiary population in recent years. From 1995 to 2001, the number of physicians per 1,000 beneficiaries grew slightly from 12.9 to 13.2. In addition, the volume of physician services beneficiaries use has also grown. Between 2001 and 2002 volume per capita grew by 4.3 percent. Almost all of these services are delivered by participating physicians.⁵ Based on claims data from the first six months of 2002, about 96 percent of allowed charges for physician services were for services furnished by participating physicians.

MedPAC has sponsored surveys of physicians in 1999 and 2002. MedPAC's 2002 survey looked at the impact of recent payment rate reductions on physicians' willingness to accept Medicare beneficiaries and their overall impression of the Medicare program in comparison to other payers on a variety of aspects. We also compared these findings to findings of other surveys. HSC surveyed both beneficiaries and physicians, but HSC's physician survey was conducted before the reduction in payment rates. The American Medical Association (AMA) sponsored an internet-based survey of physicians that was fielded after the payment rate reductions were in place.

The 2002 MedPAC survey reveals that a large majority of physicians are still taking some or all new Medicare beneficiaries. In the 2002 survey, 95.9 percent of physicians accepting any new patients from any insurer were accepting some or all new Medicare patients.

However, each of the three surveys did show that physicians are increasingly limiting the proportion of their patient care load insured by Medicare (Table 3-1). Between MedPAC's 1999 and 2002 survey, the percentage of physicians accepting all new fee-for-service (FFS) Medicare patients fell 6.3 percentage points from 76.4 percent to 70.1 percent. HSC's results were similar. Between 1997 and 2001, the percentage of physicians surveyed by HSC who said they accepted all new Medicare patients fell from 74.6 percent to 71.1 percent.⁶

The AMA survey, fielded after the payment rate reductions between February and April 2002, found a higher percentage of physicians—83 percent—willing to take

3 Fee updates for physicians will be -4.4 percent in 2003 and -5.1 percent in 2004 under current law. However, Medicare expenditures for physician services are still increasing. They rose from \$42 billion in 1996 to \$56 billion in 2001 and are expected to grow at an annual rate of 2 to 4 percent from 2001 to 2006, assuming these negative updates under current law.

4 It is important to note that "trouble accessing care" applies to more than physician services. As such, it may only be an indirect indicator of beneficiaries' ability to obtain care from a physician.

5 The number of participating physicians is often used as an indicator of whether physicians are available to beneficiaries. However, in this chapter we use the percentage of allowed charges because it is a more direct measure of beneficiary use of participating physicians. For a more detailed discussion of the relevance of this indicator see Chapter 2B.

6 These numbers may not represent an appropriate comparison because the HSC survey was fielded before the physician payment rate reductions in 2002.

all new Medicare beneficiaries.⁷ But, similar to the other surveys, the AMA survey also found that physicians were becoming increasingly selective about Medicare patients. When physicians were asked whether they had decreased or restricted the number or type of Medicare patients they treat in the last six months, 16 percent responded that they had. Another 8 percent said they planned to implement such restrictions in the next 12 months.

The phenomenon of physician selectivity in accepting new patients is not unique to Medicare, however. The MedPAC survey found that physicians' limiting their patient load was even more pronounced for patients with Medicaid or private health maintenance organization (HMO) coverage. Results show that, in general, physicians view patients insured by private sector FFS or preferred provider organization (PPO) options more favorably than those of any other payer (Table 3-2).

While the HSC survey did not distinguish among types of private insurance, it found that physicians were limiting their acceptance of both Medicare-covered and privately insured patients. The decline in the percentage of physicians willing to take all new privately insured patients was similar to the decline in their willingness to take all new Medicare patients, falling from 76.2 percent in 1997 to 70.8 percent in 2001.

Analysis of the MedPAC survey results reveals that the level of reimbursement was more often the reason physicians reported for limiting acceptance of new Medicaid or HMO patients than it was for Medicare patients. However, the percentage limiting their acceptance of new patients due to concern over reimbursement was slightly higher for Medicare—15.6 percent—than for private FFS/PPO patients—15.0 percent.⁸

TABLE 3-1

Share of physicians accepting all new Medicare patients, 1997–2002

	1997	1999	2001	2002
MedPAC*	N/A	76.4%	N/A	70.1%
Center for Studying Health System Change	74.6%	72.5%	71.1%	N/A
American Medical Association	N/A	N/A	N/A	83.0%

Note: N/A (not applicable).

*MedPAC's survey results reflect physician acceptance of new fee-for-service beneficiaries.

Source: MedPAC Survey of Physicians 1999 and 2002; Center for Studying Health System Change 1997 and 2001; and American Medical Association Survey of Physicians 2002.

TABLE 3-2

Acceptance of all or some new patients, by type of patient: MedPAC physician survey results, 1999 and 2002

Type of patient	1999	2002	Percent change
Private FFS and PPO patients	97.9%	99.3%	1.4*
FFS Medicare patients	96.8	95.9	-0.9
Uninsured patients ¹	90.5	92.8	2.3
HMO and other capitated plan patients ²	87.6	86.3	-1.3
Medicaid patients ³	73.7	69.5	-4.2*

Note: FFS (fee-for-service), HMO (health maintenance organization), PPO (preferred provider organization). Analysis limited to physicians who were accepting new patients (regardless of type) in the year. The response shows the percentage of doctors with patients of a type who are accepting new patients of that type into their practice. 1999 percentages were weighted to account for oversampling of selected surgical specialties. Missing values excluded from all calculations.

¹In 2002, uninsured included charity and self-pay patients; in 1999, it did not.

²In 2002, the Medicaid category included both HMO and fee-for-service patients; in 1999, this category included only fee-for-service patients.

³In 2002, the HMO category did not include Medicaid patients; in 1999, it did.

*Change since 1999 is significantly different from zero at the 95 percent confidence level.

Source: MedPAC Survey of Physicians, analysis of responses to Question 27B (2002) and Question 19 (1999).

Furthermore, the share of physicians concerned about reimbursement who said they limited new Medicare patients because of reimbursement levels—15.6 percent—was slightly less than the share who said they did so based on concerns about the administrative burden of Medicare—16.0 percent.

Medicare beneficiaries' access to physicians also varied by region. The HSC survey found that, while Boston ranked among the highest of the 12 markets in physician willingness to accept all new Medicare patients (at about 70 percent), Seattle ranked near the bottom (at about 55 percent). This measure would

7 It is interesting that this statistic is higher than the MedPAC or HSC findings. Some have suggested that because the physicians responding to the AMA survey agree ahead of time to participate in AMA surveys, they might be more likely to voice concern over Medicare policies. Clearly, the physicians in the AMA survey have concerns, but they do not appear any more negative towards Medicare than respondents to the other surveys who were chosen to be more nationally representative. The AMA survey was based on 520 respondents with a response rate of 26 percent, compared with about 800 respondents in the MedPAC survey with a 54.5 percent response rate and 12,500 respondents in the HSC survey with a response rate of 61 to 65 percent.

8 Seventy-seven percent of physicians voiced concern about reimbursement. Of these physicians, 15.0 percent said they limited their acceptance of new private FFS/PPO patients, 15.6 percent did so for Medicare patients, 38.0 percent did so for Medicaid patients, and 32.4 percent did so for all other HMO patients.

lead one to believe that Medicare beneficiaries have better access to physician care in Boston than in Seattle. However, taken together with results from other HSC questions, the difficulty of drawing conclusions about access from any single measure becomes apparent. On a different measure—delay for a check-up exceeding three weeks—Seattle beneficiaries appeared to have better access to physician services. In Boston, 54.6 percent of beneficiaries reported that they had to wait more than three weeks for an appointment for a check-up. In Seattle, only 24.2 percent of Medicare beneficiaries reported such a delay.

A survey of State Health Insurance Assistance Programs (SHIPs) and other Medicare advocacy organizations by the Medicare Rights Center, a consumer advocacy organization, identified eight states where access to physicians worsened after the payment rate reductions went into effect in 2002. The SHIPs and others reported an increase in the volume of calls from beneficiaries having difficulty finding doctors who would accept new Medicare patients in Tennessee, Missouri, Arizona, Virginia, New Hampshire, Texas, Rhode Island, and New Mexico. The Medicare Rights Center cautions, however, that they did not evaluate the level of increased calls—the characterization of an increase could be based on a handful of beneficiaries or a large volume of calls.

Availability of post-acute services

Post-acute services covered by Medicare include skilled nursing facility services provided after a hospital stay, as well as home health care. MedPAC's review of available evidence, as discussed below, generally supports the conclusion that Medicare beneficiaries' access to skilled nursing care and home health services remained stable after the implementation of prospective payment for skilled nursing and home health services. Nevertheless, Department of Health and Human Services (HHS), Office of Inspector

General (OIG) surveys and a small focus group sponsored by MedPAC did find that hospital discharge planners reported increasing problems in placing patients with particularly complex health problems in skilled nursing facilities (SNFs), and to a lesser extent home health agencies (HHAs), since the implementation of prospective payment systems (PPSs) in these sectors.

SNF services

Available evidence suggests that the capacity of SNFs to meet Medicare beneficiaries' post-acute care needs has remained relatively stable over the last several years from 1998 to 2002 (see Chapter 2C). Although 26 percent of hospital-based SNFs closed, the increase in the number of freestanding SNFs appears to have offset these closures. In fact, the number of covered days increased 4 percent from 1999 to 2000.

Opinion data from discharge planners also suggest that most Medicare beneficiaries have access to SNF services, although certain types of beneficiaries may experience more problems than others. In a series of studies by the OIG from 1999 to 2001, hospital discharge planners reported that beneficiaries generally had access to SNF care.⁹ About 5 percent of hospital patients who needed SNF care were described as being difficult to place, as defined by whether the surveyed discharge planner reported a delay in placement. Patients for whom SNF placements were difficult were characterized as patients for whom care was costly. Discharge planners said that patients needing rehabilitation services—for whom Medicare pays more generously—were not difficult to place.

In October 2002, MedPAC convened a focus group of 15 hospital discharge planners from a variety of regions and types of hospitals to discuss the impact of Medicare's prospective payment systems for skilled nursing facilities and home health care on Medicare beneficiaries' access to post-acute care (see text box). The findings from this focus group were

consistent with the OIG findings. Since the implementation of Medicare's SNF prospective payment system, hospital discharge planners reported they have had no problems getting SNFs to accept patients requiring rehabilitation services. However, they reported increased difficulty in getting SNFs to accept patients with particularly complex and costly health problems, even when beds were available.

What happens to beneficiaries who stay in the hospital longer because they cannot be placed in a SNF? Focus group participants told us that some patients are eventually placed in a SNF, but some are never placed and stay in the hospital until they can be discharged home. However, it is not clear whether longer hospital stays should be characterized as an access problem. Even though discharge planners may believe that the patient is ready to leave the hospital and be admitted to a skilled nursing facility, these patients may be able to obtain appropriate care in the hospital.

Home health care

There has been a sizeable drop in home health agencies and use of home health services, but this drop followed a period of dramatic increases in each. Twenty-four percent of home health agencies closed between 1997 and 1999. Since that time the number of home health agencies has remained stable, with the numbers entering the Medicare program roughly equivalent to those leaving. In addition, fewer beneficiaries have been using Medicare's home health benefit since 1997.

The declines in the number of agencies and the use of services occur in a historical context that includes several years prior to the implementation of Medicare's interim payment system and PPS for home health. During this time period the number of agencies, beneficiaries who used home health, and visits per beneficiary were increasing dramatically. The percentage of Medicare fee-for-service beneficiaries using home

9 The OIG did not repeat their survey in 2002 and has no plans to do so in 2003. MedPAC is recommending in this report that this series of surveys be continued.

Impact of Medicare's SNF and home health PPS on access to post-acute care: findings from MedPAC's discharge planner focus group

In October 2002, MedPAC convened a focus group of 15 hospital discharge planners from a variety of regions and types of hospitals to discuss the impact of the skilled nursing facility (SNF) and home health prospective payment systems on beneficiaries' access to post-acute care. Focus group participants told us that SNF placements are delayed for certain types of patients at least one day between 5 percent and 25 percent of the time, with some beneficiaries with delayed placements remaining in the hospital for significant periods of time. It was unclear from the discussion whether this delay resulted in the inability of beneficiaries to obtain appropriate care. According to the discharge planners, under the PPS, patients requiring rehabilitation services—for whom Medicare pays more generously—have no problem being placed in SNFs. Hard-to-place patients included those:

- needing dialysis,
- needing expensive medications,
- needing ventilator services,
- requiring total parenteral nutrition,
- having infectious diseases, and
- having mental illness or cognitive impairment.

Patients with infectious diseases, end-stage renal disease, and mental impairments were difficult to place before the PPS was implemented, but the discharge planners said placement was even more difficult after implementation. They suggested that SNFs were eager to take rehabilitation patients because payments for these services were more generous.

The delays in placing patients post-PPS do not necessarily relate to the lack of available beds in freestanding SNFs, according to the discharge planners.

Even when beds are available, freestanding SNFs often will not take complex patients.

The focus group was not as concerned about placing beneficiaries needing home health care as they were about placing those needing SNF care. However, a few planners said that it was harder to place beneficiaries for home health services if they:

- lived in rural areas, especially if therapy, such as physical or speech, was needed;
- required extensive supplies, such as wound treatments; or
- were unable to remain safely at home.

The group did not indicate that these beneficiary groups were either newly hard-to-place or more hard-to-place after the implementation of the PPS. ■

health services in 2001 was 5.5 percent, similar to the percentage in 1991 (6.5 percent). But, at the high point of usage in 1996, 9.0 percent of Medicare beneficiaries used home health services. The increase in use of services in the early and middle 1990s was the primary reason that Congress implemented the PPS, clarified eligibility rules, and strengthened fraud and abuse enforcement in the program.

Despite the decrease in use due to policy changes, the OIG surveys and MedPAC discharge planner focus group (see text box) did not identify widespread problems finding home health care for beneficiaries

discharged from hospitals. The OIG survey did reveal that it was difficult to place a small subset of hospital patients who needed home health care. These patients tended to be those with more complex care needs.

We have less information on beneficiaries referred to home health care from the community. While the MedPAC and earlier OIG surveys did not address this topic, another 2001 OIG survey did. The OIG generally found the reported experiences of “community beneficiaries” to be similar to those of beneficiaries discharged from the hospital into Medicare home health services.¹⁰

Availability of nurses

The supply and retention of registered nurses is an important concern for the entire health system. The Bureau of Health Professions within HHS has reported a growing shortage of nurses, which is expected to worsen by 2010 and thereafter. In a recent survey, hospital administrators report historically high vacancy rates for nurses, as well as other types of personnel (First Consulting Group 2001).¹¹ Nursing homes, home health agencies, health systems, and other organizations have also reported difficulties filling nursing positions.

10 These findings were based on surveys of 21 physicians, 30 home health agencies, 60 aging network representatives, and beneficiaries already receiving services in 10 states. The OIG has no plans to repeat the study. MedPAC is recommending in this report that the Secretary continue this type of study on beneficiaries' access to home health services.

11 These administrators also noted difficulty filling positions for other personnel such as clinical pharmacists and imaging technicians. MedPAC will continue to monitor these capacity issues, but limits the discussion in this chapter to nurses.

In 2000, the Bureau of Health Professions at HHS calculated a shortage of 110,000 nurses, which represents a 6 percent gap between the supply of full-time equivalent registered nurses and the demand for those nurses. As illustrated in Figure 3-1, this gap is expected to grow to 12 percent by 2010 and then worsen dramatically to around 20 percent by 2015, when providers will face unprecedented demand from Medicare beneficiaries seeking services.

Available data do not provide firm evidence that this shortage has compromised access for Medicare beneficiaries. However, in a recent survey, hospital administrators cited emergency department diversions, emergency department overcrowding, and lesser ability to staff beds as the top three problems caused by nursing and other personnel shortages (First Consulting Group 2001). These problems could lead to delays in receiving inpatient and urgent

care, as well as increased pressure for early discharges.¹² In addition, as the number of beneficiaries increases in the future, ensuring an adequate supply of nurses and other health professionals to meet the growing needs of Medicare beneficiaries will be critical.

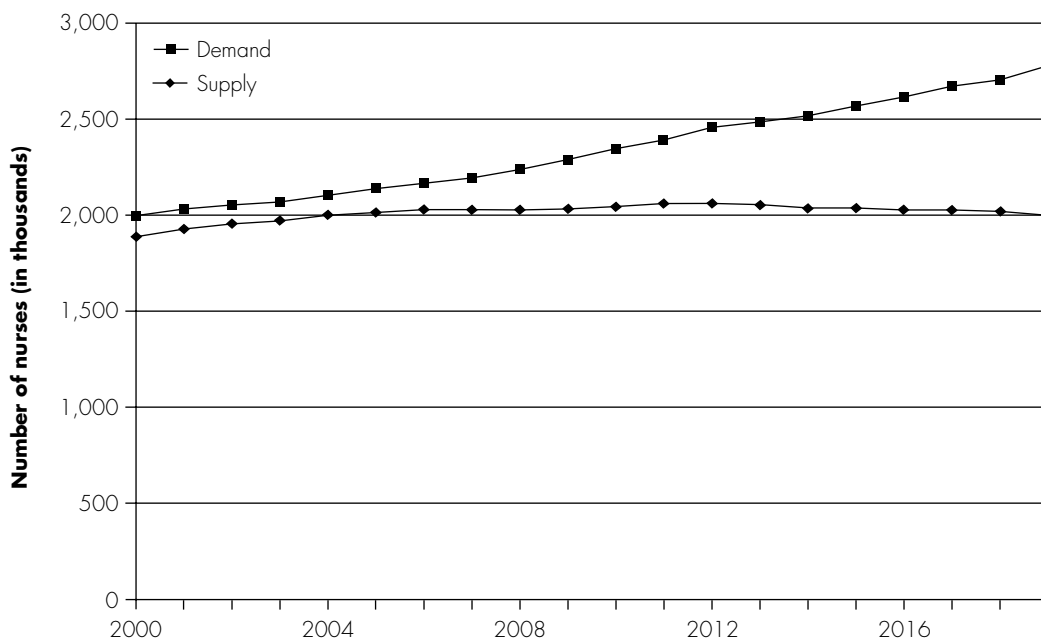
The reasons behind these shortages have been documented in several studies and reports. Factors include an aging existing workforce, fewer young persons choosing and graduating from nursing school, dissatisfaction with the work environment, an increasing number of choices of places to work both in and out of nursing, and declining relative earnings. The average age of working registered nurses has increased, resulting in a higher proportion of nurses who are approaching retirement age. Nurses also retire at an earlier age than other workers, often in their mid- and late-50s (Berliner and Ginzberg 2002). And not all of these older nurses are being replaced by new graduates entering the

workforce. Twenty-six percent fewer people graduated from nursing schools in 2000 than in 1995 (Bureau of Health Professions 2002). One reason younger persons may not be choosing nursing is that real earnings, the amount available after adjusting for inflation, have been relatively flat since 1991 (Bureau of Health Professions 2002).

Some observers suggest that the nursing shortage may be cyclical and therefore addressed over time by market forces, such as increases in wages. Most experts on the shortage of nurses, however, suggest that the gap between individuals entering the nursing workforce and the aging of the current nursing workforce is too large to be addressed by higher wages. They also point to data suggesting that dissatisfaction with working conditions, rather than low wages, is one of the primary reasons nurses are retiring early and fewer persons are entering the profession. Aiken and colleagues report in

FIGURE 3-1

Supply and demand projections for full-time equivalent registered nurses, 2000–2020



Source: Bureau of Health Professions, registered nurse supply and demand projections.

12 While not directly discussed in this chapter, much research has also focused on the impact that nursing shortages have on the quality of care, both in nursing homes and hospitals.

a recent article that more than 40 percent of nurses working in hospitals are dissatisfied with their jobs. Recent data from New York City indicate that 50 percent of new nurses in hospitals leave before their second year of employment (Berliner and Ginzberg 2002).

Beneficiaries' needs for health services: health system capacity to provide access in the coming years

In assessing the capacity of the health care system to provide access to Medicare beneficiaries, it is important to understand beneficiaries' needs for services and how their needs can be expected to change in the coming decades. In this section we consider beneficiaries' future needs by looking at anticipated changes in the prevalence of certain conditions, race and ethnicity, age, and gender, and how these changes will challenge the health care system.

MedPAC's assessment of current capacity, as described in Chapter 2, is that for the most part the health system is adequate to meet beneficiaries' needs. However, the rate of increase in the number of Medicare beneficiaries is expected to be higher than the rate of increase in the overall population, doubling over the period 2000 to 2030. The dramatic rise in the number of beneficiaries and changing demographics of Medicare beneficiaries may alter the types of services needed in the future.

More beneficiaries will mean that, based on current patterns of use, demand for almost all services will rise.¹³ Although new technology breakthroughs and treatment modalities could change the way care is delivered, current utilization patterns provide a reasonable baseline for predicting which types of services will be in greater demand. Combined with information on the types of beneficiaries

who have greater difficulty obtaining care, this analysis may also identify populations that could need more careful monitoring in the future.

In addition to specific types of services for beneficiaries, a healthcare workforce with the skills necessary to treat an older and disabled population will be needed. Although it may be difficult to provide geriatric training to enough new physicians to appropriately treat an increasingly elderly patient population, it may be possible to train current professionals to better manage these patients.¹⁴

Beneficiaries' care needs by age

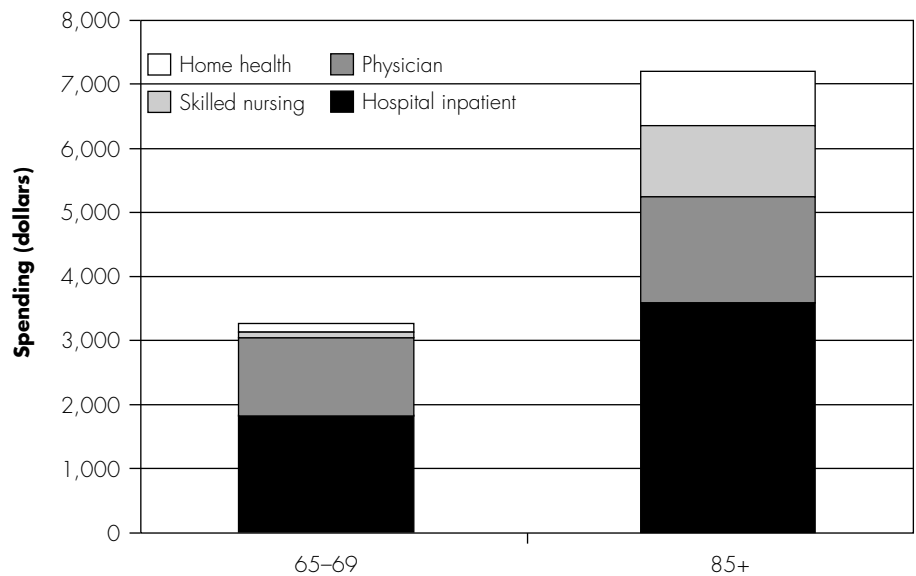
Analysis of census data shows that the fastest growing segment of Medicare beneficiaries has been individuals over

age 85, typically referred to as the "old, old." Even though the rate of growth for this subpopulation is expected to fall from its recent high levels, this population will be significantly larger in the future.

Beneficiaries over age 85 use more of all services than younger beneficiaries, some of which are Medicare-covered and others which are not. They use disproportionately more home health and SNF services than other populations (Figure 3-2). Beneficiaries this age who use the ED do so more frequently than younger beneficiaries. The greatest driver of total health care costs for the over-85 population is nursing home expenditures. However, the vast majority of these are paid for by Medicaid and out-of-pocket payments (Spillman and Lubitz 2000).

FIGURE 3-2

Per capita Medicare spending for beneficiaries ages 65-69 and 85 and over, selected services, 1998



Source: MedPAC analysis of National Center for Health Statistics data.

13 While there is some evidence that disability and functional capacity have improved on some measures among the elderly over the last decade, research has not shown a clear trend with regard to the most severe forms of age-related disability, such as cognitive impairment and the ability to perform activities of daily living; therefore these improvements may not affect usage patterns in the future (Freedman, Martin, Schoeni 2002).

14 A report issued jointly by the Merck Institute of Aging and Health and the Gerontological Society of America speculates that even if geriatric training was mandatory in every medical school, it would take more than 40 years for physicians with geriatric training to replace those without such training. They suggest this would be too long to meet beneficiaries' needs and that training the existing health work force would be more effective.

Beneficiaries' care needs by race and ethnicity

The racial and ethnic composition of the Medicare population is expected to continue to change in coming years. Census data show that, from 2000 to 2050, the percentage of the Medicare population that is white, non-Hispanic is expected to decrease from 84 to 64 percent. The growth in the number of Hispanics is even greater than the increase in the number of African Americans, so that by 2050 there will be more Hispanics than African Americans in Medicare.

Minorities in Medicare are less likely to report having a usual doctor or a usual source of care other than either an urgent care center or ED. CMS data from the 2000 MCBS show that approximately 10 percent of both Hispanics and African Americans report they use an urgent care center or the ED as their usual source of care (compared with 2 percent of non-Hispanic whites). As described later in this chapter, the ED provides important urgent care, but some of this urgent care is for acute manifestations of chronic conditions that could be more efficiently managed through an ongoing relationship with a physician. If minorities' reliance on the ED as a usual source of care continues, access problems may grow with increases in the numbers of minority beneficiaries.

National Center for Health Statistics (NCHS) data also show that African Americans over 65 use more home health services than other populations so this service use will also need to be monitored in the future.

Beneficiaries' care needs by health conditions

Data from the Federal Interagency Forum on Aging-Related Statistics show that the leading causes of death for those over 65 are heart disease, stroke, cancer, diabetes,

chronic obstructive pulmonary disease, pneumonia, and influenza. Five of these are chronic conditions. While death rates have fallen for heart disease and stroke, their prevalence and that of other important chronic conditions has not. Between 1984 and 1995, prevalence rates of heart disease, stroke, diabetes, and cancer all increased.

The prevalence of chronic conditions also varies by race and ethnicity. African Americans in 1995 were more likely to have diabetes, stroke, or hypertension than whites or Hispanics. However, whites were more likely to report cancer than either African Americans or Hispanics (Federal Interagency Forum on Aging-Related Statistics 2000).

The increasing prevalence of chronic conditions and the ability to manage them could have several effects on the services needed by Medicare beneficiaries in the future. Because these conditions are long-term diseases, they require ongoing care management to prevent acute episodes from occurring and may affect the type of care provided for acute episodes for other conditions. Caregivers will need to be able to coordinate multiple needs and treatment regimens across settings and over time. In addition, services that prevent acute episodes and/or increased disease severity, such as blood pressure screening and management, diabetic checks, and mammograms, will be increasingly important as the prevalence of chronic conditions increases.

Care needs of disabled beneficiaries

The number of persons eligible for Medicare on the basis of disability is increasing. The population under age 65 who qualify for Medicare on the basis of a disability has grown from 2.2 million people in 1975 to 5.6 million in 2000; this number is projected to reach 8.8 million in 2017 (MedPAC 2002).

While nearly two-thirds of the current Medicare disabled have physical disabilities, the remainder qualify on the basis of a mental disorder. These beneficiaries account for a disproportionate amount of Medicare spending (Foote and Hogan 2001). Because people with mental conditions usually qualify for Medicare at a much younger age, and therefore are eligible for Medicare for a longer period of time, they will continue to become a larger proportion of the disabled population.¹⁵ This could mean an increase in the need for psychiatric services and for appropriate management of pharmaceuticals specific to mental conditions.

Beneficiaries' care needs by sex

Women make up a disproportionate share of Medicare beneficiaries and will increase as a percentage of the over-65 population in the future (Federal Interagency Forum on Aging-Related Statistics 2000). Females make up 56 percent of the overall Medicare population and 71 percent of the over-85 population. Women live alone more often than men. According to 2000 MCBS data, 72 percent of the nearly 30 percent of Medicare beneficiaries who lived alone were women. Women are also more likely to have lower incomes and less likely to have employer-sponsored supplemental insurance (Schoen et al. 1998).

MedPAC analysis presented in the next section finds that lower incomes are associated with difficulty obtaining care, so the increase in the number of women with lower incomes could heighten access concerns in the future. In addition, women's lack of a caregiver at home may mean that the need for home health services will increase and that more beneficiaries may need to be admitted to nursing homes.

¹⁵ The reason the age of eligibility affects the proportion is that every year fewer persons with mental conditions leave the program compared with the elderly and the physically disabled. The physically disabled tend to sign up for Medicare closer to the age of 65 and thus are usually eligible for Medicare benefits for a shorter period of time.

Beneficiaries' ability to obtain care

Medicare beneficiaries in general report good access to health care services. Compared with younger populations, Medicare enrollees appear to have better access to care and, over time, they report improved access. Certain subpopulations, however, report higher levels of access problems than others. All else being equal, those in poor health, those who live in poverty, and those without supplemental health coverage report higher levels of access problems. Finally, the disabled under-65 population reports substantially higher rates of access problems than the aged Medicare population.

In this section, we first review current data on access to care among the Medicare population. Second, we present the results of a MedPAC study on the influence of beneficiary characteristics on access to care for the Medicare population.

What is currently known about Medicare beneficiaries' ability to obtain care?

Overall, Medicare beneficiaries say they have good access to services. This perception has become more prevalent over time and is stronger for the elderly than for any other age group. Being insured by Medicare has made it possible for an otherwise difficult-to-insure and frailer population to have access to care. According to 1999 MCBS data, 94.3 percent of beneficiaries reported that they had a usual source of care and only 4 percent reported that they had trouble getting care. MCBS data also indicate that the percentage of Medicare beneficiaries delaying care because of cost declined over the time period 1991 to 2000.

Another access measure, the percentage not seeing a doctor during the past year, also declined during this time period. Data from the National Health Interview Survey (NHIS) from 2001 also show that the percentage of people over the age of 65 who report that they failed to receive care because of financial barriers is very small, at 2.1 percent.

Overall, national surveys show that Medicare beneficiaries report fewer problems than other adults with access to care. Medical Expenditure Panel Survey (MEPS) data show that, of those requiring urgent care, older persons were more likely than adults ages 18 to 64 to report that they always received the care as soon as they wanted (66 percent vs. 51 percent). Persons over 65 also report that they delay care less often than those close to the Medicare age. On the 2001 NHIS, 5.6 percent of those age 55 to 64 reported delaying care because of cost versus 2.1 percent of those over age 65 (Cohen 2003).

One recent survey of beneficiaries found an increasing rate of access problems, but the increases were not limited to Medicare beneficiaries. The 2001 HSC survey found that 11 percent of Medicare seniors reported that they "did not get or put off care." This was an increase from 1997, when 9.1 percent of seniors reported such occurrences. On the same population survey, 40.3 percent of Medicare seniors reported waiting a week or more for an appointment for a specific illness, an increase over 34.3 percent in 1997. Privately insured near-elderly also reported increasing access problems, although not on the same measure. The proportion of privately insured persons between the ages of 50 and 64 reporting access problems increased from 15.2 percent in 1997 to 18.4 percent in 2001.

Multivariate analysis of beneficiary characteristics that influence beneficiaries' ability to obtain care

Although Medicare appears to have been largely successful in ensuring access to care for many beneficiaries, certain subgroups seem to have more access problems than others. A large body of published research suggests that persons of low income, persons with no or inadequate insurance, and individuals from racial and ethnic minority groups may have lower access to care regardless of their insurer (Mayberry, Mili, and Ofili 2002; Aday, Fleming, and Anderson 1984; Gornick, Eggers, and Reilly 1996; Gornick 2000).¹⁶

To determine empirically which beneficiary characteristics have the most influence on access to care, MedPAC conducted a multivariate analysis using five different outcome measures representing different dimensions of access to care (see text box, p. 164).

Across most measures of access, MedPAC found that, all other factors being equal, beneficiaries who were in poor health, those who were living in poverty, and those without any supplemental insurance most consistently reported access problems. Specific findings related to each of these beneficiary characteristics are discussed further below (Table 3-4, p. 166).

- **Health status.** Beneficiaries in excellent health were only 20 percent as likely to report trouble getting care and only 30 percent as likely to report delaying care because of costs as well as not seeing a doctor when needing to, compared with those in poor health. Interestingly, beneficiaries in excellent health were more likely to report not having a usual source of care or usual doctor than those in

16 There has been considerable interest in variations across subgroups in access to care. The Institute of Medicine (IOM) was commissioned to develop a set of indicators for monitoring access to personal health services over time at the national level. In its publication, *Access to health care in America*, the IOM noted that because most elderly people are entitled to Medicare benefits, they are frequently neglected in discussions of access (IOM 1993). Given that Medicare benefits are not comprehensive, the IOM noted that disparities in access among this population may exist and should be explored further. In a subsequent study on race and ethnicity in the U.S., *Unequal treatment: confronting racial and ethnic disparities in health care*, the IOM concluded that racial and ethnic minorities tend to receive a lower quality of healthcare, compared with nonminorities, even after controlling for access-related factors (IOM 2002).

Beneficiary characteristics and outcome measures in the MedPAC analysis

To assess Medicare beneficiaries' ability to obtain care, MedPAC used beneficiaries' self-reports of the following measures: (1) trouble getting care; (2) delaying care because of costs; (3) having a health condition and needing to see a doctor but not seeing one; (4) having no usual source of care; and (5) having no usual doctor. Four years of Medicare Current Beneficiary Survey data (1996–1999) were pooled to yield a sample large enough to examine differences across subgroups of beneficiaries. The sociodemographic and other characteristics of Medicare beneficiaries examined in MedPAC's study include gender, race, age, living arrangements, income (income-to-poverty ratio), insurance status, and prescription drug coverage (Table 3-3).

On each measure of access, MedPAC calculated two types of statistics for each subgroup of beneficiaries:

- the proportion who reported an access to care problem (*the unadjusted percentage*); and
- the likelihood of reporting an access problem after controlling for the remaining beneficiary characteristics listed in Table 3-4 (*the adjusted odds ratio*). For example, an adjusted odds ratio of 0.70 for delaying care among Hispanics can be interpreted as follows: all factors other than ethnicity held constant, Hispanics were 70 percent as likely as whites (the reference group) to report delaying care because of costs. ■

worse health. However, this finding may reflect the fact that such beneficiaries do not require many health services.

- **Supplemental insurance status.** A beneficiary's supplemental insurance status is also an important variable influencing self-reported access to care.¹⁷ All other factors being equal, beneficiaries with supplemental coverage were 13 to 75 percent as likely (depending on the type of additional coverage and the specific measure examined) to report access problems as beneficiaries with Medicare FFS coverage only. This result is not unexpected given the limits of the Medicare core benefit package and the cost-sharing

requirements. Although representing only about 6 percent of beneficiaries in our sample, those with coverage limited to Medicare fee-for-service reported higher levels of access problems than any other aged beneficiary subgroup: 11.9 percent reported not seeing a doctor when necessary, 16.1 percent reported delaying care because of costs, 22.3 percent reported no usual source of care, and 27.9 percent reported no usual doctor.¹⁸

Although all forms of supplemental coverage improved Medicare beneficiaries' self-reported access to care, there was little difference in access to care based on the four types of supplemental insurance reported.

Medicare HMO beneficiaries reported better access than those with Medicare fee-for-service coverage only.

- **Income.** All other factors being equal, beneficiaries with the highest incomes were less likely to report access problems than those with lower incomes across most measures of self-reported access. Beneficiaries with the middle and highest incomes were about 75 percent as likely as beneficiaries at or below the poverty level to report not seeing a doctor when they needed to, not having a usual source of care, and not having a usual doctor. Beneficiaries with the middle and highest incomes were 25 to 50 percent as likely as beneficiaries at or below the poverty level to report delaying care because of costs. Finally, the poorest beneficiaries—those below 50 percent of the poverty level—were a third more likely than those between 50 and 100 percent of the poverty level to report needing to see a doctor but not doing so. Other researchers have suggested that the role of income in influencing access to care, as well as receipt of appropriate care examined in other studies, may be related to factors such as better transportation, better environment, and additional resources that may be available to wealthier beneficiaries (Gornick 2000).
- **Race/ethnicity and socioeconomic status.** Studies have found important differences in access by race/ethnicity and socioeconomic status (Schoen 1998; Fiscella 2000; MedPAC 2002; Gornick, Eggers, and Reilly 1996; Schulman et al. 1995; IOM 1993; IOM 2002). Race/ethnicity and socioeconomic status are closely intertwined, however, and it is often difficult to isolate their respective

17 We define someone as having supplemental insurance if they are enrolled in Medicare FFS and have either Medicaid, Medigap, or employer-sponsored insurance, or if they are in a Medicare HMO instead of Medicare FFS.

18 The 6 percent reflects 1996–1999 MCBS data, in contrast to 2000 data cited elsewhere in this report that suggest a higher proportion of Medicare beneficiaries having no supplemental insurance coverage.

roles in affecting access to care.¹⁹ Notably, in MedPAC's multivariate analysis, race and ethnicity receded in importance when other factors, such as income and health status, were taken into account. Specifically, race and ethnicity were not as consistent predictors of access problems as income, health status, or supplemental insurance status in four of the five access measures, but race and ethnicity were highly significant in influencing whether a beneficiary reported having a usual doctor. African Americans were one-and-a-half times more likely than whites to report not having a usual doctor. Similarly, when all other factors were held constant, Hispanics were almost twice as likely as whites to report not having a usual doctor and almost one-and-a-half times as likely as whites to report not having a usual source of care. However, Hispanics were less likely than whites, when all other factors were statistically controlled, to report other access problems.

- **Education.** A beneficiary's education level influenced self-reported access measures in unanticipated ways. Specifically, beneficiaries with the highest education levels were most likely to report concerns with accessing care. Beneficiaries with a college education were 20 to 60 percent more likely to report having trouble getting care, delaying care because of costs, or not seeing a doctor when necessary. However, they were as likely as those with only a high school diploma to report both a usual source of care and a usual doctor. Perhaps this finding reflects the higher expectations of individuals who have higher education levels.

**TABLE
3-3**

Characteristics of the noninstitutionalized aged Medicare population, 1996–1999

Characteristics	Percent of the Medicare population
Total (N = 34,561)	100%
Sex	
Male	42
Female	58
Race/ethnicity	
White, non-Hispanic	84
African American, non-Hispanic	7
Hispanic	6
Other	3
Age	
65–74	50
75–84	39
85+	11
Health status	
Excellent/very good	46
Good/fair	48
Poor	6
Urbanicity	
Urban	75
Rural	25
Living arrangement	
Alone	32
With spouse	53
With others	14
Education	
No high school diploma	36
High school diploma only	31
Some college or more	33
Income to poverty ratio ¹	
< .5 extreme poverty	5
.5–1 poverty	15
1–2 low income	33
2–4 middle income	32
4+ high income	15
Supplemental insurance status	
Medicare only	6
Medicare and Medicaid	10
Medicare and Medigap	27
Medicare and employer-sponsored	38
Health maintenance organization	16
Other ²	3
Prescription drug coverage	
Yes	72
No	28

Note: All end-stage renal disease beneficiaries and institutionalized beneficiaries are excluded from the analysis.

¹Calculated by dividing self-reported family income by the poverty threshold.

²Other includes Medicare and Department of Defense, and Medicare and Department of Veterans Affairs.

Source: Medicare Current Beneficiary Survey, Access to Care, and Cost and Use files, 1996–1999 combined.

¹⁹ Since socioeconomic data are unavailable in the Medicare administrative databases, race and ethnicity are often used as proxies, although they have been shown to represent different issues. When socioeconomic data have been used in Medicare studies, they are often reported as ecologic variables using ZIP code level information which may not necessarily correlate to the income of the specific individual included in the study. A major advantage in using MCBS data, therefore, is the availability of both race/ethnicity and individual income data.

**TABLE
3-4**

Aged Medicare population reporting access to care problems, by beneficiary characteristics, 1996-1999

Characteristic	Had trouble getting care		Delayed care because of cost		Needed to see doctor but did not		No usual source of care		No usual doctor	
	Unadjusted percent	Odds ratio ¹	Unadjusted percent	Odds ratio ¹	Unadjusted percent	Odds ratio ¹	Unadjusted percent	Odds ratio ¹	Unadjusted percent	Odds ratio ¹
All	2.4	N/A	4.5	N/A	6.7	N/A	6.1	N/A	9.1	N/A
Sex										
Male (R)	2.2	1.0	3.9	1.0	6.1	1.0	7.0	1.0	10.8	1.0
Female	2.5	1.09	5.0	1.20*	7.2	1.16*	5.5	0.68*	7.9	0.61*
Race										
White (R)	2.2	1.0	4.2	1.0	6.5	1.0	5.7	1.0	7.9	1.0
African American	3.6	1.07	7.1	0.85	8.9	0.99	7.9	1.07	15.8	1.54*
Hispanic	3.4	0.96	5.6	0.70*	7.3	0.79*	9.0	1.42*	17.0	1.84*
Age										
65-74 (R)	2.6	1.0	5.3	1.0	7.4	1.0	6.6	1.0	9.8	1.0
75-84	2.2	0.82*	4.1	0.66*	6.1	0.75*	5.6	0.85*	8.4	0.85*
85+	2.2	0.71*	2.8	0.34*	6.0	0.67*	5.7	0.71*	8.5	0.72*
Health status										
Excellent/very good	1.6	0.19*	2.8	0.30*	1.6	0.32*	7.8	1.94*	10.5	1.56*
Good/fair	2.5	0.32*	5.3	0.51*	4.8	0.52*	4.5	0.97	7.6	0.92
Poor (R)	7.8	1.0	11.3	1.0	7.7	1.0	5.1	1.0	9.5	1.0
Urbanicity										
Urban (R)	2.5	1.0	4.1	1.0	6.4	1.0	5.8	1.0	8.9	1.0
Rural	2.0	0.86	5.8	1.09	7.6	1.12	7.0	0.99	9.6	0.94
Living arrangement										
Alone (R)	2.6	1.0	5.3	1.0	7.0	1.0	6.9	1.0	10.2	1.0
With spouse	1.9	0.79*	3.6	0.79*	6.3	0.95	5.2	0.69*	7.7	0.68*
With others	3.7	1.19	6.5	0.89	8.0	0.94	7.7	0.95	11.9	0.90

continued on next page

TABLE 3-4

Aged Medicare population reporting access to care problems, by beneficiary characteristics, 1996-1999

Characteristic	Had trouble getting care		Delayed care because of cost		Needed to see doctor but did not		No usual source of care		No usual doctor	
	Unadjusted percent	Odds ratio ¹	Unadjusted percent	Odds ratio ¹	Unadjusted percent	Odds ratio ¹	Unadjusted percent	Odds ratio ¹	Unadjusted percent	Odds ratio ¹
Education										
No high school diploma	2.8	1.16	6.7	1.46*	8.1	1.19*	7.3	1.10	11.6	1.09
High school diploma only (R)	1.8	1.0	3.4	1.0	5.9	1.0	5.7	1.0	8.2	1.0
Some college or more	2.5	1.60*	3.2	1.38*	6.1	1.21*	5.1	0.92	7.4	0.92
Income to poverty ratio ²										
< .5 extreme poverty	3.9	1.00	8.5	1.15	11.1	1.34*	8.9	1.10	15.6	1.19
.5-1 poverty (R)	3.7	1.0	8.1	1.0	8.9	1.0	8.2	1.0	13.3	1.0
1-2 low income	2.2	0.86	5.7	0.89	7.0	0.92	6.5	0.89	9.4	0.85*
2-4 middle income	1.9	0.90	2.6	0.51*	5.6	0.80*	4.9	0.74*	7.0	0.74*
4+ high income	2.1	1.00	1.3	0.25*	5.1	0.74*	4.9	0.72*	6.8	0.72*
Supplemental insurance status										
Medicare only (R)	4.4	1.0	16.1	1.0	11.9	1.0	22.3	1.0	27.9	1.0
Medicare and Medicaid	4.5	0.92	7.9	0.43*	9.9	0.74*	7.1	0.29*	13.3	0.36*
Medicare and Medigap	1.3	0.33*	3.8	0.30*	5.6	0.53*	5.9	0.29*	7.7	0.29*
Medicare and employersponsored	1.7	0.49*	2.9	0.31*	6.1	0.66*	5.2	0.28*	7.0	0.26*
Health maintenance organization	3.6	1.04	2.7	0.27*	6.1	0.66*	2.7	0.13*	5.4	0.17*
Prescription drug coverage										
Yes (R)	2.4	1.0	3.6	1.0	4.8	1.0	4.8	1.0	7.9	1.0
No	2.4	1.21	7.1	1.42*	9.5	1.17*	9.5	1.20*	12.1	1.02

Note: N/A (not applicable), R (reference group). All end-stage renal disease beneficiaries and institutionalized beneficiaries are excluded from the analysis.

¹Each odds ratio is adjusted in the multiple regression analysis for all other variables in Table 3-3.

²Calculated by dividing self-reported family income by the poverty threshold.

*Indicates that the odds ratio is significant at an approximate P<0.05. To mitigate the design effects of the Medicare Current Beneficiary Survey (MCBS), a significance level of P< 0.025 was used to approximate a 0.05 significance level. Subsequent adjustment for the MCBS design effects may alter the statistical significance for odds ratios of borderline significance.

Source: MCBS Access and Cost and Use files, 1996-1999 combined.

- **Disabled.** MedPAC conducted a separate analysis to examine access to care among the disabled population. The analysis was also done using 1996–1999 pooled MCBS data. Compared with the aged Medicare population, the disabled under-65 population reported considerably higher access problems: 8.9 percent of the disabled versus 2.4 percent of the aged population reported trouble getting care; 19.8 percent versus 4.5 percent reported delaying care because of costs; 18.3 percent versus 6.7 percent reported not seeing a doctor when they needed to; and 16.3 percent versus 9.1 percent reported not having a usual doctor (data not shown). Similar proportions of each population reported no usual source of care.

Beneficiaries' ability to obtain appropriate care

Up until this point, we have discussed whether the health system has the capacity to meet Medicare beneficiaries' current and future needs, and we have examined the experiences of different types of beneficiaries obtaining care. But just because beneficiaries are able to obtain care does not necessarily mean that they are obtaining *appropriate* care. Evaluating various measures of appropriate use of services we found:

- many beneficiaries are not receiving preventive and primary care services that can help manage a condition that might otherwise result in an acute episode;

- some beneficiaries are ending up in the hospital with conditions that might have been prevented if their care had been managed more effectively; and
- trends in the types of ED services used and the types of beneficiaries who use them may suggest a lack of availability of ambulatory services elsewhere.

Preventive and primary care services

Use of preventive and primary care services known to be effective is one possible indicator of access to appropriate care.²⁰ Declines in use of these services could signal that the Medicare population may have access problems. In addition, variations in use rates for these services by population subgroup might reveal disparities that do not appear in aggregate measures. For example, an annual influenza vaccination is recommended for all persons 65 years and older. However, in 2000, 70 percent of all white beneficiaries, 52 percent of African Americans, and 54 percent of Hispanics received flu shots (MCBS Access to care file 2000). Thus, significant portions of the elderly population are not receiving a service that could prevent one of the six leading causes of death among the elderly, and minorities seem to have the biggest gap between the amounts of recommended and received preventive services.

The Medicare population is also underusing preventive services for diabetes and other chronic conditions. One tool MedPAC has employed to monitor use of appropriate services is the

Access to Care for the Elderly Project (ACE–PRO) indicators.²¹ MedPAC analysis of 1996–1999 MCBS Cost and Use files using these indicators revealed that only 46 percent of beneficiaries with diabetes received an eye exam at least once a year and only 41 percent received a test to measure glucose levels every six months. Although the number of beneficiaries obtaining these preventive tests has increased since that analysis, a significant number still do not receive the appropriate tests.²² Diabetic beneficiaries with no supplemental coverage were even less likely to receive appropriate preventive services (Table 3-5).

Preventable hospitalizations

Some of the ACE–PRO indicators use measures of preventable hospitalizations to identify those beneficiaries who may not have received the right service. These measures are based on the premise that patients go to the emergency department or are admitted or readmitted to the hospital for some conditions, such as asthma, if they have not received appropriate primary care. Researchers have identified a number of conditions sensitive to ambulatory care, including congestive heart failure, pneumonia, asthma, diabetes, gastroenteritis, and dehydration (Rutstein et al. 1976, Billings et al. 1993, Epstein 2001). Table 3-5 contains two of these examples, including the percentage of Medicare beneficiaries with known angina who went to the ED three or more times in one year for cardiovascular-related diagnoses.

We know of no national or Medicare-specific benchmark that describes the right level of hospitalizations for these

20 A low or decreasing utilization rate for these services could be due to access barriers like the availability of providers or willingness to obtain care, or could indicate a problem with the quality of care—that is, the beneficiary did go to the physician, but did not receive the right test or vaccine. Therefore, it is important to use these indicators cautiously when making conclusions about access to care. Whether the problem is an access or quality concern, the level of coverage or payment for the service is an important concern.

21 The ACE–PRO indicators were developed by RAND for the Physician Payment Review Commission. The indicators use Medicare claims and enrollment data to identify whether patients with certain conditions have received the minimally necessary services (as defined by clinicians).

22 Data from the CMS quality improvement organization program show that the rates of provision of tests to measure glucose levels in a one-year period for the median state in 2000–2001 was 78 percent; 70 percent of the diabetics received an eye exam within a two-year period (Jencks SF, Huff EO, Cuedon T 2003). One of the primary reasons for this difference in rates between the ACE–PRO and the CMS data is that the time frames differ. The CMS data reported on rates of provision across a one-year period for glucose testing and the ACE–PROs used a six-month period. For eye exams, CMS used a two-year period while the ACE–PROs were based on a one-year period.

**TABLE
3-5**

Share of beneficiaries using selected clinically necessary services, by supplemental coverage

Indicators	Total	No supplemental coverage	Some supplemental coverage
Use of necessary care for specific conditions			
Eye exam every year for patients with diabetes	46.0%	29.9%	47.1%
Glycosylated hemoglobin or fructosamine test every six months for patients with diabetes	41.3	36.3	41.7
Follow-up visit within four weeks of initial diagnosis of gastrointestinal bleeding	72.2	54.0	73.3
Arthroplasty or internal fixation of hip during hospital stay for hip fracture	88.9	80.0	89.7
Incidence of avoidable outcomes			
Among patients with known diabetes: admissions for hyperosmolar or ketotic coma	0.1	0.6	0.1
Among patients with known angina: three or more emergency room visits for cardiovascular-related diagnoses in one year	5.2	6.0	5.2

Source: MedPAC analysis of the 1996–1999 Medicare Current Beneficiary Survey Cost and Use files using the Access to Care for the Elderly Project Indicators.

conditions. However, some studies in the Veterans Health Administration system and specific geographic regions have used clinical protocols and medical record reviews to establish rates of preventable hospitalizations for a variety of conditions.

In 1997, a study authored by researchers from NCHS reported that in 1990 almost half of all potentially avoidable hospitalizations were for those aged 65 and over (Pappas et al. 1997). For persons over 65, 15 percent of adjusted total discharges were for potentially avoidable hospitalizations. The rate of potentially avoidable hospitalizations for persons in this study aged 45 to 64 was 10 percent of

adjusted total discharges. Most of these hospitalizations for those over 65 were for congestive heart failure (40 percent) and pneumonia (35 percent).

MedPAC analysis of unpublished national estimates for 1999 from the Healthcare Cost and Utilization Project of the Agency for Healthcare Research and Quality (AHRQ) shows that of the total potentially avoidable hospitalizations for conditions identified by AHRQ as “prevention quality indicators,” five conditions accounted for 88 percent of all of the potentially avoidable hospitalizations for those over 65. Those conditions were: congestive heart failure (30 percent), bacterial pneumonia (25

percent), chronic obstructive pulmonary disease (16 percent), urinary tract infections (9 percent), and dehydration (8 percent).

Emergency department use

Medicare beneficiaries use EDs more often than people under 65 who are not eligible for Medicare, with the oldest beneficiaries and minorities using them more than other beneficiaries. This care appears to be appropriate on one level; the proportion of visits assessed as “nonurgent” at the time of admission among the elderly is quite low.²³ However, this use of EDs may also indicate that these beneficiaries are not getting appropriate care elsewhere that might have prevented the need for an ED visit. NCHS analysis of patient characteristics that act as barriers to obtaining care show that high users of EDs are more likely to report no usual doctor and no usual source of care. Because much of the increase in the use of EDs by older Americans in the 1990s was to treat illness or complications of medical treatment, including problems with medications, older Americans may not be using a regular source of care to continually monitor and manage their health conditions.

Emergency care is essential when people become critically ill and becomes increasingly important as people age. Slightly more than 20 percent of all adults over the age of 18 in the United States had one or more ED visit in 2000 (NCHS 2002). However, more than 25 percent of people age 75 and older had at least one ED visit in 2000 and people 75 and older were almost twice as likely as those age 55 to 64 to have two or more visits to the ED. Data collected by NCHS in the National Hospital Ambulatory Medical Care Survey (NHAMCS)²⁴ have explored

23 Data from the 2000 NHAMCS show that, for those visits for which the immediacy of care need was known, the proportion of visits that were “nonurgent” decreases with age: For people age 75 and older, 5.3 percent of visits were nonurgent, compared with 5.8 percent for visits by those age 65 to 74, and 9.0 percent for people age 45 to 64 (McCaig and Ly 2002). Nonurgent is defined in the survey as “a visit in which the patient should be seen within 121 minutes to 24 hours.” This definition is stricter—care needed within two hours or less—than the standard used by some health systems for their urgent care protocols.

24 This survey has been conducted annually by NCHS since 1992. This survey obtains detailed data on all ED and outpatient visits, for all patients, provided in non-Federal, short-stay hospitals providing general (medical or surgical) care (Burt and McCaig 2001). This makes it a particularly valuable source for comparing the use of EDs across all populations, and over time. Because the survey is based on visits, rather than people, however, the rates cannot fully explain variations in the use of ED services. Each visit is an independent observation, and visits by a particular individual cannot be linked.

the use of ED services in depth (Burt and McCaig 2001; McCaig and Ly 2002).²⁵ Several issues related to access to care emerge from the analysis of these data.

- **Beneficiaries used the ED for urgent care.** Beneficiaries tend to use ED care for care related to existing medical conditions that have reached the stage where urgent care is necessary. The illness-related visit rates, as compared with visits for injuries, for persons over 65 as a whole increased by 21 percent between 1992 and 1999. It appears that these ED users were under some type of medical treatment and were taking an increasing number of prescription drugs. During this period, the rate of visits caused by adverse effects from medical treatment increased from 4.8 to 10.2 visits per 1,000 persons per year and the rate of visits in which 5 or more prescription drugs were mentioned in the visit record increased by 59 percent.
- **ED use varies with beneficiaries' characteristics.** African Americans and beneficiaries with Medicaid coverage (a poorer population) use EDs to a greater extent than other Medicare populations. MedPAC analysis of several years of MCBS data also show that the oldest beneficiaries, those with end-stage renal disease, disabled beneficiaries, and those using some type of nursing facility care were also heavier users of EDs.

These data cannot provide the level of information required to evaluate how care management could mediate beneficiaries' need for emergency services. It is very

difficult to distinguish between use of services that is necessary and appropriate and use of services that may be necessary but could have been avoided with appropriate primary care or better management of complex medical conditions. However, lack of access to appropriate care management for vulnerable populations may contribute to acute episodes that require visits to the ED.²⁶

Conclusion

Our analysis finds no widespread problems in beneficiaries' access to care. On some important measures, beneficiaries enjoy better access to services than is the case for older adults not yet eligible for Medicare. There are, however, some areas of concern regarding the availability of appropriate, effective services for a growing beneficiary population that the Commission will monitor closely. First, recent research suggests that some physicians in Medicare's fee-for-service program are becoming more selective about the patients they accept into their practices. This selectivity does not appear to be targeted exclusively to Medicare beneficiaries, but trends in physician participation in Medicare and in beneficiaries' ability see physicians on a timely basis are important indicators to track. Second, there is some evidence that patients with particularly complex care needs may have problems gaining access to appropriate post-acute care services. It will be important to monitor the effect that

delayed placement in skilled nursing care may have on patients with more complex needs.

Advances in medical technology and improvements in the management of complex health care problems may change the landscape of the health care services people use. If current trends persist, however, the beneficiary population will not only be larger, but it will also include a growing number of disabled beneficiaries, people over age 85, more minorities, and more women living alone. These beneficiary groups are currently among the most vulnerable, in terms of prevalence of serious chronic conditions, low incomes, and adequate supplemental insurance. MedPAC analysis also shows that they are more likely than other beneficiaries to report problems across measures of access to care. MedPAC will continue to monitor these and other Medicare beneficiaries' access to care issues to evaluate whether the health care system is responding to their health care needs.

Finally, closer examination of data on the use of health services across populations suggests the importance of focusing not only on access to care, but on access to the right kind of care, in the right setting. The evidence suggests a need to evaluate whether better access to appropriate preventive and primary care, as well as better management of complex chronic illnesses, might help prevent or delay serious complications, including the need for emergency services and subsequent inpatient care. ■

25 The 2001 NCHS report on ED trends examined data from the NHAMCS from 1992 to 1999 and also drew on NHIS and Medicare data to explore some of the trends identified in the analysis of ED service use (Burt and McCaig 2001). Unless noted otherwise, NCHS analysis of ED use rates discussed here is drawn from Burt and McCaig, 2001.

26 Recent research points to ways that care managed outside the ED can prevent the need for ED visits. See, for example, Coleman EA, Eilersten TB, Kramer AM et al. Reducing emergency visits in older adults with chronic illness, *Effective Clinical Practice*. March–April 2001, Vol. 4, No. 2, p. 49–57.

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C H A P T E R

4

**Payment for new technologies
in Medicare's prospective
payment systems**

R E C O M M E N D A T I O N

The Secretary should introduce clinical criteria for eligibility of drugs and biologicals to receive pass-through payments under the outpatient prospective payment system.

***YES: 16 • NO: 0 • NOT VOTING: 0 • ABSENT: 1**

***COMMISSIONERS' VOTING RESULTS**

Payment for new technologies in Medicare's prospective payment systems

Medicare has a responsibility to pay enough for beneficial new technologies to ensure beneficiaries' access to care, but must also be a prudent purchaser. The hospital inpatient and outpatient prospective payment systems currently incorporate the costs of new technologies through an annual review of payment rates, as well as through special payment mechanisms for specific new technologies. The details of these new technology payments—such as the criteria technologies must meet to be eligible for them—are the mechanisms through which Medicare balances the goals of ensuring adequate payment for beneficial new technologies and being a prudent purchaser. To increase the program's ability to be a prudent purchaser and to ensure fair treatment across technologies and payment systems, MedPAC recommends that the clinical criteria currently applied to all new technology applicants under the inpatient PPS, and to new medical device applicants under the outpatient PPS, be extended to applications for new outpatient drugs and biologicals. Finally, our review of how other private and public sector payers deal with the issue of paying for new technologies suggests that many of their approaches—such as negotiation and competitive bidding—may not easily be adopted into Medicare's current administered pricing systems, but point to value-based purchasing as a concept to pursue.

In this chapter

- Payment for new technologies in prospective payment systems: an overview
 - Hospital inpatient services
 - Hospital outpatient services
 - Lessons from other health care purchasers
-

New medical technologies can improve clinical outcomes and quality of care. They are also considered a major source of escalating health care costs. Since the implementation of Medicare's prospective payment system (PPS) for inpatient hospital services in 1983, questions have arisen about how to pay for beneficial new technologies (Garrison and Wilensky 1986).

Medicare has a responsibility to pay enough for beneficial new technologies to ensure beneficiary access to care, but must also be a prudent purchaser. Achieving these two goals is technically challenging and often involves tradeoffs. Paying prudently and adequately for beneficial new technologies requires, at a minimum, the ability to determine a technology's merit, accurate and verifiable information on which to base a price, and a payment system that can incorporate new technologies in a timely fashion. However, the evidence on the value of a technology is not always clear. Furthermore, information on the market price of new technologies and their effect on the costs of providing services is often not available. Also, it takes time for Medicare's administered pricing mechanisms to reflect the costs of new technologies.

For the purposes of this chapter, we define new technologies as those that have been on the market for a short period of time. They may be true innovations, significant incremental improvements on existing technologies, or expanded uses of an old technology for a new indication.¹ We do not include those that provide no or insignificant incremental improvements on existing technology. Some are new drugs or medical devices, others are new surgical techniques or imaging devices.

Although the need to incorporate new technologies applies to all prospective payments, the topic may be more relevant to hospital payment systems because new technologies are often first adopted in that setting. In addition, in the past several years, Medicare has integrated new technology payments into the hospital inpatient and outpatient prospective payment systems through specific payment mechanisms applied when a claim is submitted. Therefore, this chapter provides a brief review of those systems. The chapter then presents information on how other large purchasers of health care pay for new technologies and considers the relevance of those approaches for Medicare. Though the chapter focuses primarily on payment, it notes that payment for new technologies often relates closely to coverage decisions (see Appendix B).

Payment for new technologies in prospective payment systems: an overview

The incentives built into PPSs promote the use of new technologies that reduce costs, but they may slow the adoption of new technologies that increase costs. In response to those concerned about delays in the incorporation of new technologies into Medicare's payment systems, the Congress implemented special payments for new technologies used in the hospital inpatient and outpatient settings.

Prospective payment systems define a fixed payment for a bundled service. That is, CMS establishes a set payment for treating a case or providing a service meant to cover all the costs of providing

the service. Clinicians and providers decide how the service will be delivered, including decisions regarding the use of specific technologies. This system provides an incentive for providers to adopt technologies that decrease costs. It can also fairly easily accommodate most incremental technologies that increase costs only modestly.²

In considering how payment systems deal with technology, it is useful to distinguish between new technologies that are inputs to an existing service and new technologies that result in a new service:

- **Technologies that are inputs to an existing service.** In the case of new technologies that are inputs to an existing service (e.g., monoclonal antibodies for treatment of cancer or drug-eluting coronary artery stents used in angioplasty), Medicare pays providers using the payment category for that service. Most new technologies fall into this category. Technologies that decrease costs or raise them only modestly can enter the payment system without additional decision making. For technologies that are very expensive, additional decisions may be required. The Centers for Medicare & Medicaid Services (CMS) might revisit how the service is classified or pay for the technology through a special payment mechanism.
- **Technologies that result in a new service.** In the case of new technologies that result in new services (e.g., laser angioplasty, positron emission tomography (PET) scanning, or digital mammography), the appropriate coding group must first assign it a code (e.g., an

1 This definition applies primarily to new technologies that are involved in clinical care. As discussed later, each payment system has criteria that define the new technologies to be covered by a specific new technology payment provision. Additional forms of new technology, such as information systems, might affect the entire organization of a hospital.

2 This section provides an overview of the process through which new technologies are incorporated into the payment system. A more detailed discussion can be found in Chapter 3 of MedPAC's March 2001 Report to the Congress.

ICD-9-CM³ code or a HCPCS⁴ code). The coding process takes time because the code sets must be reviewed by medical professionals, with public input, and updated in a manner that preserves the integrity of the system. Medicare uses multiple coding systems and is only one of many players involved in maintaining and updating the code sets. After a code is assigned, CMS must incorporate the technology into the payment system and set a payment rate.

Prospective payment systems classify services and set a unit of payment that incorporates all of the inputs needed to provide the service.⁵ Relative weights apply to each service, reflecting the relative resource costs of providing that service compared with the others in the classification system. Generally, these relative weights are recalibrated annually to reflect changes in the relative costs of one service versus another, using the most recent cost and claims data. The combination of the coding and recalibration processes generally takes at least two years because of the multiple parties involved and the open process that must be followed.

Some critics of prospective payment argue that the pace of technology adoption, the time required to make code assignments, and the time needed to collect and process cost data can make it difficult to reflect the costs of new technologies immediately and may, therefore, slow diffusion. New technologies enter the marketplace continuously. Between 1995 and 2001, for example, the Food and Drug Administration (FDA) approved about 950 new drugs, biologicals, and medical devices (American Hospital Association and The Lewin Group 2002). However,

the process of placing a new technology in the payment system also gives CMS an opportunity to better understand its clinical merits and obtain accurate information about its costs. In addition to the incremental cost of the technology itself, using a new technology may lead to efficiency gains that lower the total costs of providing the service. Conversely, use of a new technology may result in additional requirements that increase the total costs of providing a service beyond the cost of the technology itself. Finally, any dampening effect these payment systems might have on technological diffusion is often balanced by the competitive and clinical forces encouraging physicians and hospitals to use new technologies.

The general prospective payment approach described above works especially well when the unit of payment covers a broad bundle of services, as with the inpatient PPS, but less so with narrow bundles, for which technology can represent a large share of the total payment. For example, a new scalpel may not represent a large share of the payment for a surgical stay on the inpatient side, but the costs of a new cancer drug could dominate payment for outpatient chemotherapy administration. In addition, this approach does not immediately capture the rapid decline in prices that often occurs shortly after the introduction of a new technology or when competitors enter the market. Payments are set annually using hospital charge data. Price changes during the course of the year, therefore, are not built into the payments until the next payment review. In addition, it is unclear whether or not hospitals decrease their charges, which Medicare uses to approximate costs, as quickly as input prices decline.

At least partly in response to those arguing that Medicare's prospective payment systems have not adequately incorporated the costs of new technologies, the Congress introduced specific payment mechanisms for hospital outpatient services (Balanced Budget Refinement Act of 1999 and Benefits Improvement and Protection Act of 2000) and hospital inpatient services (Benefits Improvement and Protection Act of 2000).

Providing separate payment promotes adoption of new technologies (as long as the payment is sufficient), thereby helping to ensure beneficiary access to them. However, the process involves the government heavily in determining which items receive separate payment and which do not. These choices may influence both the marketplace for technologies and clinical decision making. Separate payment unbundles the unit of service, diminishing the efficiency incentives of prospective payment. It may also accelerate unnecessary use of expensive technologies, leading to increased costs for Medicare beneficiaries and taxpayers. From a systems administration perspective, separate payment streams also put a burden on both CMS and hospitals to incorporate new codes into their billing systems. There is a tension between timely inclusion of separate payment for new technologies that requires frequent system changes and the stability of the payment system. Finally, if the separate payments are financed in a budget-neutral manner, they will direct resources away from other inputs, such as nursing, to fund new technologies.

Given the potential drawbacks of introducing separate payment mechanisms for new technologies, it is important to target them to technologies that are truly new, costly, and beneficial. It is through the details of the new technology payment

3 ICD-9-CM refers to the International Classification of Diseases, Ninth Revision, Clinical Modification. This is a two-part system of coding patient information used in abstracting systems and for classifying patients into diagnosis-related groups (DRGs) for Medicare. The first part of the ICD-9-CM is a list of diseases; the second part contains procedure codes, independent of disease codes.

4 HCPCS refers to the Healthcare Common Procedure Coding System. There are three kinds of HCPCS codes. Level I codes are based on the Current Procedural Terminology coding system developed by the American Medical Association. Level II and III codes, which include many supplies, drugs, and devices, are developed by CMS in collaboration with the Health Insurance Association of America and the Blue Cross Blue Shield Association.

5 In some payment systems, Medicare pays separately for certain inputs. For example, blood products are paid separately under the outpatient PPS.

mechanisms that Medicare balances the goals of ensuring adequate payment for beneficial new technologies and being a prudent purchaser.

Hospital inpatient services

Medicare incorporates the costs of new technologies into the inpatient PPS through the standard systems used to code services and set payment rates, as well as through the recently implemented add-on payments for new technologies.

Medicare's standard system for coding and setting payment rates for inpatient hospital services

The unit of payment in the hospital inpatient PPS is the inpatient discharge, as classified by diagnosis related group (DRG).⁶ The DRG system provides for a broad patient classification, encompassing all routine nursing, support service, and ancillary costs incurred in patients' stays. Most technologies are bundled into the DRG payment system. The standard system incorporates new technology costs through three processes.

First, a technical advisory panel assigns codes to new technologies using the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM). In response to criticism about delays in the recognition of the costs of new technologies, CMS recently shortened the coding process to speed the entry of new technologies (CMS 2001).⁷

Second, CMS responds to requests for refinements in the classification of costs within DRGs and analyzes variation in the costliness of cases within DRGs.

Reassignment to a higher-paying DRG may occur if certain cases are considered to be systematically more costly, perhaps because of the use of a new technology. For example, for fiscal year (FY) 2003, CMS established new DRGs and higher payment rates for angioplasty that involves the use of drug-eluting coronary artery stents, a new technology expected to be widely adopted once approved by the FDA.

Third, the annual recalibration of DRG case weights corrects relative payments by looking at the most recent year's claims.

Medicare's add-on payments for new technologies used in inpatient settings

The Congress authorized add-on payments for new technologies, which CMS began to make in fiscal year 2003. The add-on payments described below are summarized and contrasted with the new technology provisions of the outpatient PPS in Table 4-1.

A team of clinical experts within CMS evaluates applications for technologies that may raise the cost of a case so much that it merits additional payment beyond the base DRG payment. The eligibility criteria for these payments, set forth in regulation, are considered to be fairly stringent, encompassing the newness, clinical benefit, and cost of a new technology.

The newness criterion states that a given technology will be eligible for add-on payments until data reflecting its costs are used to recalibrate the DRG weights, generally two to three years from market entry.

Clinical considerations require that the technology substantially improve—relative to technologies previously available—the diagnosis or treatment of beneficiaries (see text box, p. 182).

Cost considerations require the applicant to provide data showing that the technology is expensive relative to the cost of the entire case. The applicant must demonstrate that the average charge for a case using the technology is one standard deviation above the geometric mean of the standardized charges for all cases in the relevant DRG.⁸ Since the charges per case vary considerably for any given DRG, the standard deviation is generally large, and technologies that meet the cost criteria will be relatively unusual. These criteria bring together payment issues (How much does it cost?) and those generally considered part of the coverage process (Is it better than technologies previously available?). Only one technology (a biologic to treat severe sepsis) has met these criteria to date (CMS 2001, CMS 2002b).

Some critics contend that these criteria set the bar too high. However, strict criteria provide a mechanism for ensuring that limited funds for new technologies are directed to those with clinical benefit and high costs. They are one tool for balancing Medicare's need to be a prudent purchaser with quicker recognition of the costs of new technologies.

When a technology is eligible for additional payment, CMS will not automatically make an additional payment each time it is used. Instead, CMS bases the payment on the costs incurred for the whole case, as determined by the fiscal intermediary that processes the claim. In order for additional payment to be made, the costs of the case must be above the

6 For a more detailed description of the inpatient PPS, see Appendix A. Regarding the standard process for responding to technology costs under the inpatient PPS, see Chapter 3 of MedPAC's March 2001 Report to the Congress.

7 The process was shortened by moving the twice-yearly meetings of the ICD-9-CM coordinating committee from May and November to April and December and allowing some new codes to be incorporated into the final rule without first appearing in the proposed rule. The revised schedule allows more new codes to take effect under the October 1 start of the fiscal year, but restricts the time for public comment on some new codes.

8 Hospitals' reported charges are standardized through use of the hospital wage index to remove the effects of regional differences in medical costs. To obtain the geometric mean, the standardized charges are first transformed onto a logarithmic scale before the average is taken. This mathematical approach provides a better estimate of the average because the distribution is highly skewed and bounded by zero.

**TABLE
4-1**

Design of the hospital inpatient and outpatient new technology payment mechanisms

Design element	Inpatient add-on payments	Outpatient pass-through payments		Outpatient new technology APCs
		Medical devices	Drugs and biologicals	
What kinds of new technologies can receive additional new technology payments?	New technologies that represent a new procedure or are an input to an existing diagnosis-related group.	New technologies that are an input to an existing service.	New technologies that are an input to an existing service.	New technologies that represent a new service.
Which specific technologies receive additional new technology payments (criteria applied by CMS)?	Eligibility based on clinical benefit, newness, and cost.	Eligibility based on clinical benefit, newness, and cost.	Eligibility based on newness and cost.	Eligibility based on newness.
How are payments financed?	Budget neutral financing.	Budget neutral financing.	Budget neutral financing.	New expenditures.
What is the unit of payment?	Payment based on the additional costs of treating a case using the new technology.	Payment based on the cost of the new technology.	Payment based on the cost of the new technology.	Payment based on the cost of providing the service.
How are payments determined?	Payment equal to 50 percent of the additional costs, capped at 50 percent of the estimated cost of the new technology.	Payment equal to 100 percent of reported costs minus device costs already built into the base payment rate.	Payment equal to 95 percent of average wholesale price.	Payment equal to the midpoint of the payment range for the new technology APC group. For example, payment for a service in the \$1,000 to \$2,000 new technology APC is \$1,500.

Note: APC (ambulatory payment classification).

Source: MedPAC analysis.

standard DRG payment. To preserve incentives for judicious use of technologies, Medicare does not pay the full extra costs of a case using the new technology. Rather, the additional payment covers only 50 percent of a hospital's costs above the standard DRG payment, up to a maximum of 50 percent of the estimated cost of the new technology. Some argue that partial payment is not great enough to ensure beneficiary access to new technologies. However, this method also provides an

incentive for hospitals to weigh carefully the benefits of a technology against its costs. Countervailing competitive and clinical forces also push technology diffusion.

The add-on payment mechanism is budget neutral, meaning that CMS lowers the base payment rate prospectively by the same percentage for all services to finance the add-on payments. This introduces the need to balance the impact of the payment mechanism on payments for all services

against the need for additional payments for new technologies. Expenditures for the add-on payments are capped at 1 percent of total operating payments.

Hospital outpatient services

Medicare's hospital outpatient PPS incorporates costs of new technologies through the standard systems used to code

Clinical criteria for new technology add-on payments for inpatient services and the establishment of outpatient pass-through categories for new devices

To be eligible for new technology add-on payments under Medicare's prospective payment system (PPS) for inpatient hospital services, a new technology must, among other characteristics, substantially improve the diagnosis or treatment of beneficiaries. To be eligible for new-technology pass-through payments under the hospital outpatient PPS, medical devices must meet the same clinical criteria. CMS has established the following examples of how a technology can meet these criteria:

- It offers a treatment option for a patient population unresponsive to, or ineligible for, currently available treatments.
- It offers the ability to diagnose a medical condition in a patient population in which their medical condition is currently undetectable, or offers the ability to diagnose a medical condition earlier in a patient population than allowed by currently available methods. There must also be evidence that use of the technology to make a diagnosis

affects the management of the patient.

- Use of the technology significantly improves clinical outcomes for a patient population as compared to currently available treatments. For example, improvements might include:
 - Reduced mortality rate
 - Reduced rate of complications
 - Decreased rate of subsequent diagnostic or therapeutic interventions (e.g., due to reduced rate of recurrence of the disease process)
 - Decreased number of future hospitalizations or physician visits
 - More rapid beneficial resolution of the disease process
 - Decreased pain, bleeding, or other quantifiable symptom
 - Reduced recovery time

Extracted from CMS 2001. ■

mixes fairly broad bundles of inputs used to provide a service such as ambulatory surgery, with fairly narrow bundles of inputs to provide an ancillary service such as an X-ray. In cases where the bundle is narrow, a specific technology can represent a fairly large share of the costs for providing an outpatient service. Therefore, the outpatient PPS includes two mechanisms targeted specifically to new technologies, as well as a standard approach for maintaining the payment system, similar to that described for the inpatient sector.

Services are classified into APC groups based on their Healthcare Common Procedure Coding System (HCPCS) codes. There are three kinds of HCPCS codes. Level I codes are based on the Current Procedural Terminology coding system developed by the American Medical Association. Level II and Level III codes, which include many supplies, drugs, and devices, are developed by CMS in coordination with the Health Insurance Association of America and the Blue Cross Blue Shield Association. Both coding systems accept applications for new codes. In the case of new technologies, CMS has assigned temporary codes on an expedited basis to facilitate payments.

As with the inpatient PPS, CMS responds to requests for refinements in the classification of services within the APC system. The outpatient PPS is unique in that it also has an external advisory body, composed of hospital representatives, that is charged with aiding the agency in defining the APCs. The advisory committee also serves as a public forum for considering requests for changes in APC groupings.

Finally, the annual recalibration process should reflect the costs of new technologies as reported by hospitals. The recalibration process undertaken to set the calendar year 2003¹⁰ payment rates led to significant swings in payment, particularly

services and set payment rates, as well as through two mechanisms that specifically target new technologies: new technology ambulatory payment classification (APC) groups and pass-through payments. The two new technology payment mechanisms described in this section are summarized and contrasted with the inpatient add-on payments in Table 4-1 (p. 181).

Medicare's standard system for coding and setting payment rates for outpatient services

The unit of payment in the hospital outpatient PPS is the service provided, as classified by ambulatory payment classification groups.⁹ The APC system

⁹ For a more detailed description of the outpatient PPS, see Appendix A. Regarding the standard process for responding to technology costs under the outpatient PPS, see Chapter 3 of MedPAC's March 2001 Report to the Congress.

¹⁰ The hospital inpatient PPS runs on a fiscal year, while the hospital outpatient PPS runs on a calendar year.

for services incorporating new technologies. These problems may be transitional, in that this was the first year CMS used data from hospitals operating under the PPS to set the payment rates, and hospitals reported significant difficulties in coding for technologies.¹¹ However, the small bundles used in the classification system may make payment rates inherently less stable.

New technology APC groups for technologies used in outpatient settings

To be placed in a new technology APC, a technology must be a complete service or procedure that cannot be adequately described by an existing payment category. In addition, it must be a covered service that is new and does not meet the criteria for pass-through payments (described below). For example, PET scans—a newly covered service that does not fall into any existing payment category—currently fall in the new technology APCs. The new technology APCs are grouped into heterogeneous categories by cost (for example, \$0–50, or \$5,000–6,000), with payment at the midpoint of the range. No cap or budget neutrality provision governs the new technology APCs. In addition, since the categories are defined solely by cost ranges, CMS does not include these APC groups when recalibrating payment rates. Therefore, each service results in additional payment. CMS moves services out of the new technology APCs and into the standard system during the annual review of the APC classification and recalibration process, when sufficient data on hospitals' costs for the technology have accumulated.

The lack of a budget-neutrality constraint for new technology APCs means that payments for new technologies could increase dramatically. Currently, 75 services (as denoted by discreet HCPCS codes) fall into new technology APCs. CMS also has five applications pending review. In 2001, services in new technology APCs accounted for about 1 percent of total payments (MedPAC analysis of 2001 outpatient claims from CMS).

Medicare's transitional pass-through payments for technologies used in outpatient settings

Transitional pass-through payments cover technologies that are an input to an existing service. They are limited to medical devices, drugs, and biologicals.¹² For example, alemtuzumab is a monoclonal antibody used in the treatment of breast cancer and is paid under the transitional pass-through mechanism. There are already codes governing chemotherapy administration, but they do not reflect the cost of this new technology. In this case, the pass-through payment supplements the base payment for chemotherapy.

Pass-through eligibility criteria are somewhat different for drugs and devices. Eligibility for devices has been tightened recently to introduce clinical criteria in addition to newness and cost. The clinical criteria are essentially the same as those for the inpatient add-on payments and require that the technology under consideration substantially improve, relative to technologies previously available, the diagnosis or treatment of beneficiaries (see text box on p. 182). Including clinical considerations for

establishing new categories of medical devices raises concerns by some manufacturers that the bar has now been set too high, whereas it was previously thought to be too low by most observers. The cost considerations require CMS to assess the cost of the technology in relation to the base APC payment rate and compare its cost to that of similar technologies it replaces.¹³

The treatment of drugs and devices is inconsistent, in that only newness and cost criteria are applied to pass-through drugs. This difference in the criteria represents unequal treatment between types of technology within the outpatient payment system. It also leads to a discrepancy between the treatment of drugs under the inpatient and outpatient payment systems, since the clinical criteria are applied to all technologies, including drugs, on the inpatient side. Furthermore, without considering clinical benefit, the criteria applied to pass-through drugs may over-emphasize the goal of paying adequately for new technologies at the expense of prudent purchasing.

Payment for pass-through items is tied to use of the technology itself, without considering the impact on total costs of providing the service, such as efficiency gains or additional incremental costs associated with use of the technology. That is, each use of a pass-through item results in the hospital receiving additional payment, whether or not total costs for the entire service actually rose or fell. For medical devices, the pass-through payment is based on 100 percent of charges reduced to costs through use of a hospital-specific cost-to-charge ratio. For drugs or biologicals, payment is based on 95 percent of average wholesale price.¹⁴

11 In revising payments for 2003, CMS for the first time used claims and cost reports from hospitals operating under the outpatient PPS. Previously, CMS relied on pre-PPS claims data and information from manufacturers on the costs of technologies to set the payments. For 2002, manufacturers' price data were used to incorporate 75 percent of medical device pass-through costs into the base APC rates. Using these data led to much higher payment rates in 2002 for services using medical devices than the rates calculated for 2003 using cost data reported by hospitals. In addition, it appears that some hospitals did not code accurately for pass-through items, particularly in the beginning of the outpatient PPS. CMS modified the rates for 2003 to limit changes in payment from 2002 (CMS 2002c).

12 Until recently, radiopharmaceuticals could also be considered for pass-through eligibility. However, beginning in January 2003, CMS will no longer consider radiopharmaceuticals (CMS 2002c).

13 The three cost considerations are that the device represent at least 25 percent of the related APC rate, that it be at least 25 percent more expensive than a device it replaces, and that the increase in cost associated with using the device represents at least 10 percent of the related APC rate.

14 Payments for all pass-through items may be reduced if estimated total payments exceed a statutory cap discussed below.

These payment mechanisms provide an incentive to manufacturers and hospitals to overstate prices and charges to increase payments. Analysis of the 2001 claims indicates that hospitals initially had trouble billing for pass-through devices; however, over time both the share of hospitals billing for these items and their reported costs increased (CMS 2002c).

The pass-through payment provision is budget neutral, meaning that payments for all services are reduced by the same percentage to finance these payments. Budget neutrality redistributes funds to services or cases that include new technologies and away from those that do not. This mechanism can have distributional effects across types of hospitals depending on the service mix of a given provider. The text box on p. 185 discusses the distribution of pass-through payments among providers.

The Congress capped spending on pass-through items at 2.5 percent of total outpatient PPS payments (both program and beneficiary).¹⁵ However, the cap was not enforced until the last nine months of 2002. Because of congressional and administrative actions, the number and costs of pass-through items far exceeded original expectations in the early years of implementation. In 2001, pass-through items accounted for over 8 percent of total payments (MedPAC analysis of 2001 claims). The number of pass-through items has subsequently slowed and should continue at a modest pace, at least in the near term. The 2003 final rule includes about two dozen drugs and five device categories (CMS 2002c). CMS currently has fewer than 10 applications pending review (personal contact with CMS staff).

Despite this modest growth in the number of pass-through items in the near term, continued medical advances are likely, perhaps leading to pressures to relax eligibility criteria or increase payments.

For example, a recent review of Wall Street analyses states that medical device and supply manufacturers are in good financial health and have increased spending on research and development, indicating that the pipeline of new products will continue (CMS 2002a). In addition, the recent passage of legislation authorizing user fees for FDA review of medical devices will likely accelerate approval of additional technologies.

MedPAC has documented a number of problems with the pass-through mechanism, some of which relate to the eligibility criteria, whereas others involve payment. The Commission has recommended that pass-through payments be selectively targeted to technologies that are truly new (MedPAC 2001, MedPAC 2002). The changes to the criteria for new categories of medical devices are a step in that direction. Though CMS has moved to tighten the criteria for pass-through devices, it is likely that the agency and the Congress will face pressures to relax them in the future. However, MedPAC believes that it is appropriate to reserve additional payments for technologies that provide clinical benefit and do not have clinical substitutes. It may even be appropriate to limit payments to technologies that provide additional benefits commensurate with their costs. At a minimum, clinical criteria should apply to all new technologies.

RECOMMENDATION:

The Secretary should introduce clinical criteria for eligibility of drugs and biologicals to receive pass-through payments under the outpatient PPS.

IMPLICATIONS:

Spending

- This recommendation would have no impact on spending because the pass-through payments are budget neutral.

Beneficiary and provider

- The clinical criteria would apply only to eligibility for additional payment. New drugs and biologicals not meeting the criteria may still be used and be paid for at the base APC rate. Therefore, the recommendation should not affect beneficiaries' access to care.
- The recommendation should have no impact on providers' payments because the pass-through payments are budget neutral. Limiting additional payments to drugs and biologicals that have clinical benefit will marginally reduce hospitals' administrative burden.

MedPAC has previously noted that payments for devices are based on hospitals' charges (reduced to costs by applying a cost-to-charge ratio), providing incentives for manufacturers and hospitals to raise their prices and charges, potentially resulting in overpayments. CMS calculates payments for drugs based on average wholesale price (AWP). A number of studies by the General Accounting Office and the Office of Inspector General have provided ample evidence that payment based on AWP generally results in Medicare paying far more than market price.¹⁶ Incorporating data based on inflated costs will lead to distortions in the relative weights (MedPAC 2002). The problems we have noted previously with the payment formulas continue and merit further study.

Lessons from other health care purchasers

Various private and public sector payers other than Medicare deal with the issue of paying for new technologies. To assist deliberations on how best to pay for new technologies in Medicare, MedPAC contracted with Project HOPE to conduct

15 The cap falls to 2.0 percent in 2004 and subsequently.

16 As indicated in MedPAC's comment letter on the proposed rule for the outpatient PPS, the Commission is concerned about all Part B payments for drugs that are based on AWP, not just the outpatient pass-through payments. The Commission understands that the Congress and CMS are considering ways of reforming the current system. If the Congress or CMS implements a new system this year, the Commission will monitor the impact of payment changes and their implications for beneficiary access. We will recommend refinements if necessary. If the Congress does not act on the issue this session, we will focus our efforts on analyzing options for change.

Distribution of new technology payments among providers

One issue raised by new technology payments is distributional: Which providers will receive them? The question is even more salient in a budget-neutral system, where payments for all other services go down while those for new technologies increase. Generally, hospitals will benefit or not depending on their service mix. Hospitals that provide many technology-driven services will benefit whereas those providing more basic services will not. Given that the outpatient prospective payment system (PPS) pass-through payments represent the first new technology provision to be implemented under a Medicare PPS, the breakdown of payments under that mechanism illustrates the distributional effects of new technology payments.

The outpatient PPS pass-through payments were not evenly distributed in 2001 (Table 4-2). Some of the results are to be expected. For example, though teaching hospitals received about 50 percent of total outpatient PPS payments, they received 56 percent of pass-through payments. Similarly, cancer hospitals, which received only 1 percent of total outpatient PPS payments, received 4.3 percent of the pass-through payments and 5.5 percent of payments for pass-through drugs. However, other results are more

**TABLE
4-2**

Outpatient PPS payments by service type and hospital group, 2001

Hospital group	Share of payments by service type				
	Total payments	Nonpass-through payments	Pass-through payments	Pass-through drugs	Pass-through devices
Urban	80.7%	80.8%	79.8%	76.9%	90.6%
Rural	19.3	19.2	20.2	23.1	9.4
1-100 beds	9.5	9.5	9.5	11.5	2.5
101+ beds	9.8	9.7	10.6	11.7	6.9
Cancer	1.0	0.7	4.3	5.5	0.0
Teaching	50.2	49.7	55.9	54.2	62.1
Nonteaching	49.7	50.2	44.1	45.8	38.0

Note: PPS (prospective payment system). Numbers may not sum to 100 due to rounding.

Source: MedPAC analysis of the 100 percent Special Analytical File of 2001 outpatient PPS claims from CMS.

surprising. For example, urban hospitals did not receive a disproportionate share of pass-through payments. Urban hospitals received a similar share of total payments (81 percent) and pass-through payments (80 percent); however, they received a higher share of payments for pass-through devices (91 percent). Rural hospitals, in contrast, received proportionate shares of total payments (19 percent) and pass-through payments (20 percent) but had a

somewhat higher share of payments for pass-through drugs (23.1 percent). The distribution of payments was similar for smaller rural hospitals (less than 100 beds). One reason the distributional impact was not as marked as might be expected could be the large number of items, many of which were not truly new, that received pass-through payments in 2001. In addition, many cancer drugs that are often provided in rural hospitals were eligible for pass-through payments. ■

a survey of large public and private sector purchasers to learn what strategies they use to get the best possible prices for new technologies. The interviewees included well-informed representatives of health care insurers, group purchasing organizations (GPOs), pharmaceutical benefit management organizations (PBMs), large integrated delivery systems, the Department of Defense, the Department of Veterans Affairs (VA), the New York Medicaid program, the United

Kingdom (UK), and Australia (Mohr et al. 2002). We also convened an expert panel with representatives from hospitals, manufacturers, insurers and other payers, academia, and CMS (Mohr 2002). The panel discussed the following three questions:

- What principles should Medicare follow in paying for new medical technologies?

- What constraints does Medicare face in paying for new technologies?
- What options might Medicare consider for paying for new medical technologies?

As described below, MedPAC's structured interviews found that the approaches used by other payers include negotiation, competitive bidding, and other strategies that incorporate value into

decisions about covering and paying for new technologies. The expert panel convened by MedPAC suggested that although other payers' approaches may not easily be adopted into Medicare's administered pricing systems, the program should pursue the concept of value-based purchasing.

Other payers' approaches to paying for new technologies

Evidence from the interviews and other analysis by MedPAC suggest that large purchasers other than Medicare use several strategies to ensure prudent purchasing of new technologies:

- **Staying informed.** All respondents reported that they invest considerable resources in tracking new technologies and understanding the medical evidence regarding their benefits to bolster their position in negotiations with manufacturers. They monitor the clinical trials being performed to obtain FDA approval, plus technology hotlines developed by commercial technology assessment organizations, and they may have their own internal capabilities as well. Price information may be obtained from industry analysts, commercial databases, European experience, or information gathered from within an integrated delivery system or health plan, such as purchase contracts of member hospitals or claims data for affiliate health plans.
- **Direct negotiation and contracting with manufacturers.** Some large integrated health care systems (including military health care), GPOs, and PBMs negotiate and contract directly with the manufacturers of new technologies. They use information about a technology's clinical effectiveness and costs during their negotiations. If a product is a "blockbuster" technology that has great clinical benefit and no competitors, the manufacturer is at an advantage in setting its price. Purchasers then try

to limit the length of a contract and introduce competition clauses to renegotiate prices if a competing product enters the market.

- **Use of coverage policies and other tools to limit exposure to high prices.** Early in the diffusion of a new technology, other payers and purchasers use various tools to restrict use of new technologies to the most appropriate cases. Examples include tiered copayments, dissemination of guidelines for the use of a technology, step therapy, in which use of a new technology is approved only if existing technologies have been tried and failed, and prior authorization.
 - **Competitive bidding.** Competitive bidding is used when similar, or therapeutically equivalent, products are available. It is especially successful in closed systems like integrated delivery systems or the military health services that can limit procurement. Insurers are less likely to use competitive bidding. If purchasers know that a new product offers similar clinical outcomes to existing or other new therapies, then they can offer guaranteed volume to a manufacturer in exchange for a lower price. This process generally results in lower prices but also limits the choice of products to be used. Interviewees representing closed systems suggested that involving end-users of technologies (usually physicians) in the development of product specifications and guidelines for a product's use makes competitive bidding more viable and successful.
 - **Invoice submission.** When insurers decide to cover a new technology that is not already built into the payment rates they have negotiated with providers, they may require providers to submit an invoice showing their costs. This approach is most effective for technologies like medical devices. The insurer will then pay the invoice
- cost plus a percentage to cover overhead. Using this approach, the insurer avoids the need to pay billed charges—which often reflect a considerable mark-up—and can benefit from any reductions in price that may occur over time. However, invoices generally do not reflect any rebates that a purchaser has received and may, therefore, overstate acquisition costs.
- **Cost-effectiveness analysis.** Many payers, both public and private, invest substantial resources in determining the cost-effectiveness of new and existing technologies. This work supports coverage decisions and plays into payment decisions. For example, in Australia, manufacturers wishing to place a pharmaceutical on the national schedule for the national health insurance system must submit an application that includes cost-effectiveness information. Pricing data are considered, and if the costs are considered too high, the government may restrict use of the drug or negotiate with the manufacturer to reduce the price. The Australian health care system also applies cost-effectiveness analysis to other health care interventions, including devices, procedures, diagnostics, and blood products, although the link to pricing is less clear. In the United Kingdom, the National Institute for Clinical Excellence (NICE) provides guidance to the National Health Service (NHS) about the use of individual health technologies. Although NICE is not directly involved in establishing prices for new technologies, it does influence manufacturers' pricing decisions indirectly by examining cost-effectiveness analyses when making their recommendations. If a technology exceeds a threshold that is loosely set at 30,000 pounds (almost \$50,000 given current exchange rates) per quality-adjusted life year, NICE is less likely to recommend the product.

- Return on equity.** In the United Kingdom, prices for pharmaceuticals are subject to a cap based on a reasonable return on equity. Manufacturers may set any price they wish at product launch, subject to the constraint that the total rate of return on capital invested in the UK on all their products reimbursed by the NHS does not exceed a pre-set limit. The return on equity is limited to a range of 17–21 percent. If the rate of return exceeds these targeted rates, the manufacturer must grant the NHS a rebate or reduce the price of the drug. Manufacturers must submit audited financial returns detailing their investment in the UK. The return on equity approach applies only to companies based in the UK.

Applicability of other purchasers' strategies to Medicare

Evidence from the expert panel discussion and other analysis by MedPAC suggest that other payers' approaches may not easily be adopted into Medicare's administered pricing program, but point to value-based purchasing as a future direction to pursue.

Constraints unique to Medicare

Medicare faces constraints that other payers do not and that may limit its ability to use the alternative strategies outlined above. These constraints have to do with the size and national scope of the Medicare program, its role as an insurer, and program issues like public disclosure requirements and limited administrative capacity.

Medicare covers more than 40 million Americans. This large market means that decisions made by the Medicare program can have a large impact. In the area of new technologies, Medicare's decisions can greatly affect the financial status of a manufacturer and also have an impact on future innovation. Restricting Medicare's purchasing to one or two suppliers, as is

generally done under the competitive bidding arrangements of the organizations we interviewed, could determine which suppliers flourish and which do not. Of course, Medicare could structure competitive bidding to involve more players. In addition, other payers often follow Medicare in setting payment rates, leading to an even greater influence on the market. Furthermore, the Medicare program is national in scope. Under current law, payments are set nationally. This makes it difficult for Medicare to take advantage of local market conditions, such as market share, that might allow the program to negotiate better prices in one area as compared to another.

The Medicare program acts as an insurer, reimbursing hospitals and physicians for their services using administered pricing systems required under law. Consequently, the program has no direct role in negotiating with manufacturers or distributors. It also has little control over the choices made by providers serving Medicare beneficiaries. Of the strategies listed above, both negotiation strategies and competitive bidding are done best by closed delivery systems, such as the VA or an integrated delivery system, which do have the ability to negotiate prices and to influence the delivery of care to enrollees. However, the Medicare competitive bidding demonstration project for purchase of durable medical equipment may provide lessons that can be applied to other parts of the program.

Administrative issues also constrain the program. For instance, Medicare must follow rule-making processes that involve public comment unless there is a specific exception in law, such as the Medicaid prescription drug rebate program. Public disclosure requirements limit the program's ability to obtain and use proprietary information. For example, Medicare would be less successful in negotiating the best price for an item if that price then becomes public because manufacturers would face pressure to offer that price to all purchasers. Even if

the program had authority to negotiate prices in confidence, administration of the payment system currently requires the program to publish payment rates for use by the fiscal intermediaries and hospitals. The rule-making process also adds time to any decision-making as time must be allowed for comment by interest groups and response from CMS.

Finally, Medicare has limited administrative capacity to implement the alternative strategies noted above. Most private payers devote considerable resources to monitoring the new technology pipeline and conducting technology assessments. Large systems, such as the VA, even conduct clinical trials to evaluate technologies. Given current resources, CMS may not be able to make the same level of investment in these activities as other organizations have done.

Other environmental considerations

In addition to the system constraints noted above, other factors prevent the Medicare program from engaging in the strategies used by many other large payers and purchasers. Since Medicare is an entitlement program, beneficiaries and the general public have expectations about access and choice, making decisions about limiting access to specific items controversial. Similarly, Medicare as a public sector payer is expected to ensure a level playing field among competing manufacturers, which limits its ability to be selective, a major tool used by other payers. Selectivity also runs afoul of the law stating that Medicare will not interfere with the practice of medicine.¹⁷

One strategy that Medicare might consider despite these constraints is limiting return on equity, as done in the UK. This approach does not limit the number of suppliers or establish a specific price, but regulates the return to the manufacturer, and is one factor that must be taken into account when setting a product's price. One advantage of this approach is that it

¹⁷ The Medicare+Choice program and the competitive bidding demonstrations are governed by separate statutory provisions that allow some level of selectivity.

operates directly on the manufacturer. Since manufacturers of new technologies are generally at an advantage in price negotiations, this approach provides incentives to limit the price to the most appropriate actor.

The use of return on equity in the UK, however, is based on a number of factors that may not be applicable to Medicare. The UK limits this approach to a single industry, pharmaceuticals, and conducts its return-on-equity calculations based on the whole portfolio of products that a manufacturer sells to the National Health Service, including both existing and new technologies. Therefore, there is no need to allocate investments to a specific product. By contrast, Medicare serves a limited population (the NHS covers the whole population), and would only want to use the return on equity approach to set payments for new technology.

Consequently, Medicare would want to determine a return on equity for a specific product, or, alternatively, all of the manufacturer's products used in providing Medicare services. This would require substantial review of manufacturers' finances and sophisticated accounting to separate out expenses and revenue streams for a subset of products. A return on equity calculation might also need to take into account some share of firms' investments in unsuccessful products. Given the large number of unsuccessful products manufacturers pursue in addition to the successful ones, this calculation could prove complex.

Furthermore, since the UK establishes a return for all products, manufacturers are free to price new drugs well above the established range of return to take advantage of market position as a monopoly provider of a new product. Applying return on equity to a subset of products would limit a manufacturer's ability to do this. Another wrinkle is that the return-on-equity approach is used only for firms based in the UK and applies only to investments made in the UK. If

Medicare were to adopt this approach, the program would need to decide how to treat investments overseas and firms not based in the United States. CMS has also noted that it does not have the administrative capacity or legal authority to develop a return-on-equity approach and doubts that the resources needed to develop one are warranted given that new technology payments are meant to be limited to a small number of technologies (CMS 2002d). Despite these complexities, return on equity may be a reasonable approach for setting payment rates in certain situations, such as when there is a single producer of a technology with clear clinical benefits and no substitutes, and Medicare is the predominant purchaser of the technology. It would, however, signal a major break with Medicare payment policy, which generally avoids regulating profits.

Another possibility is the use of third-party purchasers. Can Medicare contract with multiple GPOs and PBMs to negotiate better prices for these items? It seems clear that the limited volume of new technology items makes this approach less viable. However, the use of third-party purchasers by Medicare has been discussed in the context of paying for Part B drugs and outpatient pharmaceuticals under a Medicare drug benefit. If these strategies are pursued, third-party purchasing of new technologies might be considered as an additional role.

Value-based purchasing as a future direction

Although the specific techniques used by other payers seem to have limited applicability in an administered pricing program that is national in scope, like Medicare's prospective payment systems, together they embody a concept that could prove useful to the program. In paying for new technologies, other payers strive for value-based purchasing. That is, they try to limit coverage to those technologies

that provide a demonstrated clinical benefit, and assess the level of additional benefits over existing technologies against the additional costs for the new technologies. For example, cost-effectiveness information is used in negotiations with manufacturers, and establishment of therapeutic equivalence is key to competitive bidding. Most participants in the expert panel on how Medicare should pay for new technologies agreed that the program should pursue value-based purchasing, although they did not agree on specific approaches for doing so.

Value-based purchasing involves making judgments about the benefit of a new technology compared to other available therapies and considering the value of the additional costs associated with use of the new technology. Under value-based purchasing, additional payments would be less likely for a new technology that has existing substitutes, even if the new technology is substantially more costly. If the same clinical outcome is achieved, is it necessary to pay more than is paid for the existing technology? If there are modest clinical gains at a great increase in price, should the program pay?

The clinical criteria introduced for add-on payments under the inpatient PPS and for medical devices under the outpatient PPS move in the direction of value-based purchasing by having Medicare determine the clinical benefit of a new technology before it receives additional payment. The next step, however, of assessing the value of that clinical benefit, or the relationship of the clinical benefit to the extra cost, has not been taken systematically.¹⁸

Several methodological issues surround value-based purchasing. These include, among others: establishing the level of evidence needed to assess value; specifying a measure for assessing benefit, such as quality-adjusted life-years; and defining the scope of the costs and benefits to be included in assessing value,

18 While value-based judgments are not made systematically within the Medicare program, they have been used in at least one case. In the November 1 final rule for the outpatient PPS (CMS 2002c), CMS did declare a new anemia treatment, darbepoetin alpha, "functionally equivalent" to an existing treatment, epoetin alpha, and reduced the pass-through payment for the new biologic to \$0. The agency used its authority to ensure equity of payments in taking this step, which was novel.

such as impact on future wage earnings or cost-savings because of a reduced need for future medical interventions. In addition, the choice of a threshold value that a technology must exceed to receive additional payment would likely become a political issue, leading to extensive debate among manufacturers, clinicians, beneficiaries, and other interested parties. In fact, previous attempts by Medicare to introduce cost-effectiveness analysis into the coverage process have been blocked. For example, in 1989 CMS (then the Health Care Financing Administration) put forth a notice of proposed rule-making

that included cost-effectiveness as a coverage criterion. The rule was never finalized. Later, in 2000, CMS published a notice of intent of proposed rule-making that outlined a four-step process for considering the value of an item or service when making national coverage decisions. The agency has yet to follow up on this issue. In both instances, resistance by affected interest groups was considered one element in delaying action (Foote 2002).

Despite methodological and other challenges to its development, value-based purchasing provides a framework for deciding where to spend scarce dollars. Expanding its ability to pursue value-based purchasing would allow Medicare to better balance the goals of paying enough for beneficial new technologies to ensure beneficiary access to appropriate care, and being a prudent purchaser. ■

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CHAPTER

5

**Health insurance choices
for Medicare beneficiaries**

Health insurance choices for Medicare beneficiaries

Since the Medicare program began, beneficiaries have been able to make limited choices about their health coverage. Policymakers have sought to broaden these choices; some want to use choice as a platform for a system of competition among Medicare and private plans. Many Medicare beneficiaries now have available to them an increasingly complex array of options beyond traditional Medicare fee-for-service and varying forms of supplemental coverage. How and when beneficiaries choose among these options depends on a number of factors, including specific market conditions and the circumstances of individual beneficiaries.

The determinants of how supply and demand for health insurance meet in the marketplace are both national and local. They reflect the tension between Medicare as a national program and the reality that it is only at the local level that medical care is organized and delivered, beneficiaries choose insurance options and delivery systems, and decisions to enter the insurance market are made. In this chapter we review the entire spectrum of options as a first step in MedPAC's larger effort to better understand beneficiaries' choices and market conditions.

In this chapter

- What health insurance options do Medicare beneficiaries have?
 - Medicare beneficiaries and health plans in the marketplace
 - When supply and demand meet in the marketplace
-

Medicare beneficiaries face a complex array of health insurance options, including the traditional Medicare fee-for-service (FFS) program; various forms of insurance that supplement the traditional program; and alternatives to the traditional program such as managed care, private fee-for-service (PFFS), and preferred provider organization (PPO) plans. Which of these options, other than the nationally-available FFS program, are available to beneficiaries depends on local market conditions. Which they choose—or whether they decide to choose at all—depends on the circumstances and motivations of individual beneficiaries and the information available to them.

Although supplemental insurance and options for receiving care in managed care plans have been available to beneficiaries since the Medicare program began, the array of choices for receiving Medicare and supplemental coverage has become increasingly important both for beneficiaries and for Medicare program spending. Policymakers have sought to expand Medicare beneficiaries' health insurance options for a variety of reasons. Some sought to offer Medicare beneficiaries a wider choice of plans that might better meet their perceived need for health insurance and provide access to health care delivery system options that are popular among the employed population. Some sought to build a platform for a system of competition among plans that might provide better management of care, market-determined rates for providers, and better quality.¹ The theory is that if plans compete on the basis of product, quality, and price, and if markets work well, beneficiaries and providers will have the incentive to take the costs and quality of health care into account, which could help control Medicare spending in the long run.

Choice has evolved over the years from health maintenance organizations (HMOs) paid on a cost basis, to HMOs paid on a risk basis, to the current Medicare+Choice (M+C) program, to

newly developed demonstration programs. The M+C program was established by the Balanced Budget Act of 1997 (BBA). When the program became effective January 1, 1999, it allowed private plans to offer Medicare beneficiaries options beyond the traditional FFS Medicare program, including HMOs and other managed care plans, private fee-for-service plans, and Medical Savings Accounts. However, during the last five years, many plans left the M+C program, and few new non-HMO options materialized. Enrollment declined sharply as private plans withdrew, and beneficiaries were upset by the instability in plan choices and reductions in benefits offered by plans. There have been concerns that the program has failed.

In response, the Congress and the Centers for Medicare & Medicaid Services (CMS) have been trying several approaches to encourage greater plan participation. Plans' regulatory concerns have been addressed; the Congress extended the life of Medicare HMOs that are paid on a cost basis; and CMS undertook a demonstration program to encourage PPOs to participate in M+C.

In this chapter, MedPAC examines the status of the Medicare program with respect to health insurance options for Medicare beneficiaries on a national level, including not just M+C options but all forms of supplemental insurance. The chapter begins by describing the health insurance options available to some Medicare beneficiaries, as well as the way the options have evolved over the last few years. The second section of the chapter describes constraints on Medicare beneficiaries' choices in the health insurance market and examines Medicare beneficiaries' actual choices and satisfaction, as well as the perspective of health insurers, highlighting changes insurers might like to see in order to stimulate participation.

In the final section of the chapter, we analyze how potentially conflicting preferences might play out in the health insurance marketplace. The products available to beneficiaries vary considerably across regions and states and even within metropolitan areas. Further, competition between options is not limited to M+C versus traditional fee-for-service Medicare alone. There is also competition between comprehensive plans and traditional Medicare plus supplemental policies that are available to many Medicare beneficiaries. The availability of options, their costs, plus variations in M+C benefits and premiums can create very different market dynamics in local markets across the nation. Further research is needed to help understand more about how local markets are structured and how they might work for Medicare.

What health insurance options do Medicare beneficiaries have?

Although most of the concern and debate about the availability of health insurance choices for Medicare beneficiaries have revolved around the participation of private managed care plans—predominantly HMOs—in the Medicare+Choice program, beneficiaries also make choices about other Medicare-related insurance products available to them. Therefore the discussion here covers the broad range of health insurance options available to Medicare beneficiaries. We describe two general types of insurance products:

- **Insurance products that replace the traditional Medicare FFS benefit package.** Such products include M+C managed care plans, called coordinated care plans (CCPs); M+C private fee-for-service plans; Medicare demonstration PPO plans; and Medicare cost plans.

1 The Institute of Medicine (IOM) report, *Crossing the quality chasm*, points out that the fragmented nature of Medicare's traditional fee-for-service program makes the implementation of some quality improvements more difficult (IOM 2001).

- **Insurance products that supplement the traditional Medicare FFS benefit package.**

Products designed to fill in or “wrap around” the basic Medicare FFS benefit package include Medigap plans, Medicare Select plans, employer-sponsored retiree plans, and Medicaid.

The availability and attractiveness of these products varies by geographic area and by beneficiaries’ individual circumstances. Products that replace the traditional Medicare FFS benefit packages, for example, are available only in some areas of the country. Further, the cost to the beneficiary and the benefits provided vary significantly—even among areas where these replacement products are available—depending on factors such as Medicare payment, market characteristics, and beneficiaries’ need for services. Though generally more widely available, even some products that supplement the Medicare benefit package are available only to certain beneficiaries. For example, retiree supplemental coverage is limited to beneficiaries who have worked for the employers or unions that offer this coverage. Medicaid coverage is available only to beneficiaries who meet the low-income and other standards set by the state in which they live. Finally, even supplemental products available to almost all beneficiaries have premiums that can vary by market and beneficiary age.

Insurance products that replace the traditional Medicare FFS benefit package

Medicare beneficiaries can enroll in some insurance products which serve as alternatives to the traditional Medicare program. When beneficiaries enroll in most of these alternatives, they must give up their traditional benefits (though they can disenroll at the end of any month and return to FFS Medicare). In addition to

providing beneficiaries with Medicare benefits, most of these alternatives offer some supplemental benefits.

M+C coordinated care plans

Under M+C, Medicare beneficiaries have the option of joining a private CCP, which then receives payment from Medicare for providing all Medicare-covered services. Generally, members of M+C CCPs must use plan providers to get their care. These private plans are allowed to provide additional benefits and to charge beneficiaries an additional premium for them. However, if a plan’s projected costs for Medicare benefits are lower than its Medicare payments, the plan is required by law to either return the difference to enrollees in the form of additional benefits (or lower premiums) or contribute the money to a reserve fund for future use (few plans choose this option). Historically, beneficiaries have been able to join these plans and receive extra benefits at no additional premium.

M+C CCPs have been the core of the M+C program, but they are not available everywhere and their benefit packages vary considerably. Currently, M+C CCPs are available to about 58 percent of the Medicare population, down from 74 percent availability at the peak in 1998. However, less than 20 percent of rural beneficiaries have a plan available. Currently about 5 million beneficiaries are enrolled in an M+C CCP, down from about 6 million in 1998. In explaining M+C plan participation trends, it is important to note that the CCP model is dominated by HMOs, which have been withdrawing in the private sector as well.

Medicare payments for M+C CCPs

Medicare pays M+C CCPs a monthly capitated rate for each enrolled Medicare beneficiary based on the beneficiary’s county of residence and relative health cost risk. (See Appendix A.)

As a result of this payment system, Medicare has paid more to M+C plans, on average, than it would have paid to insure demographically similar beneficiaries under the traditional FFS program for the basic benefit package. MedPAC has calculated that in 2001, Medicare’s payments were about 104 percent of average FFS costs. This calculation assumes there are no risk selection differences (other than those such as age, sex, and Medicaid status that are included in the rate-setting model) between the M+C plans and traditional Medicare. For 2003, we project the rate will also be 104 percent.

Benefits and costs to beneficiaries of M+C CCPs

The benefit packages and beneficiary premiums for the packages vary quite a bit. Almost 30 percent of Medicare beneficiaries have a plan available in their county in 2003 that charges no premium. In fact, about 4 percent of beneficiaries have access to a plan that will, in essence, pay them to join.² At the other end of the spectrum, some plans charge premiums in excess of \$200 per month. Premiums reaching that level result, at least partially, from the plan providing benefits in addition to the basic Medicare benefits. The data do not allow us to calculate the average premium paid, but the lowest premium available to beneficiaries averages \$40 per month across all M+C markets.³

The additional benefits offered and co-payments required also vary considerably. Plans can and do charge deductibles, flat copayments, and percentage coinsurance on days, stays, or benefit periods. Because of the complexity of the benefit offerings, we focus on a few indicators to compare across packages. We looked at three supplemental benefits sometimes offered by plans:

- some coverage for outpatient prescription drugs,

2 The actual transaction will involve the plan paying some or all of the beneficiary’s Part B premium.

3 The Centers for Medicare & Medicaid Services (CMS) reports the number of beneficiaries enrolled under a managed care organization’s (MCO) contract. An MCO may have several different plans (each with different benefit packages and premiums) under a single contract, but CMS has not reported the number of enrollees in each plan. CMS has begun collecting the plan-level enrollment information.

- inpatient hospital services covered without any cost-sharing, and
- physician office visits covered without any cost-sharing.

Almost half of all Medicare beneficiaries have an M+C CCP available that covers some prescription drugs. Almost 30 percent of beneficiaries have a plan available that does not charge any cost-sharing for inpatient hospital services. About 10 percent of beneficiaries have a plan available without any cost-sharing for physician services.

M+C private fee-for-service plans

M+C PFFS non-network plans operate like traditional FFS insurance plans in the commercial sector. They allow beneficiaries to use any provider who will accept the plan's reimbursement rates. (Although allowed by law, there are currently no network PFFS plans.)

Medicare pays these plans the same rates as it pays other M+C plans. They are subject to most of the same conditions of participation as other M+C plans, but some quality data reporting requirements are less stringent.⁴ As is the case with other M+C plans, PFFS plans may alter the cost-sharing arrangements for Medicare benefits, subject to approval by CMS. CMS reviews the structure in an attempt to ensure that selection bias will not occur.⁵ It is unclear how a non-network plan would compete financially with the traditional Medicare program except in areas where the payment rates are above FFS spending. The Medicare program currently pays approximately 102 percent of what it would be expected to pay to insure demographically similar enrollees under the traditional program.

There are currently three M+C PFFS plans: One of them is a demonstration plan that operates in only one county;

another, established in 2000, operates in most of 25 states and is available to about one-third of all Medicare beneficiaries, and the third has just been approved and will operate in six states. Enrollment in the established multi-state plan is low (about 20,000 enrollees) but has been growing steadily since its inception in 2000. However, the plan has pulled out of some areas in each of the last two years.

Benefits and costs to beneficiaries of the M+C PFFS plan

The established multistate M+C PFFS plan sets a standard benefit package across its entire service area. For 2003, this M+C PFFS plan charges a monthly premium of \$88. The plan does not cover outpatient prescription drugs. For inpatient hospital services, the beneficiary has a copayment of \$100 per day, up to a maximum of \$500 per stay. (There is no limit to the number of days in a stay under this plan.) The beneficiary must notify the plan before a planned admission; otherwise there is an additional copayment of \$50 per day, up to a maximum of another \$500 per stay. For physician services, the beneficiary's copayment is \$15 per primary care visit and \$30 per specialist visit.

The newly approved plan charges a monthly premium of \$19 and provides some coverage for outpatient prescription drugs.

Medicare preferred provider organization (PPO) demonstration plans

Although the statutory language that established the M+C program specifically mentioned PPOs as examples of CCPs, only a few PPOs have ever participated in the program. CMS wants to encourage PPOs to enter the M+C program, for at least two reasons: (1) to enhance competition in the Medicare marketplace and (2) to make the most popular form of

insurance in the commercial sector more readily available to Medicare beneficiaries.

CMS identified several barriers to PPOs' participation in the M+C program (Centers for Medicare & Medicaid Services April 2002):

- **Low M+C payment rates in some areas.** M+C payment rates were too low in some areas for PPOs to recruit providers into networks.
- **PPOs' reluctance to participate in a fully capitated program.** Another barrier to PPOs' participation in M+C has been their wariness about entering the fully capitated M+C program. In the commercial world, PPOs often share the risk on medical costs with the employers who offer the PPOs to their employees. In many cases, the PPOs carry no medical risk and offer administrative-services-only contracts to self-insured employers.
- **The M+C limit on premiums and cost-sharing.** The M+C limit on cost sharing (designed to protect beneficiaries from paying higher cost-sharing in M+C than under the traditional program) hinders benefit design in some geographic areas. The actuarial value of all cost-sharing, including premiums and copayments related to basic Medicare services, cannot exceed the national average cost-sharing amount for the traditional fee-for-service Medicare program, which is about \$102 per month for 2003. Because this cap is based on a national average, it has been troublesome for HMOs in higher-than-average cost areas, and would be even more of a problem for PPOs, which often include substantial out-of-network cost sharing.⁶

4 Because non-network PFFS plans do not have a network, their control over provider behavior is limited. Therefore, the plans are not required to report some of the quality measures or participate in quality improvement projects that relate to provider practices.

5 CMS does not review or approve PFFS plans' premiums, as it must with CCP premiums.

6 Beneficiary cost sharing is correlated with Medicare payments: the more Medicare pays for services, the higher beneficiary cost sharing. For Part B services, cost sharing is generally 20 percent of Medicare-allowable charges. Thus, in areas where Medicare spending is higher than average, it can be expected that beneficiary cost sharing would be higher than average.

CMS has initiated a Medicare demonstration program for PPOs in order to encourage plans to enter M+C. The Medicare PPO demonstration program is scheduled to run for three years beginning in January 2003. CMS has approved demonstration waivers for 33 plans in 23 states. The plans will be available to 11 million Medicare beneficiaries (Department of Health and Human Services 2002). Under the demonstration program, payment rates will be higher than M+C rates in some areas, the limit on cost sharing will be waived, and the Medicare program will offer to share some of the cost risk with the plans.

While the PPO demonstration program may provide an additional option to many beneficiaries, it is not likely to increase the choices available to beneficiaries who do not already have other alternatives to Medicare FFS. Of the more than 11 million beneficiaries who will have a PPO available, only about a half million do not already have a CCP available. Generally, demonstration plans are going into urban areas, but a couple of the plans are targeted to rural areas. As a result, out of approximately 10 million rural beneficiaries, about 600,000 will have access to PPOs, but 450,000 of them already have a CCP available. It remains to be seen whether those who enroll in PPOs will come from the coordinated care plans, or have fee-for-service coverage only, or have FFS plus Medigap.

Medicare payments for PPO demonstration plans Under the Medicare PPO demonstration program, plans will be paid the higher of the M+C rate in the county or 99 percent of the average risk-adjusted per capita spending under the traditional FFS Medicare program. Demonstration plans will also have the opportunity to individually negotiate risk-sharing arrangements with Medicare. If beneficiaries enroll in the PPOs at the same rate in each county where they are offered (e.g., if 1 percent of beneficiaries in each county enroll),

PPO spending will average 109 percent of the cost of insuring the enrollees in the FFS Medicare program.⁷ The reason that the Medicare costs would be so high is that the PPOs are going into many counties where M+C payment rates exceed fee-for-service spending.

Benefits and costs to beneficiaries in PPO demonstration plans Almost all of the PPO demonstration plans will charge premiums, ranging from \$32 to \$184 per month. All but one of the PPOs will offer some coverage for outpatient prescription drugs. About one-fifth of beneficiaries who have a demonstration PPO available will have one that charges no cost-sharing for inpatient hospital services in network hospitals. Plans that cover physician visits without any cost-sharing will be available to only about 2 percent of beneficiaries who have a PPO available.

Medicare cost plans

Cost HMOs have been authorized to participate in the Medicare program since 1972 (National Academy of Social Insurance 1998). They were designed to allow Medicare beneficiaries who were in HMOs before they became eligible for Medicare to stay in those HMOs. Medicare pays the HMOs their cost, as determined by a cost report, for providing Medicare benefits for their members, less the actuarial value of traditional Medicare cost sharing. The beneficiaries in cost HMOs generally cover this cost sharing through monthly premiums rather than payments as services are delivered. In addition, members are free to seek Medicare-covered services outside of the HMO's network. If a beneficiary goes to a non-network provider, Medicare pays the provider the same as if the beneficiary were in the traditional FFS program, and the beneficiary is responsible for the usual Medicare FFS cost sharing. To the beneficiary, this structure is similar to being in a point-of-service (POS) HMO.

Although Medicare cost plans have been attractive to some beneficiaries, past studies have shown that this option costs the Medicare program significantly more than serving beneficiaries in the traditional fee-for-service program (Sing et al. 1998). However, those studies are based on old data and compared costs only relative to the traditional program. Though that comparison may be the best one to examine, it may also be relevant to compare cost plan performance to the performance of M+C plans, because in areas where the M+C plans are paid more than FFS costs, the cost plans might result in Medicare spending less than for the M+C plans. The cost plan program is set to expire at the end of 2004, but the program has already been extended several times, and there has been congressional interest in extending it further.

Currently, 30 Medicare cost plans are in operation, with a total of 290,000 members. Those numbers should rise because two M+C CCPs are shifting their membership to Medicare cost plans that they also operate.

Benefits and costs to beneficiaries in Medicare cost plans Premiums generally range from \$29 per month to \$326 per month (there is one zero-premium plan). Half of the cost plan offerings have monthly premiums between \$72 and \$116. While less than half of the plans include coverage for outpatient prescription drugs, some of the ones that do not provide coverage offer high-option choices that do include drug coverage. Most of the plans charge no cost-sharing for inpatient hospital services in a plan hospital, and about one-third do not charge cost-sharing for visits to plan physicians.

7 The 109 percent figure was calculated by comparing the projected per capita FFS spending in each participating county with the rate the PPO would be paid in each county. Those county-level comparisons were then aggregated and weighted by the number of Medicare beneficiaries in each county. The calculation assumes that there is the same level of health risk in the PPO and non-PPO populations and that the risk-sharing arrangements have no aggregate net effect.

National and local availability of alternatives to Medicare's traditional FFS program

About 80 percent of Medicare beneficiaries nationwide live in counties where an alternative to Medicare's traditional FFS program—an M+C coordinated care plan, an M+C private fee-for-service plan, a PPO demonstration plan, or a Medicare cost plan—is available to them (Table 5-1). These alternatives are available to 85 percent of urban beneficiaries but only 61 percent of rural beneficiaries. Furthermore, while urban beneficiaries may have a range of plans to choose from, the only option for rural beneficiaries is generally the PFFS plan. Looking at availability of alternatives to the traditional Medicare FFS program in terms of M+C county payment rates, we find that 86 percent of beneficiaries who live in counties with payment rates above the floors⁸ (as determined in 2002) have a plan available, while 74 percent of beneficiaries in floor counties have a plan available. In addition to these alternatives, which are open to all Medicare beneficiaries,⁹ there are some specialized plans that offer benefits attractive to the frail elderly which are sometimes available only to categories of frail beneficiaries. (See text box.)

Insurance products that supplement the traditional Medicare FFS benefit package

In addition to choosing among insurance products just discussed which are intended as an alternative to (and sometimes add to) the traditional Medicare FFS benefit package, beneficiaries can also choose among products designed solely to wrap around, or supplement, the basic Medicare benefit package. All aged beneficiaries have the option of buying a Medigap plan when they first enroll in Medicare (this is

TABLE 5-1

Availability of alternatives to the traditional Medicare fee-for-service program, 2003

	Percent of beneficiaries	Percent of beneficiaries with plans available, by type of county of residence, 2003				
		M+C CCP	PFFS	PPO demo	Cost contracts	Any plan
National	100%	58%	36%	23%	23%	80%
County payment rate						
Floor	55	40	50	15	16	74
Large urban floor	31	61	43	24	19	82
Other floor	23	12	58	3	12	63
Non-floor	45	80	20	32	30	86
Rural areas	23	13	56	4	9	61
Urban areas	77	72	30	28	25	85

Note: CCP (coordinated care plan), M+C (Medicare+Choice), PFFS (private fee-for-service), PPO (preferred provider organization). For 2003, the large urban floor is \$564.10 and other floor is \$510.38.

Source: MedPAC analysis of data from CMS website, August 2002 and September 2002.

not the case for disabled beneficiaries under age 65; see p. 199). Many beneficiaries can also choose to buy a Medicare Select plan. Some beneficiaries may be fortunate enough to have the option of participating in an employer-sponsored retiree plan. Other beneficiaries may be eligible to receive supplemental benefits from state Medicaid programs and other programs designed to assist low-income individuals.

Medigap plans

Medigap insurance is private coverage designed specifically to wrap around the Medicare benefit package. Most Medigap insurance is marketed directly to individual Medicare beneficiaries, although some employers and associations help enroll their retirees and members in these publicly available plans (Chollet and Kirk 2001).

Private supplemental insurance, similar to what we now call Medigap insurance, has existed since Medicare began, but the Omnibus Budget Reconciliation Act of 1990 (OBRA 1990) imposed some structure on the market, simplifying and clarifying offerings for beneficiaries.¹⁰ Pursuant to OBRA 1990, the National Association of Insurance Commissioners (NAIC) created 10 standard plans, commonly labeled A through J, and states retained primary responsibility for regulating Medigap policies and insurers.¹¹

For the most part, all standardized plans are available to all beneficiaries as they turn age 65, although not every plan is sold in every state. When beneficiaries turn age 65, they have a one-time open enrollment period during which Medigap insurers must allow the beneficiary to

8 The floor payment rates are described in the M+C section of Appendix A.

9 Beneficiaries who have end-stage renal disease (ESRD) and are being maintained by chronic dialysis may not enroll in an M+C plan, unless they were previously in a plan before developing ESRD.

10 Many beneficiaries had been subject to questionable sales practices and had purchased multiple policies that often duplicated existing coverage (Super 2002). The Congress found that the policy offerings needed to be standardized.

11 Insurers in three states (Massachusetts, Minnesota, and Wisconsin) are not subject to the standards for plans A–J. These states were granted waivers because they had preexisting standards which they continue to maintain.

Managed care programs for frail beneficiaries

Over the years, the Congress has created a variety of managed care programs to meet the needs of beneficiaries with impairments in activities of daily living. These programs generally have been available in relatively few locations. Three of the more long-lived examples are the Program of All-Inclusive Care for the Elderly (PACE), the Social Health Maintenance Organization (S/HMO) program, and EverCare.

Program of All-Inclusive Care for the Elderly

PACE is a permanent program under Medicare and a state option under Medicaid. Most PACE enrollees are eligible for both Medicare and Medicaid, and the program is targeted to enrollees with substantial functional impairments. A primary objective of PACE is to delay or prevent use of hospital and nursing home care. The program provides a comprehensive range of preventive, primary, acute, and long-term care, beyond what is available through Medicare and Medicaid. PACE service delivery and coordination are usually organized through adult day health centers. There are now 15 permanent PACE sites in 8 states, enrolling around 2,000 beneficiaries. Another group of PACE sites is still operating under demonstration authority while CMS considers their applications to join the permanent program.

Social Health Maintenance Organization

The S/HMO demonstration program has had two phases, called

generations. Both generations have taken a traditional HMO model that enrolls a wide spectrum of beneficiaries, and added a limited long-term care benefit. The second generation program was started largely to address perceived shortcomings with the first. The two generations of S/HMO programs differ in the way that Medicare pays them, the degree to which they coordinate care across benefits and providers, and their targeting mechanisms for long-term care benefits. The demonstration project is slated to end on August 1, 2003. There are now 4 S/HMO sites in 4 states, enrolling around 112,000 beneficiaries; 37 percent of enrollees are in the single second generation S/HMO plan.

EverCare

The EverCare demonstration program enrolls permanent nursing home residents into managed care. The demonstration builds on the experience of the United Health Care EverCare company in subcontracting with Medicare HMOs to provide medical care for enrollees who live in nursing homes. Unlike PACE and S/HMO, EverCare does not expand the Medicare benefit package significantly; instead, it focuses primarily on providing more Medicare-covered outpatient services to reduce residents' use of hospital and emergency room care. The demonstration project is slated to end on December 31, 2003. Six EverCare demonstration sites now operate in 6 states, enrolling around 17,000 beneficiaries. ■

how much to charge. Medigap plans are often unavailable to disabled beneficiaries (under age 65) because these federal guaranteed-issue requirements are limited to beneficiaries turning 65 or in an M+C plan that no longer participates in the program. Except in the few states that require pure community rating, Medigap plans can be prohibitively expensive for older or sicker beneficiaries seeking coverage. (See text box, p.200, for age-rating methodologies.) After the six-month open enrollment period, Medigap insurers in most states can medically underwrite new applicants. This practice is common, particularly for Medigap plans that include prescription drug coverage. Once enrolled, however, beneficiaries can not be dropped from their Medigap plan, as the policies provide guaranteed-renewal protection.

Over 10 million, or about 27 percent of Medicare beneficiaries living in the community in 2000 were enrolled in a Medigap plan.

Benefits and costs to beneficiaries in Medigap plans

Medigap plans generally provide coverage of Medicare's cost-sharing requirements. All standardized plans (A through J) cover cost-sharing for physician and inpatient hospital services, except for the \$100 Part B deductible and the \$840 inpatient hospital stay deductible (Table 5-2, p. 201). Plans B through J cover the inpatient deductible, and plans C, F, and J cover the Part B deductible. Three of the standard plans (H, I, and J) offer limited coverage of outpatient prescription drugs, but all come with a \$250 annual deductible, 50 percent coinsurance, and a cap on benefits of \$1,250 per year (plans H and I) or \$3,000 per year (plan J). Relatively few beneficiaries enroll in the three plans that offer prescription drug coverage, and most are in either plan C or plan F. About 25 percent of Medigap enrollees have stayed in their prestandardized plans that have been closed to new enrollment since 1992. The benefits in the nonstandardized plans tend to be similar to those found in the standardized plans.

enroll in any open product. During this period insurers are prohibited from medically underwriting the beneficiary—

meaning that they cannot consider the beneficiary's health and medical history in deciding whether to offer a policy and

Medigap age-rating

Generally, insurance companies use three different methods to determine the prices, or rates, for their plans, based on the age of the enrollee:

- **Pure community rating:** All enrollees in the same geographic area pay the same premium, regardless of age.
- **Issue-age rating:** Enrollees pay premiums based on their age when their policy was first issued to them.
- **Attained-age rating:** Enrollees pay premiums based on their current age.

State insurance rules regulate which method, or methods, insurers may use. The methods determine the relative levels of premiums beneficiaries will face as they age.

Under pure community rating, younger policyholders generally pay more than their expected costs while older policyholders pay less than their expected costs. This cross-subsidization may be desirable for older beneficiaries who may be less able to afford higher premiums tied to their expected costs. Insurers may face special challenges under community rating, however. In order to keep premiums low, insurers need to maintain an enrollee population that is balanced between older and younger policyholders as their original policyholders age. That means they need to attract a steady stream of younger beneficiaries, which usually requires keeping premiums low. If the premium is too high, younger beneficiaries may feel that they will not get good value from

a policy, and they may wait until they are older to purchase a policy or purchase a policy that is rated differently. Such delaying behavior could lead to increases in the cost of the policies.

Under issue-age rating, beneficiaries have a stronger incentive to buy a policy without delay, because the premium is based on their age when they first buy the policy. For example, if a beneficiary buys a policy at age 65, the premium will continue to be the same as that offered to new 65-year-old beneficiaries. This rating structure also provides incentives for beneficiaries to stick with a plan because in many states some of their premiums are put into a reserve to fund their higher expected costs as they age.

Attained-age rating reduces cross-subsidies between groups of younger and older beneficiaries. The premiums for younger beneficiaries will generally be lower than under any other rating structure. However, the premiums for older policyholders will be higher than under any other structure and can become prohibitively expensive for many beneficiaries.

In addition to rating by age, insurers in some states can rate by other beneficiary variables, including sex, whether or not the beneficiary smokes, and the geographic area where the beneficiary lives. Finally, if beneficiaries want to enroll in plans outside of the time periods in which they have guaranteed-issue rights, plans in the majority of states may underwrite them, charging more for beneficiaries with certain health conditions or denying coverage. ■

The average premium for individual Medigap insurance across all plan types—standardized and nonstandardized—was \$129 per month in 2001. The average premium for plan F, the most common standardized plan option, was \$122 per month; premiums for standardized plans that include outpatient prescription drug coverage ranged from \$119 for plan H to \$196 for plan J. Medigap premiums vary considerably by state.¹² Premiums also vary substantially according to the age of the beneficiary and the rating methodology used (see text box at left). For example, policies for older beneficiaries in attained-age rated policies may cost considerably more than policies that use issue-age or pure community rating.

Medicare Select plans

The Medicare Select program began as a demonstration in the early 1990s and was made permanent in 1998. Medicare Select policies are Medigap policies that cover more of the cost-sharing when beneficiaries use network providers. From the beneficiaries' point of view, a Medicare Select policy is exactly the same as a Medigap policy when they use a network provider, but coverage is not as complete as with a comparable Medigap plan when they use non-network providers. In exchange for giving up some coverage for non-network providers, the Select policies usually have lower premiums than comparable Medigap policies.¹³ Insurers are able to offer these less-expensive products because providers agree to accept rates lower than Medicare's in order to participate in the network. Because Medicare continues to pay its share of the claims from Select members, the reductions really are in the form of waiving all or part of the beneficiary cost-sharing.

Current Medicare regulations, however, have allowed these cost-sharing reductions only for hospital services. The Office of Inspector General (OIG) of the

12 For further discussion of Medigap products and reasons behind the variation in premiums, see Appendix B in MedPAC's Report to the Congress: Assessing Medicare Benefits, June 2002.

13 GAO found that in 1999 the average annual premium for a Select plan was more than \$200 lower than the average premiums for non-Select plans (General Accounting Office July 2001).

**TABLE
5-2**

Benefits, enrollment, and average premiums in standardized Medigap plans, 2001

Benefits, enrollment, and premiums	Standardized Medigap plan									
	A	B	C	D	E	F	G	H	I	J
Cost sharing										
Part A hospital coinsurance	•	•	•	•	•	•	•	•	•	•
365 additional hospital days	•	•	•	•	•	•	•	•	•	•
Part B coinsurance	•	•	•	•	•	•	•	•	•	•
Blood products	•	•	•	•	•	•	•	•	•	•
Part A deductible		•	•	•	•	•	•	•	•	•
Part B deductible			•			•				•
Skilled nursing facility copayments			•	•	•	•	•	•	•	•
Part B balance billing						•	•		•	•
Additional benefits										
Foreign travel			•	•	•	•	•	•	•	•
Home health care				•			•		•	•
Preventive medical care					•					•
Prescription drugs								•	•	•
Enrollment	11%	9%	23%	6%	3%	37%	3%	2%	3%	4%
Average monthly premium	\$91	\$102	\$117	\$114	\$108	\$122	\$121	\$119	\$170	\$196

Note: Percentages do not sum to 100 because of rounding.

Source: Medicare Payment Advisory Commission analysis of 2001 Medicare Supplemental Exhibits from the National Association of Insurance Commissioners.

Department of Health and Human Services (HHS) had ruled that Part B providers could not waive cost-sharing without violating anti-kickback rules. Studies of Medicare Select found that the program was limited because plans could not include physicians in their networks, which kept them from any real possibility of saving money through managing care (Lee et al. 1997). The OIG has now proposed regulations that would allow physicians and suppliers to waive Part B cost-sharing if they participate in a network. If physicians are willing to accept lower total Medicare payments to participate, then insurers might be able to pass along savings in the form of lower premiums. Network creation may also allow plans to pursue managed care objectives within their networks. In any event, if this regulatory change allows insurers to lower premiums on Select plans, they may become a more attractive option for beneficiaries.

Benefits and costs to beneficiaries in Medicare Select plans Select benefits are the same as Medigap benefits except that beneficiaries may be limited in their choice of providers. For the most part, the premiums are lower because the insurers get lower rates from network providers. More than one million Medicare beneficiaries are enrolled in Select plans.

Employer-sponsored retiree plans

The most common form of supplemental coverage is employer-sponsored insurance, which covers 33 percent of noninstitutionalized Medicare beneficiaries. Some of these beneficiaries have access to employer-sponsored coverage in their current jobs or through a spouse's employer, but the majority receive coverage as part of their retiree benefit packages. While some employers enroll their retirees in M+C or other

managed care plans, most of the plans wrap around the Medicare benefit package.

While employer-sponsored insurance has been the largest source of supplemental coverage, it has been declining. Over the past decade, the proportion of employers offering retiree health coverage has declined, even during the strong economy of the late 1990s.

A nationally representative survey of public and private employers with 500 or more employees found that 23 percent offered health coverage to Medicare-eligible retirees in 2001, down from 40 percent in 1994 (Mercer 2002). The declines have accelerated in recent years: The percentage of firms with 200 or more workers offering coverage to retirees over age 65 declined by 10 percentage points between 1999 and 2001. The same survey found that the percentage of small firms

Federal programs that provide supplemental coverage to retirees

Three Federal programs provide supplemental coverage to retirees.

Department of Defense supplemental health benefits

The National Defense Authorization Act for Fiscal Year 2001 created the program TRICARE For Life (effective October 1, 2001) to wrap around Medicare benefits. TRICARE For Life provides supplemental coverage for military personnel and retirees enrolled in Medicare. Approximately 1.5 million people are eligible for this benefit. The 2001 National Defense Authorization Act also created a new prescription drug benefit that provides eligible Medicare beneficiaries with the same pharmacy benefit enjoyed by military personnel not eligible for Medicare. Medicare beneficiaries who meet the eligibility criteria are automatically enrolled in TRICARE and in the pharmacy benefit program, with no application process.

TRICARE covers virtually all of Medicare's cost-sharing requirements, including deductibles and coinsurance for inpatient and outpatient services. It provides unlimited coverage for inpatient hospitalizations and skilled nursing facility stays, with beneficiaries responsible for 20 to 25 percent coinsurance for stays beyond the normal Medicare-covered allowance. The program also offers a comprehensive prescription drug benefit that gives beneficiaries the option of obtaining prescription drugs at no cost from military treatment facilities or with only nominal copays from any pharmacy. In general, for most Medicare-covered services, Medicare will pay first and TRICARE will pay the beneficiaries' remaining out-of-pocket expenses. If beneficiaries have

other sources of coverage, TRICARE pays after the other sources have paid. The program includes a \$3,000 annual out-of-pocket limit (Politi 2002).

To be eligible for TRICARE, beneficiaries must pay the Medicare Part B premium but are not required to pay any additional premium. Eligible beneficiaries include uniformed service retirees (including retired guard and reservists) who served at least 20 years in the military, family members of uniformed service retirees (including widows/widowers), and certain former spouses of uniformed service retirees, if they were eligible for TRICARE before age 65.

Department of Veterans Affairs health benefits

In 2003, an estimated 3.3 million beneficiaries will be enrolled in the Department of Veterans Affairs (VA) health care system (Congressional Budget Office 2002). For individuals who qualify, the VA program provides generous benefits at little or no charge to the beneficiaries, including broad coverage of most inpatient and outpatient services; preventive care; and prescription drug coverage. The VA program has become increasingly popular in recent years, with more than 1 million new enrollees in the past 5 years. The growth has been fueled largely by elderly veterans seeking prescription drug coverage (Simmons 2002).

To receive health care from the VA system, veterans generally must be enrolled with the VA. (Though disabled veterans do not have to enroll, the VA encourages them to enroll formally to help the agency's planning and resource allocation process.) Veterans are enrolled subject to

available appropriated funds, based on a priority system of eligibility categories, with veterans with service-connected disabilities rated 50 percent or higher accepted first. Veterans deemed unable to make copayments for their treatment are given higher priority than others who do not have service-connected disabilities and who agree to pay copayments. To qualify based on inability to defray the costs of their care, veterans must supply the VA with income and net worth information, which is compared to a financial threshold. Enrollment is reviewed each year. Those in the lowest priority group pay the Medicare hospital deductible for the first 90 days of care during any 365-day period, and one-half of the Medicare deductible for each additional 90 days of hospital care, as well as a \$10 per day charge for each hospital day. This group is also responsible for copayments for most outpatient care.

Outpatient pharmacy services are provided free to eight categories of veterans (subject to available VA funds), based on service-connected disability and other special needs criteria; others pay a fixed copayment (\$7 per prescription in 2002). For most priority groups, there is also an annual cap on copayments for drugs, including both prescription and over-the-counter medications and supplies dispensed by a VA pharmacy (\$840 in 2002); those in the lowest priority group who are responsible for copayments for other health services are not protected by the cap (Department of Veterans Affairs 2002).

The Federal Employees Health Benefits Program (FEHBP)

In addition to providing employment-based group insurance to active federal workers, FEHBP provides group

(continued next page)

Federal programs that provide supplemental coverage to retirees (continued)

insurance to federal retirees. About 31 percent of the 8.3 million people covered by FEHBP are retired, and 1.8 million (21 percent) are enrolled in Medicare (Quayle, 2003). FEHBP offers retirees a range of commercial health plans, including both national

and local fee-for-service plans, preferred provider organizations, point-of-service plans, and managed care plans. The benefits included in the plans, when coordinated with Medicare FFS, are generally comparable to those of retiree health insurance supplements

offered by other large public- and private-sector employers—i.e., they generally fill in Medicare cost-sharing, plus offer some additional coverage for preventive care, routine physicals, and prescription drugs. ■

(those employing 3–199 workers) offering retiree health coverage fell from 9 percent in 2000 to 3 percent in 2001 (Henry J. Kaiser Family Foundation, Commonwealth, HRET 2002). Few, if any, employers have added health coverage for Medicare-eligible retirees (Mercer 2002).

These declines generally affect future, rather than current, retirees. In 2001, 5 percent of large employers had plans that covered only current retirees, or those hired before a certain year (Mercer 2002). Employers also have increased the number of years of service required to qualify for retiree health benefits (Watson Wyatt Worldwide, 2002). Most of the impact of this change has yet to be felt. It is not apparent in current coverage trends, but will appear gradually over time as today's workers, who have less-generous employer contributions or no retiree health benefits at all, begin to retire (General Accounting Office May 2001).

Not only has the number of firms offering coverage to their retirees declined, but those firms that offer coverage have been scaling back on drug benefits and

increasing retirees' premium contributions. Among firms that offer retiree health benefits, 32 percent increased cost-sharing for prescription drugs, and 53 percent increased retirees' share of the premium between 1999 and 2001. About 36 percent of large employers have capped their contributions towards retiree coverage for either current or future retirees (Hewitt Associates, LLC 2001).¹⁴

Special attention is often paid to federal retiree health programs, but they are essentially employer-sponsored plans.¹⁵ (See text box at left.)

Benefits and costs to beneficiaries in employer-sponsored retiree plans

The average premium paid for employer-sponsored health insurance by new retirees over age 65 was \$79 per month in 2002, up 20 percent from 2001 (Henry J. Kaiser Family Foundation, Hewitt Associates 2002). About 20 percent of employers providing coverage do not require new retirees to pay a premium. Currently, benefits provided by employer-sponsored plans tend to be

comprehensive. Almost all retiree plans (96 percent of those issued by large firms) provide some coverage for prescription drugs (Henry J. Kaiser Family Foundation, Hewitt Associates 2002). Further, about 90 percent of the plans that cover prescription drugs have no upper limit on that coverage. Although we do not have specific information on required cost-sharing for hospital or physician services, the average retiree with coverage has an out-of-pocket cap of \$1,500 per year for all covered service (Henry J. Kaiser Family Foundation, Hewitt Associates 2002).

Medicaid

In 2000, about 11 percent of beneficiaries living in the community were enrolled in the federal/state Medicaid program which supplemented their Medicare coverage. Medicaid offers several levels of supplemental coverage to eligible low-income beneficiaries. In addition, some low-income individuals who do not meet all of the requirements for dual eligibility receive Medicaid coverage for part or all of their Medicare premiums or cost-sharing requirements.¹⁶

14 These caps were put in place to limit employers' future liability for retiree health insurance. Employers began setting caps in the early 1990s in response to the Financial Accounting Standards Board's approval of Financial Account Statement No. 106 in 1990. It required employers to report annually on their current and future retiree health benefit liabilities and include them on their balance sheets, beginning with fiscal years after December 15, 1992. The Governmental Accounting Standards Board Statement No. 34 makes a similar requirement for state and local governments, which is now being phased in.

15 Health benefits for retirees receiving care through the Indian Health Service (IHS) are an exception. For Native American and Alaska Native beneficiaries, the IHS is the primary payer. The IHS does not technically "supplement" Medicare; rather, it provides a wide range of health services, some of which are paid for by Medicare. About 60,000 Medicare beneficiaries were served by 47 IHS or tribal-operated hospitals in 2001. Since the passage of BIPA in 2000, Medicare reimburses IHS for services in hospitals and skilled nursing facilities, and also pays for services of physicians and nonphysician practitioners furnished in hospitals and ambulatory clinics. Noncovered services are provided by the IHS. Services may be provided through provider-based or freestanding tribal federally qualified health centers, hospitals, ambulatory care centers, or individual practitioners employed by the IHS. Native Americans and Alaska Natives using IHS health care may also be eligible for Medicaid benefits (Health Care Financing Administration April 10, 2001).

16 The Balanced Budget Act of 1997 (Public Law 105–33) allowed states to pay providers the lower of Medicare's cost-sharing requirements or the states' Medicaid rates, although providers are not permitted to charge beneficiaries the difference. In 1999, only 16 states reimbursed providers for the full amount of Medicare's cost-sharing requirements (Nemore 1999).

Medicaid benefits available to Medicare beneficiaries not eligible for full Medicaid benefits

Several mandatory Medicaid programs pay beneficiaries' Medicare premiums or cost-sharing requirements:

- **Qualified Medicare Beneficiary (QMB) program.** Under the QMB program, states pay Medicare's premiums, deductibles, and coinsurance for all beneficiaries whose income is at or below 100 percent of the federal poverty level and whose assets are at or below twice the Supplemental Security Income limit. In providing coverage for Medicare premiums or cost-sharing, QMB coverage resembles a Medigap plan C or plan F (covering most of Medicare's cost-sharing requirements without providing additional benefits).

- **Specified Low-Income Medicare Beneficiary (SLMB) program.**

Under the SLMB program, states pay the Medicare Part B premium for beneficiaries with incomes between 100 percent and 120 percent of poverty.

- **The Qualifying Individuals-1 (QI-1) program.** Under the QI-1 program, states pay the Part B premium for beneficiaries with incomes between 120 and 135 percent of poverty. Because the QI-1 program's federal funding is limited, assistance is available on a first-come, first-served basis (General Accounting Office 1999).

Although Medicaid's premium and cost-sharing assistance programs are defined by federal law, states have discretion in how they implement these programs (Nemore 1999). ■

but not enrolled in Medicaid are more likely to be 80 years or older, married, and otherwise insured (through Medicare managed care or private supplemental insurance) than are enrolled beneficiaries (Laschober and Topoleski 1999). The way a state implements its Medicaid programs also affects participation rates. In 1999, more than half of states did not use a simplified enrollment application; more than three-quarters of states did not provide outreach materials in languages other than English; and about two-thirds of states did not make eligibility screening tools available to outside agencies, clinics, or senior centers (Nemore 1999). Other research has shown that enrollment in Medicaid is higher in states that have more generous Medicaid programs (Pezzin and Kasper 2002).¹⁸

In 1999, the proportion of Medicare beneficiaries classified as dual eligible varied by state, ranging from a high of almost 28 percent in Mississippi and Tennessee to less than 8 percent in Arizona, Idaho, and Utah (Ellwood and Quinn 2002). Compared with the rest of the eligible Medicare population, dual-eligible beneficiaries tend to be disproportionately female (63 percent versus 55 percent), over age 85 (18 percent versus 10 percent), and members of racial or ethnic minority groups (38 percent versus 14 percent) (CMS 2002).

Medicare beneficiaries and health plans in the marketplace

In this section, we describe constraints on Medicare beneficiaries' choices in the health insurance marketplace, and examine Medicare beneficiaries' actual choices and satisfaction. We then look at the health insurance marketplace from the perspective of the health plans that serve Medicare beneficiaries.

The benefit package for Medicare beneficiaries who are fully eligible to receive Medicaid (dual-eligible beneficiaries) is one of the most comprehensive of all Medicare supplemental options. The vast majority of dual-eligible beneficiaries do not pay premiums for Medicare or Medicaid, and any cost-sharing requirements are generally nominal (see text box above). In addition, dual-eligible beneficiaries generally receive a comprehensive prescription drug benefit through Medicaid.¹⁷

Despite the generosity of benefits available to dual-eligible beneficiaries, participation in Medicaid by eligible Medicare beneficiaries is low in most

states. An estimated 24 percent of all noninstitutionalized beneficiaries are eligible for or enrolled in one of the Medicaid programs. However, fewer than half of those eligible to receive Medicaid assistance actually do (Laschober and Topoleski 1999).

Common explanations for the low participation rate include lack of knowledge of the programs, the stigma associated with Medicaid, and barriers to enrollment (such as a complex application process). Beneficiaries commonly believe that Medicaid is for only "poor people" and that applying could put their estates at risk (General Accounting Office 1999). Medicare beneficiaries who are eligible

17 Some low-income beneficiaries who do not qualify for Medicaid receive assistance for the purchase of outpatient prescription drugs through Medicaid 1115 waivers. The programs can involve considerable cost-sharing.

18 The measures of state Medicaid program generosity were based on the percentage of state Medicaid long-term care expenditures allocated to home and community-based care (HCBC), and on Medicaid per capita expenditures per elderly enrollee on HCBC waiver programs designed to help beneficiaries remain in the community and avoid being institutionalized.

Medicare beneficiaries

When viewed at the national level, the health insurance market for Medicare beneficiaries appears to offer many choices, including whether to enroll in an M+C plan, or whether, or how, to supplement Medicare FFS. As we have discussed, however, the availability of options varies tremendously depending on each beneficiary's geographic location, work history, income, health care needs, and other factors. Beneficiaries may not be able to afford some of the health insurance coverage options available to them, especially the options with the broadest scope of benefits. Beneficiaries' coverage options are constrained not only by availability of the M+C plans described above but also by factors such as underwriting restrictions on Medigap policies for some beneficiaries, financial resources, and by what is available to them in employer-sponsored supplemental insurance programs. Beneficiaries' preferences and health care needs may also affect the extent to which they are willing to change providers or health plans, or are interested in considering options at all.

As noted above, statutory provisions allow for a 6-month period of open enrollment for all of the standardized Medigap options for beneficiaries entering the Medicare program at age 65, and (for a subset of plans) for beneficiaries affected by the withdrawal of M+C plans from their market area. Beneficiaries entitled to Medicare by reason of disability do not have this federal guaranteed access to Medigap until they reach age 65 and may therefore be denied coverage.¹⁹ Beneficiaries who want to enter the Medigap market after the open enrollment period ends may be subject to underwriting based on age or health condition, depending on state law. Further, many states allow insurers to rate policies based on beneficiaries' ages.

Some beneficiaries, particularly those who have existing health care problems or are older, may have only a small number of policies open to them and those policies may not be affordable.

For beneficiaries with employer- or union-sponsored retiree health insurance, choices among insurance alternatives may also be constrained. Employers may not offer Medicare managed care options. In 2002, about half of all large employers offered a Medicare managed care option (Henry J. Kaiser Family Foundation, Hewitt Associates 2002). Employers who do offer Medicare managed care may be able to take advantage of the supplemental benefits offered by the plans, lowering their own costs. This may lead some employers to require higher premiums for retiree benefits that supplement Medicare FFS, and lower premiums for managed care options. In fact, while many employers do not offer M+C options, those who do offer them play an important role in the M+C market. Unpublished CMS data from 2002 show that 18 percent of M+C enrollees were in employer or union-sponsored groups (Zarabozo 2003).

The ability to pay for insurance to supplement Medicare is clearly a limiting factor for some beneficiaries. Research has generally shown that the main reason people choose to join M+C plans is to obtain better benefits for less cost than they can get from Medicare plus private supplemental insurance (Gold 2000; Young and Mittler 2002). A survey of beneficiaries conducted in 2000 by Mathematica Policy Research, Inc. (MPR) showed that the majority of beneficiaries who had no supplemental insurance (Medicaid or private) reported that supplemental insurance was too expensive or that they could not afford it (Gold and Mittler 2001). Analyses reported in MedPAC's June 2002 report show that beneficiaries with incomes

below 200 percent of poverty are more than twice as likely as higher-income beneficiaries to go without any form of supplemental insurance (MedPAC June 2002).

Beneficiaries' decisions about health plans and supplemental insurance also reflect their health care needs and preferences. Choice of a doctor, access to specialists, or a desire to stay with the same doctor may be particularly important to people with health care problems and long-standing relationships with particular providers. For many, coverage for services not covered by traditional Medicare—notably prescription drugs—is critically important. For some, particular details of plan offerings (e.g., provisions related to dental services, hearing aids or eyeglasses, or particular aspects of plan drug formularies) may be important.²⁰

Finally, some research suggests that many Medicare beneficiaries are not highly motivated to make choices about their insurance coverage. MPR's 2000 survey of beneficiaries found that most beneficiaries (in both FFS and M+C plans) did not give serious thought to options for insurance coverage. Only 14 percent thought seriously about options or actually changed plans, and, of those, more than one-third were either new beneficiaries (who had to make a choice) or beneficiaries who switched from one M+C plan to another. Of those who did not consider options seriously, by far the most common reason offered (65 percent of respondents) was "I like what I have" (Gold et al. 2002). Other research suggests that retirees may be less likely than younger workers to make decisions about health insurance options based primarily on cost, in part because of concerns that retirees—especially those with health care problems—may have about changing doctors (Buchmueller 2000; Strombom et al. 2002).

19 Some states require guaranteed issue and/or community rating on some or all plans (requiring insurers to charge the same premium to all insured persons, regardless of age or health status) for disabled Medicare beneficiaries.

20 As plans have revised or scaled back additional benefits, the array of benefits, cost-sharing arrangements, and exclusions can become very complicated. According to one study that compared options for actual plans in two cities, "differing plan packages make it nearly impossible to compare plans on costs" (Dallek and Edwards 2001).

Insurance choices made by Medicare beneficiaries

Although Medicare beneficiaries' insurance choices have been shaped by a variety of constraints, the resulting system of multiple insurance coverage has, for the most part, provided supplemental coverage for most beneficiaries. MedPAC analysis shows that only 9.3 percent of Medicare beneficiaries living in the community had traditional FFS Medicare coverage only for most of the year in 2000.

Note, however, that figures on the types of supplemental insurance held by Medicare beneficiaries are based on survey data available only through the year 2000. Because some M+C plans have withdrawn and some employers have reduced retiree benefits, these estimates of coverage may not accurately reflect beneficiaries' current insurance coverage.²¹ MedPAC's analysis of the 2000 Medicare Current Beneficiary Survey (MCBS) Cost and Use file shows that about one-third of all beneficiaries living in the community have employer-

sponsored supplemental insurance, and nearly 30 percent of beneficiaries have purchased Medigap (Table 5-3).

Analysis of choices about health care options also suggests that Medicare beneficiaries are particularly interested in obtaining prescription drug coverage when it is available. CMS data show that when plans offer a choice in benefit design, most beneficiaries in those plans choose to pay the higher premium for the packages that include drug coverage (Zarabozo 2002).

TABLE 5-3

Sources of additional coverage by selected beneficiary characteristics, 2000

	Percent of beneficiaries living in the community	Percent distribution					Other	Medicare only
		Employer-sponsored insurance	Medigap insurance	Medicaid	Medicare managed care			
All beneficiaries	100.0%	32.0%	27.0%	11.6%	18.3%	1.8%	9.3%	
Age								
Under 65	13.6	27.2	5.0	34.4	9.7	3.2	20.5	
65-69	23.9	35.6	23.0	7.4	21.0	1.9	10.9	
70-74	22.2	34.1	30.2	7.3	19.7	1.7	7.1	
75-79	19.0	32.3	33.0	8.4	19.4	1.3	5.6	
80-84	12.1	30.9	35.4	8.0	19.4	1.1	5.2	
85+	9.2	25.4	38.1	10.2	17.2	1.8	7.3	
Income status								
Below poverty	15.9	9.8	13.9	46.2	12.0	2.2	15.9	
100 to 125% of poverty	10.3	15.3	23.6	22.6	19.8	3.1	15.0	
125 to 200% of poverty	22.1	27.7	30.9	6.2	21.6	2.3	11.4	
200 to 400% of poverty	33.0	42.5	28.4	1.1	20.5	1.5	5.9	
Over 400% of poverty	18.4	46.6	32.9	0.6	15.0	0.8	4.1	
Residence								
Urban	76.1	33.7	23.0	10.5	22.9	1.6	8.1	
Rural	24.9	26.7	39.8	12.8	3.9	2.6	13.1	

Note: Income status is defined in relationship to the poverty level in 2000 (\$8,259 if living alone and \$10,419 if living with a spouse). Urban includes beneficiaries in metropolitan statistical areas (MSAs). Rural includes beneficiaries living outside MSAs. Beneficiaries according to the type of coverage they held for at least six months of the year.

Source: MedPAC analysis of 2000 Medicare Current Beneficiary Survey, Cost and Use file.

21 A large share of the beneficiaries who no longer have Medicare managed care coverage probably now have Medigap plans. Data from 2000 suggest that Medigap enrollment is increasing as managed care enrollment declines. A 1999 survey found that 75 percent of beneficiaries who were involuntarily disenrolled from M+C plans, and did not join a different managed care plan, found a different source of supplemental coverage (Barents 1999). The benefits offered may not have been as rich as in their M+C plans, however, or the premiums may have been higher. If we assume that people disenrolled from the M+C market between 1999 and 2002 obtained supplemental coverage in the same proportions as the survey respondents reported, then the fraction of beneficiaries with no additional coverage has grown from 9 percent in 1999 to an estimated 11 percent in 2002. These are MedPAC estimates based on the distribution in 1998, the change in Medicare managed care enrollment between 1998 and 2002, and the survey results regarding the sources of supplemental coverage obtained by those who lost their M+C plan. Note that this estimate of uncovered beneficiaries may be conservative. One survey of beneficiaries conducted in 2000 found that 17 percent had no supplemental coverage at the time of the survey (Gold and Mittler 2001).

Medicare beneficiaries' satisfaction with their plan choices

Most Medicare beneficiaries report that they are satisfied with their health coverage. A survey of beneficiaries conducted in 2000 found that 61 percent of all beneficiaries in fee-for-service (with or without supplemental coverage) and 69 percent of beneficiaries enrolled in M+C plans rated the value of their current coverage as excellent or very good, and 86 percent of FFS and 90 percent of M+C beneficiaries would recommend their plans to a friend (Gold et al. 2001). Data from a 2002 insurance industry-sponsored survey indicated that 89 percent of respondents were satisfied or very satisfied with their Medigap coverage, and 76 percent said that, considering the premiums they were paying, their policies were a good or excellent value. According to this same survey, over 80 percent said they would recommend Medigap coverage to a friend or relative turning 65 and enrolling in Medicare (Young 2002).

CMS has devoted significant resources to the development of programs to monitor beneficiaries' experiences and satisfaction with Medicare options. The ongoing Consumer Assessment of Health Plans Survey (CAHPS) was first fielded in 1998 to obtain information from beneficiaries in M+C plans. CMS is now also fielding a version of CAHPS designed to obtain comparable information from beneficiaries in the traditional FFS Medicare program.²²

Data from the M+C CAHPS have consistently shown that beneficiaries generally report high levels of satisfaction with their health plans and with the health care they receive. In 1999, across 69 MSAs for which data were analyzed, 79.7 percent of M+C enrollees gave their

plans an overall rating of 8 or more out of a possible 10 (Lake and Rosenbach 2001). These scores, however, differed significantly across the geographic regions in the first three years of the survey²³ (Goldstein et al. 2001; Zaslavsky et al. 2000).

Comparing data from the FFS and M+C CAHPS raises conceptual and methodological issues. The FFS sample includes beneficiaries with various types of supplemental coverage, and those without any supplemental insurance. The M+C sample reflects the nature of the current M+C market—the beneficiaries who are included in the sample are those who have access to, and have chosen to enroll in, M+C plans. This means that there are some significant differences in the populations included in either the FFS or M+C samples across geographic areas. There are few (or no) M+C options in some areas, the FFS CAHPS sample includes people who might have, if given the opportunity, chosen to be in an M+C plan.

Despite these caveats, however, the CAHPS surveys do provide an important insight: A large proportion of all beneficiaries are quite satisfied with Medicare and with their own health insurance coverage. Unpublished data from both the M+C and Medicare FFS CAHPS and the disenrollment survey indicate in general there is a relatively high level of satisfaction with Medicare regardless of the plan model in which beneficiaries are enrolled. A large proportion of all beneficiaries rate their health care and Medicare a “10,” on a scale of “10” on composite measures constructed by CMS. Beneficiaries in poorer health, however, give Medicare lower ratings overall (Bernard et al. 2003). The data also suggest that M+C

beneficiaries with health problems may be less satisfied than beneficiaries enrolled in the traditional FFS Medicare program: The disparities between the satisfaction ratings of people in fair or poor health and the ratings of people in excellent or very good health were greater for those enrolled in M+C than for those enrolled in the traditional FFS Medicare program (Table 5-4). There are also differences across individual measures included in the composite ratings.²⁴

Changes that Medicare beneficiaries would like to see in insurance offerings

Beneficiary and advocacy organizations' concerns about available insurance options can be divided into four categories: the adequacy and cost of benefits and coverage, the stability of plans and plan offerings, the complexity of the options available, and the equity in choices across markets.

- **Benefits and costs.** The single greatest concern among beneficiary advocates is coverage of prescription drugs. Major beneficiary organizations have called for the addition of prescription drug coverage to the basic Medicare package (AARP 2002). Some advocates also believe that the addition of a drug benefit under Medicare would help to stabilize the M+C market, because Medicare payments to plans for covered benefits would relieve the plans from at least some portion of the rapidly increasing costs of prescription drugs. More generally, advocates are concerned about increases in out-of-pocket costs incurred by beneficiaries, both for uncovered services and for premiums—

22 These surveys are very large, and can be used to compare enrollees' reports about their health plans and health care experiences at the plan level, as well as within and across states and metropolitan statistical areas. A survey of beneficiaries who disenroll from M+C plans is also conducted each year. In addition, information on beneficiaries' views about their health plans and insurance coverage is collected in the Medicare Current Beneficiary Survey.

23 The overall plan ratings have generally been higher in the Northeast and lower in the Pacific and Northwest regions (Goldstein et al. 2001).

24 Analyses supplied to MedPAC by CMS indicate that among the 42 states with managed care and DC, M+C enrollees gave higher percentages of positive responses than FFS beneficiaries for 2 of the 6 indicators: “Good Communication” and “Flu Shot.” For two other indicators, “Care Quickly” and “Rate Health Care,” neither group had a notably higher percentage of positive responses. Generally, FFS received higher percentages of positive responses than M+C for the “Needed Care” composite and “Rate Medicare” indicator (Bennett 2003).

**TABLE
5-4**

Consumer Assessment of Health Plans ratings of Medicare FFS and Medicare+Choice plans

Percent of beneficiaries surveyed giving answer, by perceived health status

	Excellent or very good	Fair or poor
Rate their health care a "10"		
Medicare FFS	54.4*	43.7
M+C	58.9*	44.2
Rate Medicare a "10"		
Medicare FFS	49.8	44.6*
M+C	49.9	36.5*

Note: FFS (fee-for service), M+C (Medicare+Choice)

* Statistically significant differences (p < .05) between Medicare FFS and M+C.

Source: Consumer Assessment of Health Plans Surveys from CMS, Bernard et al. 2002.

particularly for the higher premiums charged by M+C plans offering supplemental benefits.

- **Stability.** Beneficiaries have growing concerns about the stability of M+C options. Plan withdrawals over the past four years have caused frustration and anger among affected beneficiaries, and some beneficiaries are reportedly seeking alternative prescription drug coverage or reverting to Medigap coverage rather than enrolling in an M+C plan (Stuber et al. 2002; Young and Mittler 2002). Some advocates have proposed regulatory changes to promote greater stability, including requiring that plan/provider contracts last throughout the calendar year and be finalized prior to the open enrollment period, and requiring plans that wish to participate in M+C to commit to the program for a fixed period (e.g., three years) (Stuber et al. 2002).²⁵ Some advocates also believe

that the instability of the M+C program militates against provisions that would restrict beneficiaries from switching among plans over the course of a year.²⁶

- **Complexity.** Changes in M+C availability, benefits, and premium costs, and the introduction of new plan options such as private FFS plans, have made the choice of insurance options more complicated. Researchers as well as advocacy groups report that beneficiaries can find it extremely difficult to sort out their options (Young and Mittler 2002; Barents 1999; Stuber et al. 2002). Specific conditions and limits of prescription drug coverage offered by M+C plans can be especially complicated and difficult to summarize in ways that are useful to beneficiaries.²⁷ Some advocates have called for expanded education and outreach programs to help

beneficiaries understand their choices (AARP 2002). Greater standardization of M+C products to make it easier for beneficiaries to compare plan benefits and costs has also been proposed. One major beneficiary organization supports the use of standard definitions for all services covered by plans (AARP 2002).

- **Equity.** The geographic variations in health care and insurance costs that underlie the Medicare FFS system affect the insurance choices available to Medicare beneficiaries (see MedPAC's March 2002 Report to Congress). There are significant geographic differences in the Medicare+Choice options available to beneficiaries, as well as large variations in the richness of supplemental offerings and the premiums charged for these options. These variations are intertwined with cost differences for Medigap policies. Advocates view the variations as inherently unfair and as a threat to the underlying principles of equity embodied in Medicare. Some advocates believe that some of the variations, or at least some of their negative effects in terms of equity, could be reduced through standardizing benefits and through risk-adjusting payments to reduce adverse selection (Dallek et al. 2002).

Health plans

For health plans and insurers, the Medicare market presents both opportunities and frustrations. Insurers seek a dynamic environment in which a broad range of private options can meet the needs of a diverse population and where there are opportunities for profit. Plans as well as Medigap insurers believe

25 The effect of requiring plans to make multiple-year commitments is a topic of debate. Some analysts believe that, rather than providing stability for beneficiaries, these provisions might deter plans from entering into contracts with Medicare.

26 The lock-in provisions that were partially implemented in 2002 were delayed until 2005 in legislative provisions included in the Public Health Security and Bioterrorism Response Act of 2002 (Public Law 107-188).

27 A 2002 report issued by the HHS Office of Inspector General found that "The information that HMOs provide to beneficiaries about certain elements of the drug benefit is inconsistent, incomplete, and misleading" (Department of Health and Human Services 2002).

that they can better serve beneficiaries if there is a “level playing field” where Medigap products can compete with other products, including M+C plans, that are currently subject to different regulations governing underwriting, guaranteed issue and renewal, community rating, and flexibility in benefit design.

Plans’ perspective

From the industry’s perspective, three basic problems impede the development of more successful Medicare markets: Medicare payment levels, administrative and regulatory requirements, and limits imposed by Medicare on health plans’ ability to design and market new, “flexible” products.

Medicare payment levels Industry representatives maintain that inadequate funding is the biggest problem facing the M+C program. From their perspective, Medicare payments have to be sufficient to maintain their physician networks. In particular, plans believe that the statutory update amount, which has effectively limited plans to 2 percent increases, has failed to keep up with the increasing cost of providing Medicare and non-Medicare services. Payment updates to M+C plans in the past two years have been far lower than the increases in premiums for health plans in large employer-based markets (American Association of Health Plans [AAHP] 2002). One major industry group has called for Congress to change the payment system to one that pays Medicare plans the higher of 100 percent of local FFS costs or the current M+C rates²⁸ (Blue Cross and Blue Shield Association 2002).

Administrative and regulatory requirements imposed by Medicare Plan representatives believe that some of the data reporting and compliance requirements imposed by Medicare are excessively complicated and expensive, and divert funds from patient care. They

also report that some of the instructions for complying with these requirements are unclear or contradictory. Plans, despite their appreciation of CMS’s recent simplification efforts (see below), still have some concerns about the operation of the M+C risk-adjustment system (see Appendix A), which they believe is resource intensive and can, because of a need to correct errors, lead to delays in payments to plans (AAHP 2002).

Limits imposed by Medicare on plans’ ability to offer “flexible” products Plans and insurers want to be able to market more varied insurance products, including products that look more like those available to the working insured population. The managed care industry has recommended expanding the range of choices for beneficiaries by making cost contracts a permanent part of Medicare and allowing M+C plans to vary benefits and premiums within segments of service areas (AAHP 2002). Other industry representatives have urged the Congress to develop options to increase participation of PPOs in M+C as a major policy objective (Health Insurance Association of America 2002). Some Medigap insurers would like to see the standard packages modernized, or have more flexibility in offering nonstandard packages. There is widespread agreement in the insurance industry that any major restructuring of the standardized benefit forms should, however, wait until the prescription drug issue and broad reform of Medicare benefits is settled.

CMS policy changes to encourage plan participation

CMS has already taken action to address perceived problems in M+C markets, in conjunction with a major project being directed by the Secretary of Health and Human Services’ Advisory Committee on Regulatory Reform. Organizational changes at CMS, including the creation of a new Center for Beneficiary Choices,

consolidate oversight responsibilities, which should improve communication with plans. CMS has also reduced the number of mandatory quality assessment activities that participating plans must conduct, and revised the processes for deeming plans to be in compliance with a variety of regulatory requirements.

The agency has also made significant changes designed to reduce the administrative burden associated with risk adjustment.²⁹ Data collection for risk adjustment across multiple sites of care began in October 2000, but M+C plans argued that CMS’s requirements for collecting and submitting the data were too burdensome. In response, the Secretary suspended collection of data from ambulatory sites in May 2001 and directed CMS to investigate alternatives. CMS worked with M+C plans, trade organizations, and physicians to develop a multiple-site model to address plans’ concerns. CMS announced a preliminary version of the model on March 29, 2002. Plans began to collect diagnosis data from physician office and hospital outpatient sources in July 2002 and began submitting the data in October 2002. CMS will announce the final version of the model by March 28, 2003, and will begin using the model on January 1, 2004.

As described earlier, CMS has also initiated a new demonstration program, focused on PPOs, to foster competition in the M+C program. Medicare’s PPO demonstration could be attractive to insurers for several reasons:

- In some areas, the demonstration will pay more than the M+C payment rates. The demonstration will pay the maximum of the M+C rates or 99 percent of the per capita Medicare FFS spending in a county. Almost one-fourth of the beneficiaries who will have a PPO demo plan available live in counties where higher rates would be paid.

28 MedPAC has recommended that M+C rates be set equal to 100 percent of local FFS costs (MedPAC March 2002).

29 For 2004, CMS must begin using a risk adjustment system based on a model that uses data from hospital inpatient and ambulatory settings. Also, CMS is required to apply such a model to 30 percent of payments in 2004, and the agency must increase this percentage annually until it reaches 100 percent in 2007.

- Though M+C CCPs may not set premiums and cost-sharing for the basic benefit package above a cap actuarially set at the national average for all Medicare FFS beneficiaries, PPOs in the demonstration will not be limited by this cap. Benefit consultants have stated that lifting the cap will allow plans to compete with Medigap for those beneficiaries who are willing to buy a higher-priced product.
- The demonstration allows for negotiated risk-sharing between the plan and Medicare. Details of the risk-sharing arrangements have not been released, but apparently not all of the demonstration plans are availing themselves of the option.

When supply and demand meet in the marketplace

Medicare beneficiaries' demand for benefits beyond those found in the traditional FFS Medicare program has been filled by a broad spectrum of options, with varying degrees of success. Some options, such as M+C plans, primarily replace Medicare FFS while enhancing some benefits. Other options, such as Medigap, employer-sponsored supplemental, Medicaid, and VA programs, are designed only to supplement Medicare. Access to these various options depends on beneficiaries' circumstances and geographic locations.

The supply of health insurance options for Medicare beneficiaries is influenced by the overall health care marketplace. The stage of the underwriting cycle and insurance company circumstances influence the supply of plans and the premiums they charge. Also, the economic and regulatory environment influences employers' willingness to provide retiree benefits. Finally, the nature of local markets and the balance of power between plans and providers drive plan decisions to enter and remain in local

markets. In this section, we look at the interplay of supply and demand in the marketplace.

Beneficiary demand

The demand for more comprehensive benefits is clear: In 2000 only 9 percent of beneficiaries in the community had just traditional FFS Medicare. But the market may be changing in the future. While employer-sponsored coverage was held by 32 percent of beneficiaries in 2000, many companies are cutting back on postretirement health coverage and eliminating it for new employees. Cost pressures will likely fuel the demand for less-expensive options for employers or options that retirees can afford on their own.

Despite the popularity of Medigap coverage—27 percent of beneficiaries had Medigap in 2000—it may be becoming less affordable for many beneficiaries, particularly when prescription drugs are part of the plan. Even those Medigap plans that include a drug benefit do not provide comprehensive drug coverage.

Medicaid provided additional coverage for 12 percent of beneficiaries living in the community in 2000. That coverage may change to some extent if state budgets come under increasing pressure. States have taken a variety of steps to limit Medicaid spending, including cutting back on prescription drug benefits, increasing cost sharing, and tightening eligibility criteria (Smith et al. 2003). A survey conducted by the National Conference of State Legislatures in late 2002 found that 16 states reported they would consider eligibility reductions for the elderly as a means of reducing their Medicaid costs in 2003 (Bureau of National Affairs 2002).

All of this potential increase in demand for more comprehensive benefits may represent an opportunity for M+C plans, other alternatives to FFS, and Medigap insurers. But those opportunities may be limited by marketplace realities.

Health plan willingness to supply coverage

Health plans will only enter the Medicare market under certain conditions. Medicare+Choice plans and other alternatives to Medicare FFS, for example, need payments that exceed their costs. If payments are set to equal those for FFS Medicare, then the other plans must lower their costs of care below those of Medicare by an amount sufficient to offset their administrative and marketing costs, plus their profits. They can do so by being more efficient (through utilization controls or disease management programs, for example), receiving discounts from providers, enrolling healthier beneficiaries, or using some combination of these actions. (If risk-adjusted payments are fully implemented and accurately capture the cost of caring for enrollees, then enrollee health status would not matter.) Alternatively, plans can enter areas where payments are set above FFS Medicare costs.

On the other hand, in the current environment M+C plans do not compete against only Medicare FFS. Instead, they compete against a combination of Medicare FFS and Medigap. To be successful, they have to deliver the same combined set of benefits for less. This challenge raises the possibility of not having to undercut Medicare FFS costs but being about equal to Medicare and less than Medigap for the additional benefits. In the past, M+C plans tried to keep premiums low or at zero because they did not think that beneficiaries were willing to pay a premium (or thought that those who were willing to do so were bad risks). Sometimes M+C plans left markets rather than adding premiums. Now that premiums for M+C have been increasing, it appears that some beneficiaries are willing to pay for their product and may be comparing M+C plans and the combination of FFS and Medigap more carefully than they may have in the past. For example, although plans in many markets have increased premiums, and decreased the value of

additional benefits offered in the last two years, enrollment in those plans has not decreased precipitously.

Plans that supplement the basic Medicare benefit package take their lead from FFS Medicare. Medigap and employer “wrap-around” plans usually depend on the Medicare programs’ coverage decisions in order to determine coverage for cost sharing. The levels of cost sharing under FFS Medicare determine plan cost-sharing liability and thus the cost of the plans to beneficiaries. Also, the plans—including M+C plans that supplement the basic Medicare package—are greatly affected by regulations that determine how the supplements must interact with Medicare. This is especially true of regulations on plan marketing and rules on how the plans may integrate employer-sponsored contributions.

For network-based alternative plans, a major constraint on supply is the feasibility of putting together a network. In some areas of the country, particularly rural areas, it is very difficult to recruit providers because they are in a monopoly position and have no interest in dealing with managed care organizations. In the M+C program, this has resulted in very few MCOs entering rural areas. In California, for example, the overall penetration rate of HMOs is very high and the M+C penetration rate is 35 percent, but the participation rate in counties outside MSAs is only 1.1 percent (Gold and Lake 2002). The only M+C choices in many rural areas are non-network private FFS plans which so far have very limited membership. Network formation will also be crucial to success in expanding the Medicare Select program.

National marketplace dynamics

The Medicare alternative and supplement markets are only a small part of the larger health insurance marketplace. As such, they are not immune to larger-scale trends in the overall market. In recent years the M+C program has reflected some of those trends, including the underwriting cycle, the move to larger and looser

networks with less utilization control, and provider pushback and the decline in full-capitation and other models of risk sharing with providers.

The underwriting cycle is a term often used by health policy analysts to describe the tendency of commercial insurance premiums to rise at a rate lower than cost increases when the market is profitable as insurers compete to increase market share, and then to rise at a higher rate as insurers try to repair profit margins and rid themselves of money-losing lines of business. This tendency has been reflected in the M+C market as plans used M+C to grow market share in the mid-1990s, in the anticipation of higher M+C profits, and then pulled back beginning in 1999 (Grossman et al. 2002).

In reaction to the anti-HMO backlash of the mid-1990s and changes in state laws, plans started to move to less-restrictive networks and less emphasis on utilization controls in commercial plans. This broadening of networks and lessening of controls moved into M+C plans as well, which further restricted plans’ ability to manage underlying care and costs. In a competitive market, if costs and premiums rise in reaction to fewer restrictions, more restrictive plans may begin to once again look attractive, which may carry over into the M+C market as well.

Another larger-scale trend has been provider pushback against contract terms proposed by network plans. Providers in many markets have consolidated, increasing their market power and making it difficult to form desirable networks without them. They have also moved away from accepting risk from plans and moved to a more FFS-like relationship. In California, some plans relied heavily on the capitated risk model, and pushback from providers has caused turbulence and withdrawal from some markets (Gold and Lake 2002).

Taken together, these larger trends reveal a dynamic M+C marketplace in which plans enter and exit just as they do in other managed care markets. This entry and exit by health plans can cause

instability for Medicare beneficiaries and concern among policymakers, but it is part of the reality of competition. The Medigap market has not been particularly volatile over the last few years, however. Instead, Medigap enrollment and premiums have grown modestly.

Importance of local markets

Whatever the national trends, local markets are where beneficiaries make their choices, where health care is delivered, and where insurance plans have to compete.

Beneficiaries’ real choices are limited to what they perceive as acceptable and affordable. Conceptions of acceptable insurance products will vary along with beneficiary expectations in different areas of the country. For example, local employers’ provision of health insurance will have an effect on their retirees’ choices when they become eligible for Medicare. If a beneficiary was in an HMO when employed, belonging to an HMO as a Medicare beneficiary may be an obvious, and perhaps a preferable, choice. For a beneficiary with no experience with managed care and an attachment to a particular physician, an HMO may not be an obvious choice.

Beneficiaries’ ability to afford different choices may also depend on their employment history, as well as on their income in retirement. If, for example, beneficiaries have an option that subsidizes their expenses, such as employer-sponsored wrap-around supplemental insurance or Medicaid, their demand for HMO options or Medigap may be lower than without such support. Affordability is a key determinant. In low-income areas, the demand for pricier products may be low, unless the premiums are subsidized by former employers.

Health care providers operate in local markets as well. They frequently draw customers from specific geographic areas and sociodemographic groups. At the same time, they may have existing relationships with other providers that

influence expected practice patterns. These relationships can also influence which insurance arrangements are considered acceptable in local markets. In some areas capitated contracts with insurance plans are much more routine than in others. Therefore, products that depend on capitation may only succeed in certain areas.

Health insurers are also sensitive to local market conditions because of the regulatory environment. Most insurance is regulated at the state level. Plans judge some states to be more conducive to certain forms of insurance than others. State rating rules may also greatly affect the competition between plan types. Because Medicaid differs by state, plans that interact with Medicaid also differ by state. At a more local level, plans react to beneficiary preferences and provider

characteristics that differ by local area. For example, if there is a monopoly local provider of a service, such as a large local hospital, plans will be constrained in their contracts with that provider in ways they would not be if competing providers were available or not be able to contract at all. Plans also react to the presence of other plans. Some researchers have found that larger numbers of M+C plans competing is correlated with greater value for beneficiaries at the same cost to the program (Pizer and Frakt 2002).

To understand the choices available to Medicare beneficiaries, the individual features of local markets and how they relate to competition and market dynamics must be examined. MedPAC plans to draw on existing research on local health care markets and conduct some case

studies of actual markets to comprehend the Medigap and supplemental marketplace. We hope to use the case studies to clarify what happens in markets, and then draw some conclusions about where particular kinds of choices might be made available to Medicare beneficiaries. We might also learn that M+C payment rates, Medigap rating rules, or state assistance programs may have unintended consequences for insurance competition in some areas. Designing a national program flexible enough to support different kinds of choices in different kinds of local markets will be difficult and raise issues of equity as well. Nevertheless, it will be necessary to address these difficulties if the goal is to foster increased choice for Medicare beneficiaries. ■

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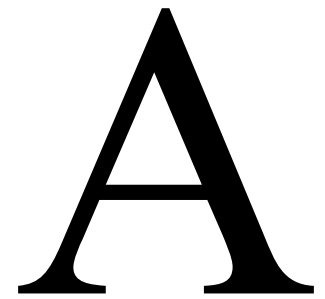
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A P P E N D I X

A

**How Medicare pays for services:
an overview**



How Medicare pays for services: an overview

Medicare's 40 million beneficiaries use thousands of different health care products and services furnished by over 1 million providers in hundreds of markets nationwide. Medicare pays for these services using 15 payment systems that are generally organized by delivery setting. These payment systems share common goals, and most have similar design elements that are tailored to accommodate the products Medicare is buying in each setting, the characteristics of the providers that produce them, the extent to which the same product may be furnished in different settings, and the market circumstances that affect providers' costs. In this appendix, we describe the key features of these payment systems.

Medicare was enacted to improve access to care by reducing the financial burdens faced by elderly people (and later, disabled people) in obtaining medically necessary acute care services. To achieve this objective, Medicare helps its beneficiaries pay for covered products and services in 15 different health care settings. These settings encompass the full

range of health care, including facility services—provided in hospital inpatient and outpatient departments, ambulatory care centers, and skilled nursing facilities, for example—and professional services furnished by physicians, therapists, and other practitioners.

In the traditional fee-for-service (FFS) program, Medicare sets prospectively determined payment amounts (rates) providers will receive for most covered products and services, and providers agree to accept them as payment in full.¹ Thus, in most instances, providers' payments are based on predetermined rates and are unaffected by their costs or posted charges. When beneficiaries use services, providers submit bills to Medicare's fiscal agents, who pay the predetermined rates minus beneficiaries' cost-sharing liabilities, such as deductibles and coinsurance. Providers then collect the remaining amounts from beneficiaries.²

In the Medicare+Choice (M+C) program, Medicare sets the county-specific monthly capitation payment rates that M+C organizations will receive for

enrolled beneficiaries. M+C plans may offer beneficiaries additional benefits not covered in the traditional program and charge additional premiums if the total cost of all covered benefits exceeds Medicare's capitation payment rates. M+C plans, however, accept responsibility for contracting with and paying health care providers and suppliers for the products and services they furnish to enrolled beneficiaries.

Recent legislation—the Balanced Budget Act of 1997 (BBA), the Balanced Budget Refinement Act of 1999 (BBRA), and the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA)—fundamentally changed the way Medicare pays for many products and services. These laws required the Centers for Medicare & Medicaid Services (CMS)³ to develop and adopt new prospective payment systems (PPSs) for services furnished by skilled nursing facilities, hospital outpatient departments, home health agencies, rehabilitation facilities, long-term care hospitals, and psychiatric facilities. The legislation also required CMS to change the method for

1 Medicare pays for some services—those furnished by long-term care hospitals and psychiatric facilities, for example—based on a provider's incurred allowable costs. In these instances, providers receive interim payments, usually reflecting their unit costs in the preceding year; discrepancies between interim payments and allowable costs are resolved (settled) annually after the end of the provider's cost reporting period.

2 Most beneficiaries have secondary insurance; in this case, Medicare's fiscal agents generally bill the secondary payer directly for the beneficiary's liability.

3 CMS was formerly known as the Health Care Financing Administration.

making prospective capitation payments to health care organizations under the M+C program. In addition, CMS has modified its PPSs for hospital inpatient acute care, physician services, and ambulance services, and proposed changing its payment methods for durable medical equipment.

In this appendix, we describe the 15 major payment systems Medicare uses to pay providers for products and services they furnish to Medicare beneficiaries. We begin with an overview of key structural elements that are present—explicitly or implicitly—in virtually all prospective payment systems. This overview is followed by six sections that describe the payment systems, grouped as follows:

- inpatient acute care in short-term hospitals and psychiatric facilities;
- ambulatory care furnished by physicians, hospital outpatient departments, ambulatory surgical centers, and clinical laboratories;
- post-acute care furnished by skilled nursing facilities, home health agencies, inpatient rehabilitation facilities, and long-term care hospitals;
- dialysis services furnished in outpatient centers and hospice care;
- ambulance services and products furnished by durable medical equipment suppliers; and
- services furnished by private health plans under the M+C program.

Key structural elements of Medicare's prospective payment systems

Medicare's payment policies and methods are often seen as extremely complex, a perception strengthened by the myriad policy changes enacted in recent legislation. Even without these changes, however, Medicare's size and scope—

encompassing a full range of health care products and services from many different types of providers in hundreds of markets nationwide—would make its payment methods seem complicated. Further complexity stems from the current mix of payment systems, in which traditional payment methods based on providers' costs and charges have not yet been fully replaced by prospectively determined payment rates.

Nevertheless, Medicare's payment systems reflect common goals and problems that are addressed using a handful of similar structural elements. Focusing on the goals and structural elements helps make the payment systems and related policy issues more understandable.

As discussed in previous MedPAC reports, Medicare's prospective payment systems are intended to support its principal policy objective—promoting beneficiaries' access to high-quality care in the most appropriate clinical setting without imposing undue financial burdens on beneficiaries or taxpayers. To achieve this objective, Medicare's payment systems must set payment rates that are consistent with efficient providers' short-run costs of producing services. That is, payment rates must accurately reflect predictable cost variations among products and services, including variations that result from patient characteristics and local market factors that are beyond providers' control.

To set and maintain accurate payment rates for many products and services—even in a single setting—is a difficult task. At a minimum, policymakers need the following conditions (Table A-1, p. 222):

- The products and services Medicare is buying must be well defined.
- The relative costliness of each product or service compared with that of the average service unit must be measurable.
- Production processes used by providers must be understood well

enough to identify the major inputs that contribute to efficient providers' unit costs.

- Patient or beneficiary characteristics and market circumstances that may affect providers' costs must be known and measurable.
- A payment update method must be developed to adjust payment rates annually, consistent with changes in input prices and other factors that may affect efficient providers' costs over time.

Defining the products and services Medicare is buying

The products Medicare buys in each setting are defined by the unit of payment and a compatible classification system. The unit of payment may be an individual service (a physician office visit, for example), a day of care (care in a skilled nursing facility), an episode of care (a hospital stay), or a month of service (as in the M+C program). Generally, the unit of payment should match the unit of service and the way providers think about delivering care in the setting.

Consistent with the unit of payment, the classification system identifies distinct services, types of patient care products, or patients who are expected to require different amounts of resources. In some Medicare payment systems—the hospital inpatient PPS, for example—the classification categories reflect different clinical problems and treatment strategies as indicated by diagnoses and procedures. In others, such as those for physician, hospital outpatient, or ambulatory surgical services, the categories reflect different procedures or evaluation and management services. In all payment systems, the classification categories define the products for which Medicare will pay.

Setting relative values

Relative values measure the expected costliness of a unit in each classification category compared with the expected average costliness of all units. Categories

that require more resources than average have higher relative values, and those that require fewer resources have lower ones. Relative values are often referred to as case-mix weights.

Setting a national base payment rate

The base payment rate represents the amount Medicare would pay for an average unit of service in a market with national average input prices, if no other payment adjustments applied. The base payment rate in each setting should reflect the costs the payment rates are intended to cover—operating costs alone or operating and capital costs together.⁴ Base payment amounts per unit are sometimes called conversion factors as in the physician fee schedule or the hospital outpatient PPS.

In some of Medicare's payment systems—those for hospital inpatient, outpatient, skilled nursing, or home health services, for instance—the Congress has required CMS to set national base payment amounts to reflect national average historical costs for the affected providers. In general, average historical unit costs in the base year have been updated to the first payment year by taking into account industry-wide inflation and changes in case mix during the intervening years. In some instances, however (the physician fee schedule, for example) measures of providers' historical costs are simply not available. In these cases, the initial base payment amounts often have been set so that total projected payments in the first year under any new payment system would equal total projected payments under the preceding system for the same year.

Adjusting for local market conditions

Input prices differ among markets across the nation and these differences generally affect efficient providers' costs in

predictable ways. Consequently, Medicare's payment rates in each market should be adjusted to reflect the local price level. To make these adjustments, policymakers must have one or more measures of geographic variation in input prices—such as the area wage index in the hospital inpatient acute care PPS or the geographic practice cost indexes in the physician fee schedule. Policymakers also must know what proportions of providers' unit costs are affected by variations in input prices. This information is used to determine how much of the national base payment rate should be adjusted by the geographic input price factor for each market area. Most Medicare payment systems use a version of the hospital wage index.

Other adjustments

Most payment systems have other adjustments related to unusual characteristics of patients, services furnished, providers, or market areas in which providers operate. In many instances, these adjustments are intended to account for factors that might substantially alter the resources needed to provide services. In other cases, they reflect policymakers' decisions to support certain activities, such as providing graduate medical education, serving a disproportionate share of low-income patients, or furnishing services to rural beneficiaries. Some payment systems, such as the acute inpatient hospital PPS, have more adjustments than others.

Updating payment rates

Payment rates for most settings must be updated annually to reflect changes in technology, practice patterns, and market conditions. Thus CMS must develop methods and data sources to be used in updating the base payment amount, the product classification system, and the relative values. Other payment

adjustments also may need periodic revision as conditions change. In most payment systems, the national base payment rate is updated annually to reflect the forecasted increase in an industry-specific national input-price index called a market basket (MB) index. The MB index, developed by CMS, tracks national average price levels for labor and other inputs, weighted to reflect the relative importance of each input category in the specific industry.⁵ This update affects all payment rates equally, so it does not affect the distribution of payments among product categories or across providers.

Updating the relative values affects the distribution of payments among products and services, and among providers according to their case or service mixes. In some payment systems, such as those for acute inpatient hospital care and inpatient rehabilitation services, relative values are updated annually. In other systems, such as the physician fee schedule and the skilled nursing facility and home health PPSs, the relative values are updated less frequently.

The configuration of these elements varies widely among Medicare's payment systems, reflecting differences in the nature of the services Medicare is buying, the characteristics of the providers that produce them, and how market conditions affect providers' costs. In addition, Medicare's payment systems often include provisions designed to offset or weaken providers' financial incentives to shift beneficiaries' care among settings. These financial incentives reflect fixed-price payment for bundles of services—providers can lower their costs and increase profits by shifting the provision of some services to another setting where they would be paid for in a different payment system. These incentives also may arise because Medicare sets payment rates separately for each setting and may

4 Operating costs consist of expenses for room, board, routine and special care, and ancillary services, such as laboratory tests, therapy, and imaging. Capital costs, such as rent, interest, and depreciation, are included in the payment rates in some payment systems (such as the skilled nursing facility PPS) or excluded and paid separately.

5 For physician services, CMS uses the Medicare Economic Index (MEI), a weighted average of price changes for inputs used to provide care. These include physician time and effort, wage rates for nonphysician employees, and office expenses. The MEI is similar conceptually to the market basket index, except that it includes an adjustment for productivity growth.

**TABLE
A-1**

Summary of Medicare’s current payment systems by setting

Payment system description	Acute inpatient care		Ambulatory care				Post-acute care	
	Acute care hospitals	Psychiatric facilities	Physicians	Hospital outpatient departments	Ambulatory surgical centers	Outpatient laboratories	Skilled nursing facilities	Home health agencies
Fiscal year began	1984	1983	1992	2000	1982	1984	1998	2001
Basis of payment	Prospective	Facility costs with limit	Prospective	Prospective	Prospective	Prospective	Prospective	Prospective
Product definition								
Unit of payment	Discharge	Discharge	Service	Service	Procedure	Test	Day	60-day episode
Product classification system	509 DRGs	None	7,000+ HCPCS codes	HCPCS grouped in 570 APCs	HCPCS in 8 procedure groups	1,100+ HCPCS codes	44 RUG-III groups	80 HHRGs
Policies defining product boundaries	72-hour rule short-stay transfers; high-cost outliers	None	Differentials by setting, multiple or atypical services	High-cost outliers; multiple service discount	Multiple service discount	None	None	Fewer than 5 visits; high-cost outliers
Product relative values								
Components of relative values	Single value for each DRG	None	Physician work; practice expenses; liability insurance	Single value for each APC	Single amount for each group	Combined with base amount	Therapy services; nursing care	Single value for each HHRG
Source of relative values	Hospitals’ billed charges	None	Expert judgement; practice expense data; premium survey	Median of estimated service costs	Median of estimated service costs	None	Stafftime studies	Estimated mean cost per HHRG
Base payment rate/conversion factor								
Components of base amount	Labor-related; nonlabor; capital	Current per unit operating costs	Single conversion factor (for sum of relative values)	Labor-related; other	Labor-related; other	Carrier-specific rates with limit	Therapy; nursing care; routine care	Labor-related, other
Source of base amount	Updated providers’ 1982 costs	Facility’s annual cost report	Projected spending under preceding method	Updated 1996 OPD charges adjusted to costs	1986 survey of ASCs’ costs and charges	Updated 1983 lab charges	Target aggregate spending	Spending in preceding system

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pay different amounts for the same service, depending on the setting in which it is furnished.

The remainder of this appendix describes how the key elements are combined for each of the 15 payment systems Medicare uses to pay providers for services they furnish to its beneficiaries.

Acute inpatient services

This section describes Medicare’s payment methods for acute inpatient care furnished to beneficiaries in:

- short-term general hospitals.
- specialty psychiatric facilities.

Payment for acute care services in short-term general hospitals

Each year, about one of every five Medicare beneficiaries enrolled in the traditional program has one or more inpatient stays in a short-term acute care

**TABLE
A-1**

Summary of Medicare’s current payment systems by setting

Payment system description	Acute inpatient care		Ambulatory care				Post-acute care	
	Acute care hospitals	Psychiatric facilities	Physicians	Hospital outpatient departments	Ambulatory surgical centers	Outpatient laboratories	Skilled nursing facilities	Home health agencies
Adjustments for local market conditions								
Labor input prices	Hospital wage index (HWI _r)	None	Separate GPCIs: work, practice expenses, PII	Hospital wage index (HWI _r)	Hospital wage index (HWI _r)	None	Hospital wage index (HWI _u)	Hospital wage index (HWI _u)
Other input prices	COLA	None	None	None	None	None	None	None
Other payment adjustments	Low-income patients (DSH); GME programs	None	Reduced rates for nonphysician practitioners	None	None	None	None	None
Payment update method	Rise in hospital market basket index	Rise in TEFRA market basket index	SGR formula	Rise in hospital market basket index	Rise in CPI-U	Rise in CPI-U	Rise in SNF market basket index	Rise in home health market basket index
Payments for capital costs	Separate prospective rates	Separate cost pass-through	Included in payment rate	Included in payment rate	Included in payment rate	Included in payment rate	Included in payment rate	Included in payment rate
Other policies	Higher rates in large urban areas; policies for rural providers	National limit adjusted to reflect local market wage level	10 percent add-on for health professional shortage areas (HPSAs)	New technology pass-through; transitional corridors	None	National limit = median of carriers’ rates	None	10 percent add-on for rural beneficiaries

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Note: APC (ambulatory payment classification), ASC (ambulatory surgery center), BLS (Bureau of Labor Statistics), CAH (critical access hospital), CMG (case-mix group), COLA (cost of living adjustment applied in Alaska and Hawaii), CPI-U (consumer price index for all urban consumers), CPT (Current Procedural Terminology), DRG (diagnosis related group), DSH (disproportionate share), GME (graduate medical education), FFS (fee-for-service), GPCI (geographic practice cost index), HCPCS (Healthcare Common Procedure Coding System), HHRG (home health resource group), HWI_r (hospital wage index with geographic reclassifications), HWI_u (hospital wage index without geographic reclassifications), LTC (long-term care), OPD (outpatient department), PE (practice expense), PII (professional liability insurance), RUG-III (resource utilization group, version III), SGR (sustainable growth rate), SNF (skilled nursing facility), TEFRA (Tax Equity and Fiscal Responsibility Act of 1982).

hospital.⁶ They receive care in more than 4,800 facilities that contract with Medicare to provide services and agree to accept the program’s predetermined payment rates as payment in full.⁷ Payments for inpatient care (about \$94 billion in 2001) account for the largest component—about 34 percent—of Medicare spending. These payments also provide the largest single source of

hospitals’ revenues—about 23 percent of overall revenues.

From its inception in 1966 until 1983, Medicare paid hospitals for inpatient services based on their incurred costs. This payment method gave providers little incentive to produce services efficiently. Because they were costly and relatively easy to distinguish, episodes of hospital

inpatient care (stays) were the first to be converted to prospectively determined payment, beginning in fiscal year (FY) 1984. The hospital PPS is a mature system, but it nevertheless needs frequent adjustments to keep up with changes in technology, practice patterns, and market conditions that affect the amount and mix of resources hospitals use to furnish inpatient care. The inpatient PPS pays

6 The Medicare inpatient hospital benefit covers beneficiaries for 90 days of care per illness episode, with a 60-day lifetime reserve. Illness episodes begin when beneficiaries are admitted for care and end after they have been out of the hospital or a skilled nursing facility for 60 consecutive days. Beneficiaries are liable for a deductible of \$840 for the first hospital stay in an episode. Daily copayments—currently \$210—are imposed beginning on the 61st day.

7 Except for convenience items or services not covered by Medicare, providers are not permitted to charge beneficiaries more than the predetermined payment rate. Medicare pays the predetermined rate minus any beneficiary liability, such as a deductible or copayment; the provider then collects the remaining amount from the beneficiary or a supplemental insurer.

**TABLE
A-1**

Summary of Medicare’s current payment systems by setting

Payment system description	Post-acute care		Services for special populations		Other services		
	Inpatient rehabilitation facilities	Long-term care hospitals	Outpatient dialysis care	Hospice services	Ambulance services	Durable medical equipment	Medicare+Choice plans
Fiscal year began	2002	2003	1982	1983	2002	1986	1998
Basis of payment	Prospective	Prospective	Prospective	Prospective	Prospective	Prospective	Prospective
Product definition							
Unit of payment	Discharge	Discharge	Dialysis treatment	Day	Trip	Item	Month
Product classification system	385 CMGs	499 LTC-DRGs	None	4 care type groups	14 HCPCS within 9 service levels, 2 CPT codes	HCPCS within 6 equipment categories	Beneficiaries’ demographics and health risk
Policies defining product boundaries	Short-stay outliers/deaths; transfers; high-cost outliers	Short-stay outliers; transfers; high-cost outliers	None	Beneficiary gives up curative treatment	Base rate and mileage	None	All-inclusive capitation payment rate
Product relative values							
Components of relative values	Single value for each CMG	Single value for each LTC-DRG	None	Combined with base amounts	Single value for each service level	Combined with base amounts	One value for each enrollee category
Source of relative values	Hospitals’ billed charges	Hospitals’ billed charges	None	None	Negotiated rulemaking	None	FFS bills 1990-1995
Base payment rate/conversion factor							
Components of base amount	Labor-related; other	Labor related; other	Labor-related; other	Labor-related; other	Single conversion factor for base rate	Single amount	Updated 2001 rate; blended national/county rate
Source of base amount	Projected spending under preceding method	Projected spending under preceding method	1977-1979 cost reports	Cost data from Medicare demonstration	Projected spending under preceding method	Allowed charges in 1986-1987	Historical FFS spending in county and nation

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hospitals predetermined per-discharge rates that are based primarily on two factors:

- the patient’s condition and related treatment strategy, and
- market conditions in the facility’s location.

Using information about patients’ diagnoses, procedures, age, and discharge destination reported on hospitals’ claims, Medicare assigns discharges to diagnosis

related groups (DRGs), which group patients who have similar clinical problems and are expected to require similar amounts of hospital resources. Each DRG has a national relative weight that reflects the expected relative costliness of inpatient treatment for a patient in that group compared with that for the average Medicare patient. Groups expected to require more resources than average have higher weights, and those expected to require fewer resources have lower ones.

The payment rates for DRGs in each local market are determined by adjusting a national average base payment amount (the amount that would be paid for an average patient in a facility located in an average market) to reflect the input-price level in the local market, and then multiplying the adjusted local amount by the relative weight for each DRG. Payment rates also are increased for facilities that operate approved physician (resident) training programs, those that

**TABLE
A-1**

Summary of Medicare’s current payment systems by setting

Payment system description	Post-acute care		Services for special populations		Other services		
	Inpatient rehabilitation facilities	Long-term care hospitals	Outpatient dialysis care	Hospice services	Ambulance services	Durable medical equipment	Medicare+Choice plans
Adjustments for local market conditions							
Labor input prices	Hospital wage index (HWIu)	Hospital wage index (HWIu)	40% 1986 HWI+ 60% 1980 BLS wage index	Hospice wage index	PE GPCI for physician fee schedule	Carrier-specific rates with limit	Hospital wage index (HWIu); GPICs
Other input prices	None	COLA	None	None	None	None	None
Other payment adjustments	Low-income patients	None	Higher rates for hospital-based facilities	None	Rural and low-volume add-ons	Product-specific national limits	Floor rates
Payment update method	Rise in modified TEFRA market basket index	Rise in modified TEFRA market basket index	No routine update	Rise in hospital market basket index	Rise in CPI-U	Rise in CPI-U	Rise in aggregate FFS spending; 2 percent minimum
Payments for capital costs	Included in prospective rates	Included in prospective rates	Included in payment rate	Included in payment rate	Included in payment rate	Included in payment rate	Included in payment rate
Other policies	Higher rates in rural areas	None	Exceptions; extra payments for some tests and drugs	Annual payment per beneficiary capped	Qualifying CAHs on cost-based reimbursement	None	None

Note: APC (ambulatory payment classification), ASC (ambulatory surgery center), BLS (Bureau of Labor Statistics), CAH (critical access hospital), CMG (case-mix group), COLA (cost of living adjustment applied in Alaska and Hawaii), CPI-U (consumer price index for all urban consumers), CPT (Current Procedural Terminology), DRG (diagnosis related group), DSH (disproportionate share), GME (graduate medical education), FFS (fee-for-service), GPCI (geographic practice cost index), HCPCS (Healthcare Common Procedure Coding System), HHRG (home health resource group), HWI_r (hospital wage index with geographic reclassifications), HWI_u (hospital wage index without geographic reclassifications), LTC (long-term care), OPD (outpatient department), PE (practice expense), PLI (professional liability insurance), RUG-III (resource utilization group, version III), SGR (sustainable growth rate), SNF (skilled nursing facility), TEFRA (Tax Equity and Fiscal Responsibility Act of 1982).

treat a disproportionate share of low-income patients, and for other factors.

Because the inpatient PPS accounts for a large share of Medicare spending, it faces ongoing scrutiny, often leading to technical and policy improvements. The PPS payment rates are intended to cover the costs that reasonably efficient providers would incur in furnishing high quality care, thereby rewarding those whose costs fall below the payment rates. However, financial performance under the PPS differs substantially among certain groups of hospitals. Some of these differences represent intended effects of

policies adopted by the Congress. In other instances, they may reflect unintended results of inaccurate or inappropriate payment adjustments, and failures to address factors that affect efficient providers’ costs in certain circumstances.

Defining the hospital inpatient acute care products Medicare buys

Under the inpatient PPS, Medicare sets per-discharge payment rates for distinct treatment episodes represented by 508 DRGs, which are based on patients’ clinical conditions and treatment

strategies.⁸ Clinical conditions are described by patients’ discharge diagnoses, including the principal diagnosis—the main problem requiring inpatient care—and up to eight secondary diagnoses indicating other conditions that were present at admission (comorbidities) or developed during the hospital stay (complications). The treatment strategy—is described by the presence or absence of up to six procedures performed during the stay. Age, sex, and discharge destination—for example, home, another PPS hospital, or a skilled nursing

8 Although the federal DRG classification system includes 527 categories, 19 are no longer used for Medicare payment.

facility—are also occasionally used to distinguish groups of patients who are expected to use different amounts of resources.

The DRG definitions have a tree-like structure. Based on the principal diagnosis, cases are first assigned to 1 of 25 major diagnostic categories (MDCs), reflecting the affected organ system (such as the digestive system) or the etiology of the condition (such as burns or significant trauma). Within each MDC, cases are subdivided into those with and those without operating room or other significant procedures. Each of these broad groups is then further divided; the surgical group by type of procedure and the medical group by specific type of condition as indicated by the principal diagnosis. Finally, medical and surgical subgroups are often subdivided further to form DRGs distinguished by the presence or absence of comorbidities or complications indicated by specific secondary diagnoses.⁹

CMS annually reviews the DRG definitions to ensure that they continue to include cases with clinically similar conditions requiring comparable amounts of inpatient resources. When the review shows that clinically similar cases within a DRG consume atypical quantities of resources, CMS often reassigns them to a different DRG with comparable resource use; less often, CMS creates a new DRG.¹⁰

In return for receiving Medicare's predetermined payments, hospitals are expected to furnish a reasonably well-defined bundle of inpatient services for each DRG. Facing fixed payment rates,

however, providers have financial incentives to reduce their inpatient costs by moving some normally included services to another setting—such as an outpatient department or a skilled nursing facility—and bill those services separately. To counter these financial incentives, Medicare has adopted policies that help strengthen the boundaries of the inpatient service bundles associated with the DRGs. Thus, patients must stay overnight before their discharges qualify for payment under the inpatient PPS. Related outpatient department services that were delivered in the three days before admission are included in the payment for the inpatient stay and may not be separately billed (the 72-hour rule). Similarly, payments for services may be reduced when patients are transferred to another hospital after a stay that is more than one day shorter than the national average stay for the DRG. The same payment reductions apply for certain DRGs when patients are transferred to post-acute care facilities, such as rehabilitation or skilled nursing facilities, or discharged to receive clinically related home health care that begins within three days.

Setting the payment rates

Medicare sets separate per-discharge operating and capital payment rates, which are intended to cover the operating and capital costs that efficient facilities would be expected to incur in furnishing covered inpatient services.¹¹ Operating payment rates cover costs for labor and supplies; capital payment rates cover costs for depreciation, interest, rent, and certain property-related expenses for insurance and taxes.

Medicare sets operating and capital payment rates using similar methods and factors. In general, CMS sets national payment rates for all types of cases by multiplying a base payment amount by the relative weight for each DRG. The DRG payment rates are then adjusted to reflect the local level of input prices in each market area. Finally, operating and capital payment rates are adjusted to account for certain hospital- and case-specific factors.

The base payment amounts Medicare sets two separate operating base payment amounts (known as standardized payment amounts): one for large urban areas—metropolitan statistical areas (MSAs) with a population of one million or more—and one for all other urban and rural areas.¹² These base payment amounts represent what a hospital located in these areas would be paid for operating expenses for an average Medicare patient (before any adjustments). The base operating amounts per discharge for FY 2003 are \$4,251 for large urban areas and \$4,184 for other areas.

Capital payments have only recently been made fully prospective, having completed a 10-year phase-in during FY 2001.¹³ The base capital rate for discharges from hospitals in large urban areas for FY 2003 is \$419; it is \$407 for hospitals located in other areas.

The diagnosis related group relative weights Medicare assigns a weight to each DRG reflecting the average relative costliness of cases in that group compared with that for the average Medicare case. The same DRG weights are used to set operating and capital payment rates. CMS recalibrates the DRG weights annually

9 These groups are sometimes divided further to form DRGs for pediatric patients (under age 17); a few DRGs are also distinguished by patient sex or discharge destination.

10 For example, CMS established a new DRG when it found that tracheostomy patients were substantially more costly than others in the same DRGs.

11 Certain costs are excluded from the inpatient PPS and paid separately, such as direct costs of operating graduate medical education programs, organ acquisition costs, and bad debts related to beneficiaries' nonpayment of their cost-sharing liabilities (deductibles and copayments).

12 Hospitals in Puerto Rico receive a 50/50 blend of the federal base payment amount and a Puerto Rico-specific rate.

13 New hospitals are exempt from prospective payment for capital costs for two years. During this period, they are paid 85 percent of their Medicare-allowable capital costs.

based on average standardized billed charges for all PPS cases in each DRG in the most recent Medicare bill file.¹⁴

Adjustment for market conditions

Medicare's base operating and capital payment rates are adjusted to reflect the expected impact of differences in local market prices for labor and other inputs. The base operating payment is adjusted by an area wage index; in Alaska and Hawaii, a cost of living adjustment (COLA) is also applied. The area wage index is intended to measure differences in hospital wage rates among labor markets; it compares the average hourly wage for hospital workers in each MSA or statewide rural area relative to the nationwide average.¹⁵ The wage index is applied to the labor-related portion of the standardized payment amount—71 percent of the total—which reflects CMS's estimate of the portion of operating costs affected by local wage rates and fringe benefits. The wage index is revised each year based on wage data reported by PPS hospitals on their annual Medicare cost reports. The COLA reflects the higher costs of supplies and other nonlabor resources in Alaska and Hawaii; it increases the nonlabor portion of PPS operating payments—29 percent of the total—for hospitals in these states by as much as 25 percent.

The federal rate for capital payments is adjusted to reflect local market conditions using a geographic adjustment factor (which is based on the area wage index) and, for Alaska and Hawaii, the same COLA as used for operating payments.

Other adjustments Payment rates also may be adjusted to reflect higher costs of

care in hospitals that operate approved resident training programs, revenue losses associated with treating low-income patients, and the financial burden of exceptionally high-cost cases. These adjustments are intended to preserve access to care for Medicare beneficiaries by protecting hospitals that face certain cost or revenue pressures.¹⁶ Medicare also makes special payments to several groups of hospitals.¹⁷ Most of these special payment provisions are designed to help rural hospitals, although some urban facilities also may qualify.

Indirect medical education payments

Teaching hospitals receive add-on payments to reflect the additional (indirect) costs of patient care associated with operating approved physician training programs. The size of the indirect medical education (IME) adjustment applied to DRG payments depends on the hospital's teaching intensity, as measured by the number of residents per bed. In 2001, approximately 1,100 hospitals received IME payments.

Disproportionate share payments

Hospitals that treat a disproportionate share (DSH) of low-income patients receive additional payments that are intended to partially offset their revenue losses from furnishing uncompensated care. The DSH adjustment is based on nine different formulas and depends on urban or rural location, number of acute care beds, and other characteristics. The amount of the adjustment—the percentage from the applicable formula multiplied by the hospital's total DRG payments—depends on the hospital's low-income patient share. A hospital's low-income patient share is the sum of the percentage

of its Medicare inpatient days furnished to patients eligible for Supplemental Security Income benefits and the percentage of its total acute inpatient days furnished to Medicaid patients. No DSH payments are made unless a hospital's low-income patient share exceeds 15 percent.

Until 2001, small urban hospitals—those with fewer than 100 beds—and most rural providers had to meet substantially higher minimum low-income patient shares to qualify for DSH payments. The BIPA reduced the qualifying thresholds for small urban and rural providers to the same level applied for larger urban hospitals. In 2001, these policy changes expanded eligibility for DSH payments from about 1,800 hospitals to about 2,800 hospitals; about 800 of the newly eligible facilities were in rural areas.

Outlier payments In general, hospitals are expected to offset losses on some cases (in which costs exceed the payment rate) with gains on others (in which costs are below payments). Some cases, however, are extraordinarily costly, producing losses that may be too large to offset. Hospitals facing fixed payment rates have strong financial incentives to avoid patients who may be likely to require extraordinary care. To promote access to high-quality inpatient care for seriously ill beneficiaries, Medicare makes extra payments for these so-called outlier cases, in addition to the usual operating and capital DRG payments. Outlier cases are identified by comparing their costs to a DRG-specific threshold that is the sum of the hospital's DRG payment for the case (both operating and capital), any IME and DSH payments, and a fixed loss amount. For instance, in 2003

14 Hospitals' billed charges are standardized to improve comparability. This involves adjusting charges to remove differences associated with variations in local market prices for inputs and those related to the size and intensity of hospitals' resident training activities.

15 A hospital may request geographic reclassification to an adjacent market area for the standardized payment amount, the wage index (and capital geographic adjustment factor), or both. To qualify, a hospital must demonstrate that it is located within 15 miles of the border of the adjacent area. It also must show that its hourly wages are above average for its market area (above 106 percent for rural hospitals and 108 percent for urban hospitals) and comparable to the average in the area to which it seeks reclassification (at least 82 percent for rural hospitals and 84 percent for urban hospitals).

16 Medicare also reimburses acute-care hospitals for bad debts resulting from beneficiaries' nonpayment of deductibles and copayments after providers have made reasonable efforts to collect the unpaid amounts. The BBA reduced these payments, but the BIPA added some back. As a result, Medicare paid 70 percent of allowable bad debts in FY 2000.

17 These special payment provisions are discussed in greater detail in MedPAC's June 2001 Report to the Congress: Medicare Payment Advisory Commission. Report to the Congress: Medicare payment policy. Washington (DC), MedPAC. June 2001.

the threshold is set at the hospital's DRG payment plus any IME and DSH payments plus \$33,560—the national fixed loss amount—adjusted to reflect input price levels in the hospital's local market. Medicare pays 80 percent of hospitals' costs above their fixed loss thresholds. Costs for individual cases are estimated by reducing the hospital's covered charges for the case by its overall Medicare cost-to-charge ratio from its most recent settled annual cost report. IME and DSH adjustments are not applied to outlier payments. Outlier payments are funded by offsetting reductions in the operating base payment amounts (5.1 percent) and the capital federal rate (5.3 percent).

Transfer policy Medicare reduces DRG payments when the patient is transferred to another PPS hospital, or in some instances to a post-acute care setting. When a patient is transferred to another PPS hospital, the transferring facility is paid a per diem amount for each day before the transfer occurs, up to a maximum of the full DRG payment.¹⁸ The hospital receiving a transferred patient is paid as if the case had not been transferred.¹⁹ Beginning in FY 1999, discharges in 10 DRGs are treated as transfers if patients are sent to a long-term care hospital or a rehabilitation, psychiatric, or skilled nursing facility, or they receive clinically related home health care. This policy is intended to strengthen the boundaries of the hospital inpatient service bundle by reducing providers' financial incentives to unbundle services normally furnished during the hospital inpatient stay. The 10 affected DRGs were selected by the Secretary of HHS based on their high volume and disproportionately high likelihood of post-acute care use. The Secretary was authorized to expand the set

of DRGs to which this policy applies beginning in FY 2001, but has not yet done so.

Payment updates Both the operating and capital payment rates are updated annually. The operating update is set by the Congress in law; the annual capital update is determined by the Secretary of HHS. In recommending annual updates, the Commission and CMS use frameworks that take into account projected changes in input prices, science and technology, productivity, and other factors expected to affect efficient hospitals' costs.

Recommended and statutory updates for the operating and capital payment rates are generally expressed relative to the projected increase in the hospital MB index, which measures changes in national average prices for inputs hospitals purchase to produce services. An update usually would be expressed then as being equal to MB or MB minus 0.5 percentage points, for example.

Payment for specialty psychiatric facilities

Medicare beneficiaries with mental illnesses or alcohol- and drug-related problems are frequently treated in specialty psychiatric facilities, either freestanding hospitals or specialized hospital-based units. These hospitals generally furnish short-term acute care. To be admitted to a specialty facility, patients generally must be considered a risk to themselves or others.²⁰ Payments to psychiatric facilities (almost \$3 billion in 2001) represent only a small part of total Medicare spending (about 1 percent), but the program accounts for about 30 percent of psychiatric facilities' annual revenues.

Psychiatric facilities are paid for furnishing care to Medicare beneficiaries under cost growth limits established in the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA); payments are based on their incurred average operating costs per discharge, subject to an annually adjusted facility-specific limit (see text box).

The Congress required CMS to develop and implement a per diem PPS to replace the earlier payment methods; CMS plans to implement the new system in 2003.

As is the case for stays in short-term acute care hospitals, beneficiaries treated in specialty psychiatric facilities are responsible for a deductible—\$840 in 2003—for the first admission during a spell of illness, and for a copayment—\$210 per day—for the 61st through 90th days. Beneficiaries treated for psychiatric conditions in specialty facilities also are covered for 90 days of care per illness episode, with a 60-day lifetime reserve.²¹ Over their lifetimes, however, beneficiaries are limited to 190 days of treatment in freestanding psychiatric hospitals.

Ambulatory care

Medicare beneficiaries receive ambulatory care services from a variety of practitioners in several settings. The most common ambulatory services are:

- physician services.
- outpatient hospital care.
- ambulatory surgical care.
- outpatient laboratory services.

These physicians and providers furnish a wide range of services, including some

18 The per diem rate is the hospital's DRG payment rate divided by the national average length of stay for the same DRG. Generally, hospitals receive twice the per diem rate for the first day and the per diem rate for each additional day up to the full DRG rate. Hospitals may also receive outlier payments calculated using a loss threshold prorated to reflect the length of stay.

19 If the patient is discharged to yet another PPS hospital, the transfer payment rules again apply.

20 Beneficiaries are also treated for psychiatric or alcohol- and drug-related conditions in regular beds in acute care hospitals; in these instances providers are paid under the acute care inpatient PPS.

21 Beneficiaries are liable for a higher copayment for each lifetime reserve day—\$420 per day in 2003.

Payment for facilities exempt from the prospective payment system for acute care hospitals

From Medicare's inception until 1983, all hospitals were paid based on their Medicare-allowable incurred costs. In the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), the Congress set facility-specific limits on hospitals' operating costs per discharge, with penalties and rewards based on whether their costs were above or below the facility-specific limit or target. In 1984, short-term general acute care hospitals moved to the inpatient prospective payment system (PPS), but the Congress excluded other classes of facilities because the types of cases they treated and the relationships between case characteristics and efficient providers' costs were not well understood.

Five classes of facilities were paid under TEFRA between 1983 and 2002—cancer hospitals, children's hospitals, long-term care hospitals, and rehabilitation and psychiatric facilities (hospitals and units). From 1983 to 1998, each provider was paid an operating amount for each discharge, equal to the lesser of its current operating costs or a facility-specific target amount. The facility-specific target amount (limit) for each provider was based on its operating costs per

discharge during its base year, updated for inflation using a TEFRA market basket index which measures changes in the prices of goods and services that specialty facilities must buy to produce inpatient care. These facilities were paid for capital costs based on their Medicare-allowable incurred expenses from 1983 to 1998. From 1998 to 2002, facilities were paid 85 percent of allowable capital costs.

Because facilities' operating targets were based on their own historical costs, TEFRA payments often varied substantially among facilities. In addition, new providers often entered the Medicare program with higher costs than older providers had, giving new providers higher targets and creating payment inequities. The Congress required the Centers for Medicare & Medicaid Services (CMS) to design PPSs for the three largest classes of facilities—rehabilitation facilities, long-term hospitals, and psychiatric facilities. Rehabilitation facilities began payment under a PPS in January 2002; long-term care hospitals began payment under a PPS in October 2002. Specialty psychiatric facilities will continue to be paid under TEFRA until a PPS for this group is implemented.

To reduce inequities in target amounts, the Balanced Budget Act of 1997 (BBA) established temporary national caps on facilities' target amounts from 1998 through 2002 for three provider groups: long-term care hospitals and rehabilitation and psychiatric facilities. (Cancer and children's hospitals continued to be paid under the old TEFRA method during this period.) In addition, the BBA temporarily reduced capial payments for all TEFRA facilities to 85 percent of their allowable capital costs. Beginning in 2003, these provisions expired and facilities returned to the old TEFRA payment method.

However, the BBA also established two permanent features in the TEFRA payment system. One is payment limitations for new specialty facilities excluded from the acute care hospital PPS on or after October 1, 1997. The other is revised incentive payments for facilities with costs below their targets and relief payments for facilities with costs above their targets.

Facilities' operating targets are updated according to a TEFRA market basket. The market basket index for FY 2003 is 3.5 percent. ■

common to more than one setting. For example, beneficiaries may receive identical services in physicians' offices and hospital outpatient departments. Outpatient laboratory services help physicians in offices and outpatient departments to diagnose, treat, and monitor patients' illnesses or conditions. Some ambulatory surgeries can be performed in physicians' offices, outpatient departments, or ambulatory surgical centers.

Payment for physician services

Physician services include office visits, surgical procedures, and a broad range of other diagnostic and therapeutic services. These services are furnished in all settings, including physicians' offices, hospitals, ambulatory surgical centers, skilled nursing facilities and other post-acute care settings, hospices, outpatient dialysis facilities, clinical laboratories, and beneficiaries' homes. Medicare payments

to physicians (about \$56 billion in 2001) account for about 20 percent of total spending.

The Medicare physician payment system was implemented in 1992. To make predetermined payments for physician services, Medicare uses a fee schedule with payment rates for more than 7,000 services. Many services have two payment rates: a higher rate for services provided in nonfacility settings, such as physicians' offices, and a lower rate for

those furnished in facilities, such as hospitals. Rates are lower for services furnished in facilities because physicians' practice costs are generally lower. Also, when a service is provided in a facility, Medicare pays both the facility and the physician.

Each service has a weight—called a relative value unit—that measures the relative costliness of three types of resources used to provide physician services: physician work, practice expenses, and expenses for professional liability insurance (PLI). Payment rates for services in each local market are determined by adjusting each relative weight to reflect the input-price level in that market, and then multiplying the total of the adjusted weights by a dollar amount called the fee schedule's conversion factor. Payment rates for physicians' services are adjusted further when they are:

- furnished by practitioners other than physicians.
- furnished in Health Professional Shortage Areas (HPSAs).
- provided by a physician who has not agreed to accept Medicare's payment rate as payment in full.
- atypical (for example, the service is assisting the primary surgeon rather than serving as the primary surgeon performing a surgical procedure).

Payments are updated every year according to a formula called the sustainable growth rate (SGR) system, which is intended to keep spending growth consistent with growth in the national economy.

The physician fee schedule was adopted more than 10 years ago, but efforts to improve it continue. For example, CMS is working with the physician community to refine the relative weights for practice expenses.

Defining the physician services that Medicare buys

Under the physician fee schedule, the unit of payment is the individual service, such as an office visit or a diagnostic procedure. These products, however, range from narrow services (an injection) to broader bundles of services associated with surgical procedures, which include the surgery and related preoperative and postoperative visits. All services—surgical and nonsurgical—are classified and reported to CMS according to the Healthcare Common Procedure Coding System (HCPCS), which contains codes for more than 7,000 distinct services.

Setting the payment rates

Under the fee schedule, payment rates are calculated by adding three relative weights and multiplying the sum by the conversion factor. The weights reflect the relative costliness of the inputs used to provide physician services: physician work, practice expenses, and PLI expenses. The relative weights for physician work are based on physicians' assessments of the relative levels of time, effort, skill, and stress associated with each service. The relative weights for practice expense are based on the expenses physicians incur when they rent office space, buy supplies and equipment, and hire nonphysician clinical and administrative staff. The PLI relative weights are based on the premiums physicians pay for professional liability insurance.

In calculating payment rates, each of the three relative weights is adjusted to reflect the price level for related inputs in the local market where the service is furnished. Three geographic practice cost indexes are used for this purpose. The fee schedule payment amount is then determined by summing the adjusted weights and multiplying the total by the fee schedule conversion factor.

Payments under the physician fee schedule also may be adjusted to reflect other factors. First, payments are decreased if services are furnished by certain nonphysician practitioners.

Services provided by physician assistants and nurse practitioners are paid at 85 percent of physicians' fees, and nurse midwives' services are paid at 65 percent.

Second, payments are adjusted according to so-called payment modifiers that appear on claims for payment to show whether the service provided was atypical. For example, physicians use a modifier to bill for a service when they serve as assistant surgeons. Payment for an assistant surgeon is 16 percent of the fee schedule amount for a surgical procedure. Other modifiers apply to multiple surgical procedures performed for the same patient on the same day, preoperative or postoperative management without surgical care, and bilateral surgery.

Third, under the Medicare incentive payment program, physicians receive bonus payments when they provide services in HPSAs. These payments are intended to attract more physicians to HPSAs. The bonus increases payments to these physicians by 10 percent (excluding beneficiary coinsurance).

Fourth, payments are adjusted downward when services are furnished by physicians who are not in Medicare's participating physician and supplier program. Payment rates for services provided by nonparticipating physicians are 95 percent of the fee schedule payment rate.

The fee schedule's relative weights are updated at least every five years; HCPCS codes and the conversion factor are updated annually. The update of relative weights includes a review of changes in medical practice, coding changes, new data, and the addition of new services. In completing its review, CMS receives advice from a group of physicians and other professionals sponsored by the American Medical Association and physician specialty societies.

The annual updates for the conversion factor are made according to the SGR system. If actual spending is less than the target, the update is greater than the change in input prices for physician services. If actual spending is greater than

the target, the update is less than the change in input prices.

Payment for outpatient hospital care

Medicare beneficiaries receive a wide range of services in hospital outpatient departments, from injections to surgical procedures requiring general anesthesia. Spending for these services is growing rapidly, largely because of changes in technology and medical practice that have fostered new services and encouraged shifts in care from inpatient to ambulatory care settings. Outpatient hospital care accounted for about 7 percent of total Medicare spending in 2001, or about \$16 billion.²²

Medicare originally paid hospitals for outpatient care based on their allowable incurred costs. The BBA almost completely eliminated such cost-based payment by requiring CMS to develop and adopt an outpatient PPS, which was implemented in August 2000.

In requiring the outpatient PPS, the Congress also reduced beneficiary copayments for outpatient hospital care. When the BBA was enacted, copayments accounted for about 50 percent of total Medicare payments to hospitals for outpatient care. Under the new payment system, beneficiaries' share of total payments will slowly decline. MedPAC has recommended that the Congress accelerate the reduction in these copayments.

Like the payment system for physician services, the new outpatient PPS is a fee schedule. It sets payment rates for individual services based on a set of relative weights, a conversion factor, and an adjustment for geographic differences in input prices. The PPS also includes an outlier adjustment for extraordinarily high-cost services and so-called pass-through payments for certain new technologies that are used as inputs in the delivery of services.

Because of uncertainty about the effects of the new system, certain types of hospitals are at least partially protected from financial losses. Cancer and children's hospitals are permanently held harmless from losses; small rural hospitals are held harmless through 2003. Other hospitals that experience losses are eligible for partially offsetting payment adjustments through 2003.

Defining the outpatient hospital products that Medicare buys

Medicare pays for outpatient services based on the individual service or procedure provided, as identified by an HCPCS code. CMS classified procedures, evaluation and management services, and drugs and devices furnished in outpatient departments into about 570 ambulatory payment classifications (APCs). These APCs group items and services that are clinically similar and use comparable amounts of resources. More than 300 of the APCs identify drugs or devices used in conjunction with a procedure. In addition, some new services are assigned to certain "new technology" APCs based only on similarity of resource use. CMS chose to establish new technology APCs because some services were too new to be represented in the data used to develop the outpatient PPS. Services remain in these APCs for two to three years while CMS collects the clinical and cost data necessary to refine and update the APC classification system. Additional services may be placed in the new technology APCs after review by CMS.

Within each APC, CMS bundles integral services and items with the primary service. For example, the bundle for a surgical procedure includes operating and recovery room services, most pharmaceuticals, anesthesia, and surgical and medical supplies. In deciding which services to bundle and which to pay separately, CMS considered comments from hospitals, hospital suppliers, and others. For example, in response to public comments, CMS separated corneal tissue

acquisition, maintenance, and distribution from services requiring corneal tissue. CMS also pays separately for blood, blood products, and plasma-based and recombinant therapies.

Unlike all other services included in the outpatient PPS—for which the unit of payment is the service or procedure provided—partial hospitalizations for psychiatric services are paid on a per diem basis. These intensive outpatient psychiatric services may be provided by a hospital outpatient department or by a community mental health center, and the per diem payment rate represents the expected facility costs for a day of care.

Setting the payment rates

Payment rates in the outpatient PPS are intended to cover hospitals' operating and capital costs for the facility services they furnish; professional services (physicians' services provided to individual patients, for example) are paid separately. Outpatient payment rates are determined by multiplying the relative weight for an APC by a conversion factor. Except for the new technology APCs, each APC has a relative weight that is based on the median cost of services in that APC. Services are assigned to a new technology APC based on their expected cost. New technology APCs range from \$0–\$50 to \$5,000–\$6,000, with an additional category at \$19,500–\$20,500; the relative weights are set at the midpoint of these ranges.

The conversion factor translates the relative weights into dollar payment amounts. The initial conversion factor was set so that projected total payments—including beneficiaries' copayments—would equal the estimated amount that would have been spent under the old payment methods, after correcting for some anomalies in statutory formulas.

To account for geographic differences in input prices, the labor portion of the conversion factor (60 percent) is adjusted by the hospital wage index.

²² Total spending on all hospital outpatient services (those covered by the outpatient PPS as well as those paid under separate fee schedules or based on costs) accounted for \$18.4 billion in 2001.

The outpatient PPS includes four additional payment adjustments: pass-through payments for new technology; outlier payments for high-cost services; hold-harmless payments for cancer, children's, and small rural hospitals; and transitional corridor payments that help to limit hospitals' financial losses under the PPS.

In addition to the new technology APCs, the pass-through payments are a second way that the outpatient PPS accounts for new technologies. Unlike the new technology APCs, however, pass-through payments are not payments for individual services. Instead, they are payments for certain new technology items—drugs, biologicals, and implantable devices—that are used in the delivery of services. By supplementing the payments for individual services, pass-through payments are meant to help ensure beneficiaries' access to new technologies that are not well represented in data that CMS uses to set the PPS payment rates. For drugs and biologicals, the payments are based on average wholesale prices. For devices, the payments are based on each hospital's costs (as determined by adjusting its charges using a cost-to-charge ratio). By law, total pass-through payments are limited to 2.5 percent of total payments under the outpatient PPS, and the conversion factor is reduced by 2.5 percent to finance them. If CMS projects that pass-through payments will exceed this limit during a year, the agency is required to reduce all pass-through payments in that year by a uniform percentage to meet the limit. However, CMS did not maintain budget neutrality from August 2000 to April 2002.

Outlier payments are made for individual services or procedures that have extraordinarily high costs, compared with the payment rates for their APC group. In 2003, outliers are defined as services with estimated costs that exceed a threshold equal to 2.75 times the PPS payment rate. Hospitals will be reimbursed for 45 percent of the difference between the threshold and the estimated cost of the service in 2002. Aggregate outlier

payments are limited to 2 percent of total payments; outlier payments are financed by reducing the conversion factor by 2 percent.

The BBRA mandated that cancer hospitals and outpatient departments of small rural hospitals (100 or fewer beds) be held harmless from financial losses under the PPS. This protection is permanent for cancer hospitals; small rural hospitals are protected until 2003. In addition, the BIPA extended permanent hold-harmless protection to children's hospitals. These hospitals will be paid according to the PPS payment rates, but if their PPS payments are lower than those they would have received under previous policies, they will receive extra payments to make up the difference.

To smooth the way to the outpatient PPS, the Congress mandated transitional corridor payments in the BBRA that will continue through 2003. The amount of these payments depends on the difference between a hospital's PPS payments and what it would have received under the previous payment policy. Corridor payments are intended to make up a high proportion of hospitals' small losses but a declining proportion of larger losses. For example, in 2000 and 2001, corridor payments made up 80 percent of losses that were less than 10 percent of what the hospital would have received under previous policy, but only 70 percent of losses in the 10 to 20 percent range. In 2002 and 2003, the transitional corridor payments make up declining proportions of hospitals' revenue losses under the PPS.

The APC groups and their relative weights are reviewed and revised annually. The review considers changes in medical practice, changes in technology, the addition of new services, new cost data, and other relevant information. CMS consults with a panel of outside experts as part of this review.

CMS also annually updates the conversion factor by the projected increase in hospital market basket index unless the Congress stipulates otherwise.

Payment for care provided by ambulatory surgical centers

Since 1982, Medicare has paid for the facility costs of surgical procedures provided in freestanding or hospital owned and operated ambulatory surgical centers (ASCs). ASCs are distinct facilities that furnish only ambulatory surgery; the most common procedures are cataract removal and lens replacement, other eye procedures, and colonoscopy. Payments to ASCs (about \$1.6 billion in 2001) account for less than 1 percent of total Medicare spending.

Medicare pays for surgery-related facility services provided in ASCs—such as operative nursing, recovery care, anesthetics, drugs, and other supplies—using a simple fee schedule. (Medicare pays for the related physician services—surgery and anesthesia—under the physician fee schedule.) The ASC fee schedule sets payment rates for only nine procedure groups. The payment rates are adjusted to reflect geographic differences in market input prices. Medicare must revise the payment rates at five-year intervals based on a survey of ASCs' costs and charges. Between revisions, the rates are to be updated annually using the consumer price index for all urban consumers (CPI-U).

Defining the care that Medicare buys from ambulatory surgical centers

The unit of payment in the ASC payment system is the individual surgical procedure. Each of the 2,300 procedures approved for payment in an ASC is classified into one of nine payment groups.

Approved procedures generally are limited to those that are provided in hospital inpatient settings and can also be performed safely in outpatient facilities. Procedures frequently performed in physicians' offices are specifically excluded from ASC coverage. ASC-approved procedures usually require less than 90 minutes of operating room time

and less than 4 hours of recovery room time.

Setting the payment rates

To set ASC payment rates, CMS must survey a sample of ASCs every five years to collect data on their costs and charges for individual procedures. After auditing the survey data, CMS adjusts ASCs' charges to reflect costs using cost-to-charge ratios. CMS sets the national payment rate for each of the nine payment groups equal to the estimated median cost of procedures in that group. To account for geographic differences in market input prices, CMS adjusts the labor portion of the rate using the hospital wage index for the ASC's location. The labor portion of the rate is currently 34.45 percent.²³ ASC payment rates also are adjusted when multiple surgical procedures are performed during the same operative session. In this case, the ASC receives full payment only for the procedure with the highest payment rate; payments for the other procedures are reduced to one-half of their usual rates.

Between revisions to the payment system, the ASC payment rates are to be updated annually based on the CPI-U. The BBA limited those updates to the CPI-U minus 2 percentage points (but not less than zero) from FY 1998 through FY 2002. CMS also is required by law to update every two years the list of procedures performed in ASCs that are eligible for Medicare payment.

Payment for outpatient laboratory services

Clinical laboratory tests help physicians diagnose, treat, and monitor patients' illnesses and conditions. Beneficiaries may receive tests during a hospital stay or a visit to a physician's office or outpatient department. Medicare pays hospitals for tests furnished during a hospital stay as part of the bundled inpatient payment. In contrast, Medicare pays the labs directly based on a fee schedule for tests

performed in an outpatient setting. Three main types of labs serve these ambulatory patients: hospital-based labs; independent labs, which usually serve a region; and physician office labs, which generally perform only relatively simple tests. Although Medicare payments account for about 30 percent of laboratories' revenues, laboratory payments account for about 2 percent of total Medicare spending.

Medicare uses a simple PPS (fee schedule) established in 1984. Payment rates were initially set separately for more than 1,100 tests in each carrier's geographic market, based on what local labs charged in 1983; since then, the rates have been updated periodically for inflation. PPS payment rates are also limited by national service-specific maximums that affect almost all lab claims.

Defining the laboratory products Medicare buys

Medicare sets payment rates for more than 1,100 HCPCS codes used in billing for laboratory services. Although in theory there is a separate code for each service, in practice a single HCPCS code may identify more than one testing method for a given substance or more than one substance analyzed by a single method. Panel tests, which are tests commonly ordered together, have their own HCPCS codes as well.

Setting the payment rates

The fee schedule payment rates represent the total payment to laboratories; beneficiary copayments are not required. CMS assigns payment amounts for all laboratory HCPCS codes in each carrier market based upon 1983 charges from the laboratories in that market. Medicare payments were set at the 60th percentile of prevailing charges for freestanding laboratories and the 62nd percentile for hospital-based laboratories in each area. In 1987, fees for outpatient services in hospital laboratories, other than those performed in sole community hospitals,

were reduced to the 60th percentile of prevailing charges. Fee schedule amounts differ from carrier to carrier in some instances, but no separate geographic adjustment is provided. Beginning in 1986, the Congress established upper limits on laboratory payment rates, called national limitation amounts (NLAs). NLAs are based on the median of all carrier rates for each test. The NLAs have been repeatedly reduced and currently are set at 74 percent of the median of all local fee schedule amounts for each procedure. Because so many of the carrier payment rates are constrained by the NLAs, most laboratory services are paid the same national rate.

When newly developed tests are used by laboratories, CMS either assigns payment rates based on their similarity to existing tests or requires carriers to independently set the rates for the first year of use. Carriers must research and set their own payment amounts. They may obtain cost data from manufacturers, receive payment data from other carriers, or perform their own analyses.

Post-acute care

Many beneficiaries receive post-acute care from one of four types of providers:

- skilled nursing facilities
- home health agencies
- inpatient rehabilitation facilities
- long-term care hospitals

Most patients use this care immediately following an acute hospital stay.

Payment for skilled nursing facility services

Beneficiaries who need short-term skilled care (nursing or rehabilitation services) on an inpatient basis following a hospital stay of at least three days are eligible to receive covered services in skilled nursing

23 The labor-related portion of the rate was determined by calculating the average percentage of facility costs attributable to labor expenses for the 90 facilities included in the 1986 cost survey. The 1994 cost survey—which has not been used to update payment rates—showed that 37.66 percent of facility costs were related to labor expenses.

facilities (SNFs). SNFs can be hospital-based units or freestanding facilities. About 1.4 million beneficiaries use SNF care in a year, but Medicare's payments for these services account for only about 10 percent of freestanding nursing facilities' revenues; they make up less than 2 percent of hospitals' revenues. Similarly, payments to SNFs (\$15.3 billion in 2001) represent only about 6.5 percent of total Medicare spending.

Medicare adopted a new PPS for SNF services on July 1, 1998. Throughout most of the 1980s and 1990s, however, SNFs were paid on the basis of their costs, subject to limits on their per diem routine costs (room, board, and routine nursing care); no limits were applied for ancillary services (such as drugs and therapy). Under the PPS, SNFs are paid a predetermined rate for each day of care. The per diem rates are based primarily on the patient's service needs and market conditions in the facility's location. Patients are assigned to 44 groups, each containing patients with similar service needs who are expected to require similar amounts of resources. The daily rate for each group is the sum of three components:

- a fixed amount for routine services (such as room and board, linens, and administrative services),
- a variable amount reflecting the intensity of nursing care patients are expected to require, and
- a variable amount for the expected intensity of therapy services.

The rates are computed separately for urban and rural areas, and a portion of the total rate is adjusted to reflect market conditions in each SNF's location.

The SNF PPS has problems characterizing and classifying patient days, thereby raising questions about its ability to generate payments that accurately reflect efficient providers' costs of furnishing care. Partly in response to this problem,

the Congress temporarily increased payments to SNFs. Two of the three payment increases expired at the end of FY 2002.

The skilled nursing facility product Medicare buys

Medicare sets daily payment rates for 44 resource utilization groups, version III (RUG-III), which are intended to group patients with similar expected service needs. Patients' expected service needs are determined by periodic assessments of their condition, including their needs for intensive physical, occupational, or speech therapy; special treatments (such as tube feeding); and their functional status (their ability to manage unassisted ordinary daily activities, such as eating, bathing, and dressing).

Setting the payment rates

The PPS rates are expected to cover all operating and capital costs that efficient facilities would be expected to incur in furnishing covered SNF services. Each of the 44 RUG-III groups has a daily rate comprising a fixed routine amount plus a nursing component and a therapy component. The nursing component is calculated by multiplying a base rate for nursing by a national relative weight that reflects the intensity of nursing care that patients in each RUG-III category are expected to receive. For groups that require intensive therapy, the therapy component is calculated by multiplying a base rate for therapy by a national relative weight that reflects the expected intensity of therapy; a fixed rate is used for groups receiving routine therapy. Rates are set separately for urban and rural SNFs.

The rates are adjusted to account for differences in input prices among local markets. The labor-related portion of the daily payment rate—75 percent for FY 2002—is multiplied by the hospital wage index in the SNF's location, and the result is added to the nonlabor portion. Rates are updated annually, based on the projected increase in the SNF market basket index,

a measure of the national average price level for the goods and services SNFs purchase to provide care.

The initial payment rates in 1998 were set to reflect the projected amount that SNFs received in 1995, updated for inflation.²⁴ The Congress subsequently increased the payment rates temporarily in several ways:

- The BBRA increased rates for all 44 RUG-III groups by 4 percent for care furnished from April 2000 through September 2002.
- The BIPA increased the base rate for the nursing component by 16.66 percent for care furnished from April 2001 through September 2002.
- The BBRA and BIPA increased rates for 14 rehabilitation groups by 6.7 percent and those for 12 complex care groups by 20 percent. These increases were intended to give CMS time to refine the RUG-III classification system, and they expire when CMS adopts that refinement.

Payment for home health care services

Beneficiaries who are generally confined to their homes and need skilled care (from a nurse, physical therapist, or speech therapist) on a part-time or intermittent basis are eligible to receive certain medical services at home. Covered services, delivered by home health agencies (HHAs) in visits to beneficiaries' homes, include:

- skilled nursing care
- physical, occupational, and speech therapy
- medical social work
- home health aide services

Beneficiaries are not required to make any copayments for these services.

²⁴ By law, this projection excluded costs of SNFs that were exempt from Medicare's routine cost limits or that had so-called atypical exceptions in 1995. The projection included only 50 percent of the difference between the average costs of hospital-based and freestanding facilities.

About 2.2 million beneficiaries used home health care in 2001. Medicare's payments to HHAs were about \$9 to \$10 billion²⁵ in 2000, accounting for around 6 percent of total Medicare spending but a large share of HHAs' total revenues.

Until October 2000, HHAs generally were paid on the basis of their incurred average costs per visit, subject to annually adjusted limits. In October 2000, CMS adopted a new PPS in which HHAs are paid a predetermined rate for each 60-day episode of home health care. The payment rates are based on patients' conditions and service use, and they are adjusted to reflect the level of market input prices in the geographical area where services are delivered. If fewer than 5 visits are delivered during a 60-day episode, the HHA is paid per visit by visit type, rather than by the episode payment method. Adjustments for several other special circumstances, such as high-cost outliers, can also modify the payment. Payment rates also are increased for patients in rural areas.

Setting rates for Medicare home health services has always been complicated by the lack of a clear definition of the benefit. The benefit was originally intended for short-term, posthospital recovery care for beneficiaries who could not leave their homes, but changes to eligibility criteria have expanded the benefit. Beneficiaries who have no preceding hospital stay and are capable of spending significant time outside their homes are now eligible to receive covered services furnished in an unlimited number of home care episodes.

The home health products Medicare buys

Medicare purchases home health services in 60-day episodes. For each episode of care, the payment amount is intended to cover what an efficient provider would have to spend in furnishing visits, supplies, outpatient therapy, and patient assessments. The severity of a patient's condition changes the expected amount of resources—chiefly the number and type of visits—required for high-quality care. To

capture differences in expected resource use, patients receiving 5 or more visits are assigned to 1 of 80 home health resource groups (HHRGs) based on diagnosis, functional capacity, and service use.

Setting the payment rates

The HHRGs range from groups of relatively uncomplicated patients to those containing patients who have severe medical conditions, severe functional limitations, and a need for extensive therapy. Each HHRG has a national relative weight reflecting the average relative costliness of patients in that group compared with the average Medicare home health patient. The payment rates for HHRGs in each local market are determined by adjusting a national average base amount—the amount that would be paid for a typical home health patient residing in an average market—to reflect the input-price level in the local market and then multiplying the adjusted local amount by the relative weight for each HHRG.

The initial national average base payment amount for a typical home health episode in 2001 was set so that projected spending would equal the amount that would have been spent under the previous payment system. This amount was reduced beginning in 2003 to account for certain previously deferred payment reductions. Further, because providers receive payments on a per-visit basis for patients who are furnished fewer than 5 visits in 60 days, the base amount was adjusted to reflect this policy. It was also reduced 5 percent to account for anticipated high-cost outlier payments. For FY 2003, the national average payment rates for HHRGs range from \$1,000 to \$6,000.

To capture local market conditions, the per-episode payment rate is divided into labor and nonlabor portions; the labor portion—77 percent—is adjusted by a version of the hospital wage index to account for geographic differences in the market prices for labor-related inputs to home health services. For most services

provided in facilities, the location of the facility determines the local area adjustment that applies. For home health services, however, the local area adjustment is determined by the beneficiary's residence. The total payment is the sum of the adjusted labor portion and the nonlabor portion.

Payment rates are temporarily increased by 10 percent for care delivered to beneficiaries who live in rural areas. This is intended to compensate for potentially higher visit costs in rural areas related to low patient volume and long distances between patients.

When a patient's episode of care involves an unusually large number or a costly mix of visits, the HHA may be eligible for an outlier payment. To be eligible, imputed episode costs must exceed the payment rate by 13 percent or more. Episode costs are imputed by multiplying the estimated national average per visit costs by type of visit—adjusted to reflect local input prices—by the number of visits by type during the episode. When these estimated costs exceed the outlier threshold, the HHA receives a payment equal to 80 percent of the difference in addition to the episode payment.

The base rate is updated annually. The update is based on the projected change in the home health market basket index, which measures changes in the prices of goods and services home health agencies must buy to produce care.

Payment for inpatient services in rehabilitation facilities

After an illness, injury, or surgical care, some patients need intensive inpatient rehabilitation services, such as physical, occupational, or speech therapy. Relatively few beneficiaries use intensive rehabilitation therapy because they must be able to tolerate and benefit from three hours of therapy per day to be eligible for treatment in an inpatient rehabilitation setting. Among those who qualify, many are admitted to inpatient rehabilitation

25 Estimates vary.

facilities (IRFs), which may be freestanding hospitals or specialized, hospital-based units. Others may receive care in a SNF, especially in markets that lack IRFs or have few rehabilitation beds. Although payments to IRFs (about \$4.2 billion in 2001) represent only a small part of total Medicare spending (about 1 percent), Medicare accounts for a large share of IRF revenues.

Until January 1, 2002, Medicare paid IRFs (under TEFRA) on the basis of their incurred average costs per discharge, subject to annually adjusted facility-specific limits. Beginning in January 2002, IRFs are paid predetermined per-discharge rates based primarily on the patient's condition (diagnoses, functional and cognitive statuses, and age) and market conditions in the facility's location. Discharges are assigned to case-mix categories containing patients with similar clinical problems that are expected to require similar amounts of resources. Each case-mix category has a national relative weight reflecting the expected relative costliness of treatment for a patient in that category compared with that for the average Medicare inpatient rehabilitation patient. The payment rates for case-mix categories in each local market are determined by adjusting a national average base payment amount to reflect the input-price level in the local market, and then multiplying the adjusted local amount by the relative weight for each case-mix group. Payment rates also are increased for facilities located in rural areas and those that treat a disproportionate share of low-income patients.

Defining the inpatient rehabilitation products Medicare buys

Under the inpatient rehabilitation PPS, Medicare sets payment rates for 385 intensive rehabilitation products—called case-mix groups (CMGs)—defined by types of treatment episodes. Patients are assigned to 380 of these treatment categories based on the primary reason for intensive rehabilitation care (for example, a stroke or burn); their age and levels of functional and cognitive impairments; and

the types of comorbidities present during the stay. The other five categories are for patients discharged before the fourth day—short-stay outliers—and for those few who die in a facility. Further, IRFs may receive only partial payment for other patients who do not receive a full course of intensive therapy because they are discharged to another facility and the length of stay is less than that typically provided to patients with the same condition.

Setting the payment rates

The PPS payment rates are intended to cover all operating and capital costs that efficient facilities would be expected to incur in furnishing covered rehabilitation services. The initial payment level (base rate) for a typical discharge—\$12,193 for FY 2003—is intended to reflect the projected amount providers would have been expected to receive per discharge under the previous payment system (TEFRA) in 2003. Because providers will receive additional payments under the PPS for extraordinarily costly patients (high-cost outliers), the projected amount is reduced (3 percent) to maintain the same expected total spending. Further, reflecting its experience with similar financial incentives under other discharge-based PPSs, CMS decreased the base rate (by 1.16 percent) in the expectation that providers would lower their costs by reducing lengths of stay compared with those under TEFRA.

The base rate is adjusted to account for differences in input prices among markets. The labor-related portion of the base payment amount—72 percent—is multiplied by a version of the hospital wage index, and the result is added to the nonlabor portion. The adjusted rate for each market is multiplied by the relative weights for all CMGs to create local PPS payment rates. Payment rates are increased for IRFs located in rural markets and for those that treat low-income patients. Rural facilities' payment rates are increased by 19 percent to compensate for their tendencies to have fewer cases, longer lengths of stay, and higher average costs per case. An IRF also is eligible to

receive higher payment rates if it serves at least one low-income patient. The payment adjustment for each facility is based on its low-income patient share, which is the sum of two proportions: the proportion of total inpatient days furnished to beneficiaries eligible for Supplemental Security Income benefits and the proportion of total patient days furnished to Medicaid patients. After adjustments for local market conditions, rural location, and type of treatment category, the CMG payment rates range from \$3,819 to \$58,590.

Finally, IRFs receive additional payments for high-cost outliers when their costs exceed a fixed-loss threshold. An IRF has a threshold for each CMG equal to its regular payment rate plus a national fixed-loss amount (\$11,211) adjusted by the wage index for the IRF's market. For high-cost outliers, IRFs receive their regular payment rates plus 80 percent of their costs above the fixed-loss threshold.

Both the base rate and relative weights are updated annually. The base rate is updated using the TEFRA market basket index (used for facilities originally excluded from the acute care hospital PPS) expanded to reflect changes in the price of capital. The relative weights are updated based on changes in national average charges per discharge for each CMG.

Payment for services furnished in long-term care hospitals

Patients with clinically complex problems, such as multiple acute or chronic conditions, may need hospital care for relatively extended periods of time. Some are admitted to long-term care hospitals (LTCHs). Other patients—especially in the many markets without these hospitals—may be cared for in acute care hospitals or SNFs. Payments to LTCHs (about \$2 billion in 2001) represent only a small part of total Medicare spending (less than 1 percent); however, Medicare accounts for a substantial proportion of these hospitals' revenues.

Beginning in October 2002, LTCHs are paid predetermined per-discharge rates

based primarily on the patient's diagnosis and market conditions in the facility's location.²⁶ Before then, LTCHs were paid for furnishing care to Medicare beneficiaries under TEFRA.

Discharges are assigned to case-mix categories containing patients with similar clinical problems that are expected to require similar amounts of resources. Each case-mix category has a national relative weight reflecting the expected relative costliness of treatment for a patient in that category compared with that for the average Medicare LTCH patient. The payment rates for case-mix categories in each local market are determined by adjusting a national average base payment amount to reflect the input-price level in the local market, and then multiplying the adjusted local amount by the relative weight for each case-mix group. Payment rates also are increased for hospitals located in Alaska and Hawaii and for cases that are extraordinarily costly. Payment rates are adjusted for patients who have very short stays and for those who are transferred to an acute care hospital, an inpatient rehabilitation facility, or a skilled nursing facility for a specified amount of time, followed by readmission to the same LTCH.

Defining the long-term care hospital products Medicare buys

Under the PPS for care in LTCHs, Medicare sets payment rates for 499 types of treatment episodes. These episodes are called long-term care diagnosis related groups (LTC-DRGs). The grouping system for episodes is the same one used for the acute care hospital PPS. Patients are assigned to these treatment categories based on the discharge diagnosis, including the principal diagnosis; up to eight secondary diagnoses; up to six procedures performed; age; sex; and

discharge status. LTCHs may receive partial payments for patients who do not receive a full course of treatment.

Setting the payment rates

The PPS payment rates are intended to cover all operating and capital costs that efficient LTCHs would be expected to incur in furnishing covered acute long-term care services. The initial payment level (base rate) for a typical discharge—\$34,956 for FY 2003—is intended to reflect the projected amount providers would have been expected to receive per discharge under the previous payment system in FY 2003. Because providers will receive additional payments under the PPS for extraordinarily costly patients (high-cost outliers), the projected amount is reduced (8 percent) to maintain the same expected total spending. Further, reflecting its experience with similar financial incentives under other discharge-based PPSs, CMS decreased the base rate (by 0.34 percent) in the expectation that providers would lower their costs by reducing lengths of stay compared with those under the old payment system.

The base rate is adjusted to account for differences in input prices among markets. This adjustment is being phased in over five years. The labor-related portion of the base payment amount—73 percent—is multiplied by a version of the hospital wage index and the result is added to the nonlabor portion.²⁷ For LTCHs in Alaska and Hawaii, the nonlabor portion is adjusted by a COLA and added to the labor-related portion.²⁸ The adjusted rate for each market is multiplied by the relative weights for all LTC-DRGs to create local PPS payment rates.

Relative weights for the LTC-DRGs differ from the acute care hospital DRG weights. Medicare assigns a weight to each LTC-DRG reflecting the average

relative costliness of cases in the group compared with that for the average Medicare case. LTC-DRGs with fewer than 25 cases in 2001 have been grouped into 5 categories based on their average charges; relative weights for these 5 case-mix groups have been determined based on the average charges for the LTC-DRGs in each of these 5 groups.

LTCHs are paid adjusted PPS rates for patients who do not receive a full course of treatment. Short-stay outliers are defined as cases with a length of stay up to and including five-sixths of the geometric average length of stay for the LTC-DRG. For short-stay outliers, LTCHs are paid the least of:

- 120 percent of the cost of the case,
- 120 percent of the LTC-DRG specific per diem amount multiplied by the length of stay for that case, or
- the full LTC-DRG payment.

LTCHs are paid adjusted PPS rates for patients who are extraordinarily costly. High-cost outlier cases are identified by comparing their costs to a LTC-DRG-specific threshold that reflects the DRG payment for the case plus a fixed loss amount. For example, in 2003 the threshold is set at the LTC-DRG payment plus \$24,450—the national fixed loss amount—adjusted to reflect the input price levels in the local market. Medicare pays 80 percent of the LTCHs' costs above their fixed loss thresholds. High-cost outlier payments are funded by offsetting reductions in the base payment amount (8 percent).

LTCHs receive one payment for patients who are transferred from the LTCH to another facility for a specified period of time and return to the LTCH—so-called “interrupted stays.” Interrupted stays are defined as those cases in which an LTCH

26 LTCHs began receiving payments under the new PPS at the beginning of their FY 2003 cost reporting periods. During a five-year transition period, they are paid a blend of the PPS rate and their updated facility-specific rate. For example, in the first year of PPS, payments will be made up of 20 percent PPS rates and 80 percent facility-specific rates; in the second year, payments will be made up of 40 percent PPS rates and 60 percent facility-specific rates.

27 The wage index used to adjust LTCH payments is calculated from wage data reported by acute care hospitals without the effects of geographic reclassification.

28 The COLA reflects the higher costs of supplies and other nonlabor resources in Alaska and Hawaii; it increases the nonlabor portion of the payment by as much as 25 percent.

patient is discharged to an inpatient acute care hospital, an IRF, or a SNF for a specified period followed by readmission to the same LTCH. The specified period of time for an interrupted stay is 9 days when the patient is discharged to an acute care hospital, 27 days for discharge to an IRF, and 45 days for discharge to a SNF. PPS payment is based on the LTC-DRG assigned to the case at discharge to the other facility.

Finally, Medicare has established policies to discourage transfers between LTCHs and other providers, followed by readmissions to the LTCH, when the LTCH and any of the other providers are located in the same facility or on the same campus (colocated). Medicare's concern about such transfers is that they may occur as a result of financial instead of clinical considerations. Within a cost reporting period, Medicare treats transfers to colocated acute care hospitals followed by readmissions to the same LTCHs above a threshold of 5 percent of all cases as if they were one LTCH discharge for payment purposes. Until the threshold is exceeded, Medicare treats each case as a discharge. A separate 5 percent threshold applies to cases transferred to colocated SNFs, IRFs, and psychiatric facilities.

Services for special populations

Many Medicare beneficiaries have special needs resulting from end-stage renal disease (ESRD) or a terminal illness. These beneficiaries may receive services in two specialized settings:

- outpatient dialysis facilities
- hospices

Payment for outpatient dialysis services

Individuals with ESRD—irreversible loss of kidney function—require either dialysis or kidney transplantation to survive. In 1972, the Social Security Act extended all Medicare Part A and Part B benefits to individuals with ESRD who are entitled to

receive Social Security benefits. This entitlement is nearly universal, covering 93 percent of all people with ESRD in the United States. Total Medicare spending for these beneficiaries has outstripped expectations—reaching about \$15 billion in 2001—primarily because of unanticipated growth in the ESRD population. The 350,000 enrolled ESRD beneficiaries in 2001 accounted for 0.8 percent of total Medicare enrollment, compared with only 0.1 percent of enrollment in 1974. This enrollment growth reflects population aging and improvements in clinical knowledge and technique that have enabled successful treatment of older patients and those with coexisting illnesses who might not have been treated 30 years ago.

Because of the scarcity of kidneys available for transplantation, most people with ESRD receive dialysis treatments three times per week in either freestanding or hospital-based facilities. Medicare spending for outpatient dialysis and injectable drugs administered during dialysis (about \$6.7 billion in 2001) accounts for 2 percent of total program expenditures but is a predominant share of revenues for dialysis facilities. Medicare pays dialysis facilities a predetermined amount for each dialysis treatment they furnish, using a payment system first implemented in 1983. The prospective payment—called the composite rate—is intended to cover the bundle of services, tests, drugs, and supplies routinely required for dialysis treatment and is adjusted only to account for differences in local input prices.

Even though technological advances have changed the provision of dialysis care since the composite rate was established, CMS has not modified the unit of payment. Although CMS has occasionally changed the dialysis bundle, it has not used explicit criteria to determine which services should be included. Consequently, the composite rate currently excludes several new injectable drugs and clinical laboratory tests that have diffused widely into medical practice over the past decade; providers are paid

for these services based on their incurred costs. The BIPA required the Secretary of HHS to:

- include in the composite rate by July 2002 diagnostic laboratory tests and drugs that were routinely used in furnishing dialysis care but that were being billed separately.
- recommend to the Congress in a study whether the composite rate should be updated annually or periodically.

A draft of this study is currently being reviewed within CMS.

Defining the dialysis products Medicare buys

Medicare covers two methods of dialysis—hemodialysis and peritoneal dialysis. In hemodialysis, a patient's blood is cycled through a dialysis machine, which filters out body waste. About 90 percent of all dialysis patients undergo hemodialysis three times per week in dialysis facilities. Peritoneal dialysis uses the membrane lining the peritoneal cavity to filter excess waste products, which are then drained from the abdomen. Patients undergo peritoneal dialysis five to seven times per week in their homes.

The unit of payment is the dialysis treatment. The composite rate payment system differs from Medicare's other prospective payment systems because it uses only one product category to define the service bundle Medicare is buying. Although different equipment, supplies, and labor are needed for hemodialysis and peritoneal dialysis, the current system does not differentiate payment based on dialysis method.

Providers may separately bill Medicare for certain injectable medications, including erythropoietin and vitamin D analogues, and laboratory tests that are not included in the composite rate bundle. The Congress has set the payment for erythropoietin at \$10 per 1,000 units whether it is administered intravenously or subcutaneously in dialysis facilities or in patients' homes. Providers receive 95

percent of the average wholesale price for separately billable injectable medications other than erythropoietin administered during in-center treatments. Finally, providers furnishing laboratory services outside the composite rate bundle are paid according to the laboratory fee schedule.

Setting the payment rates

The composite rate is intended to cover all operating and capital costs that efficient providers would incur in furnishing dialysis treatment episodes in dialysis facilities or in patients' homes. The base payment rate is \$131 for hospital-based facilities and \$127 for freestanding facilities in 2002. Medicare caps its payments to facilities at an amount equal to three dialysis sessions per week, although dialysis may be given more frequently.

The labor-related portion of the composite rate—40 percent in 2002—is adjusted for local market differences in input prices using a wage index created in 1987. This wage index blends 60 percent of a wage index based on 1980 Bureau of Labor Statistics hospital wage data with 40 percent of the fiscal year 1986 PPS hospital wage index. Both component wage indexes use labor markets based on 1980 definitions for MSAs and statewide rural areas. The blended wage index is limited by a floor and a ceiling; areas that have blended index values lower than 90 percent of the national average are raised to the 90 percent level (the wage index “floor”), while those with blended index values higher than 130 percent of the national average are lowered to the 130 percent level (the “ceiling”). Thus, the minimum payment is \$121 and the maximum is \$144 per dialysis treatment in 2002.

A dialysis facility may apply for an exception to its composite rate when dialysis costs exceed the base payment rate. The four circumstances that may justify a payment exception are: (1) serving an atypical patient mix, (2) furnishing services to patients who are using fewer than three dialysis sessions per week, (3) serving an isolated area in

which the facility is essential to ensure beneficiaries' access to care, or (4) extraordinary circumstances, such as furnishing dialysis in an area affected by natural disaster.

Dialysis facilities are reimbursed for bad debt that results when, after a good faith effort, they are unable to collect beneficiaries' 20 percent coinsurance amounts for dialysis services.

Payment for hospice services

Terminally ill beneficiaries (certified to have a projected life expectancy of six months or less) may elect to receive hospice care, which aims to help these patients continue to live as normally as possible and remain in their homes. Therefore, the hospice benefit covers a wide array of services, including:

- physician services.
- skilled nursing services.
- counseling (dietary, spiritual, bereavement, and other counseling services).
- medical social services.
- drugs and biologicals for pain control and symptom management.
- physical, occupational, and speech therapy.
- home health aide and homemaker services.
- inpatient respite care.

To be eligible for hospice services, beneficiaries must give up other covered services related to curative treatment of the terminal condition, although Medicare still pays for unrelated care. Twenty percent of Medicare beneficiaries who died in 1998 used hospice care. Payments to hospices (almost \$3.4 billion in 2001) represent a small part of total Medicare spending (about 1 percent), although Medicare makes up a large share of hospice revenues.

Medicare pays hospices for each day a beneficiary is eligible and under hospice care, regardless of the amount of services furnished on any given day. Per diem payment rates are based on a fee schedule with separate rates for four broad categories of care. The rate for each day is adjusted to reflect local market conditions.

Defining the hospice products Medicare buys and setting payment rates

For hospice services, Medicare sets predetermined daily payment rates according to a fee schedule for four broad categories of care: routine home care, continuous home care, inpatient respite care, or general inpatient care. Patients are assigned to these categories based on the type of care they actually receive each day.

The daily payment rates represent payment in full for all costs that hospices incur in furnishing services identified in patients' care plans. The initial payment level (base rate) per category is adjusted to account for differences in wage rates among markets. The labor-related portion of the base payment amount—69 percent for routine and continuous home care, and 54 percent and 64 percent for inpatient respite care and general inpatient care, respectively—is adjusted by the hospice wage index for the location in which care is furnished, and the result is added to the nonlabor portion. The base rates are updated annually by the projected increase in the acute care hospital MB index.

A hospice's annual aggregate payments are limited by a capped amount (\$17,391 for FY 2003) multiplied by the number of beneficiaries newly enrolled during the year. The capped amount is updated annually by the consumer price index for all urban consumers, U.S. city average (CPI-U).

Other services

Medicare also pays for other services and products used by beneficiaries in the traditional fee-for-service program, including:

- ambulance services.
- durable medical equipment.

Payment for ambulance services

Medicare pays for both emergency and nonemergency ambulance services, including ground, water, and air services when the use of other means of transportation to health care services would be harmful to beneficiaries' health. Ambulance staff provide a range of services to stabilize and treat patients in transit.

Ambulance providers are either facility based (hospital, skilled nursing facility, or home health agency) or freestanding suppliers, a distinction integral to past and current payment. Until April 1, 2002, Medicare based payments for ambulance services on providers' reported costs (facility-based providers) and charges (freestanding providers). Providers were paid a base rate, which covered the costs of services and supplies, and a mileage payment. This approach provided few incentives for cost containment and often resulted in payment and coverage disparities among similar providers. These issues, together with increased expenditures, led the Congress to mandate in the BBA that CMS implement a prospective fee schedule.

Several issues delayed fee schedule adoption, including how to adjust for higher costs incurred by low-volume providers, how to ensure that aggregate payments to ambulances were not reduced, and whether to require additional coding to document the medical necessity of services. After a fairly extensive rule-making period, including the formation and guidance of an advisory committee for CMS, the final rule was issued in February 2002 for implementation effective April 1, 2002.

Defining the ambulance product Medicare buys

Under the new prospective fee schedule, 14 HCPCS codes are used to distinguish the level of services provided, supplies

and equipment used, and mileage. Ambulance suppliers may also bill two CPT codes for electrocardiograms. Ambulance-administered drugs are considered supplies and are not reimbursed separately. Payments are reduced when a beneficiary dies before the ambulance arrives at the scene.

CMS adopted nine transport service levels from the National Emergency Medical Services Training Blueprint as revised by the Department of Transportation. When different from the Blueprint, state and local laws preempt the Blueprint for vehicle staffing and clinical certification requirements. CMS assigned relative value units for seven of the service levels (ground only) through negotiated rule-making with the advisory committee.

Setting the payment rates

The new fee schedule establishes payment amounts that, for ground or water services, are the product of a nationally uniform relative value for the service, a geographic area adjustment factor, and a nationally uniform conversion factor. The conversion factor is based on four estimates for 2002 through 2006: spending levels (both program and beneficiary), inflation, the mix of service levels performed, and the increase in Medicare enrollment. If these behavioral and other assumptions prove different, CMS will adjust the conversion factor prospectively, in order to keep the total amount of payments in the system equal to the level prior to fee schedule implementation. For air services, the base payment is the product of an unadjusted nationally uniform value for the service and a geographic adjustment; there is no conversion factor or relative value unit.

The geographic adjustment accounts for varying costs of conducting business in different regions of the country, and is equal to the geographic practice expense index for the Medicare physician fee schedule. The geographic areas are those used for the physician fee schedule, selected by location of the patient when put on the ambulance. The geographic index applies to 70 percent of the base rate

for ground services and 50 percent of the base rate for air services; it does not apply to the mileage payment rate.

A separately calculated payment is made for mileage to account for costs attributable to use of the ambulance vehicle. To reflect cost differences, mileage rates vary between ground and air transport and also distinguish between fixed wing and rotary wing (helicopter) transport. For rural ground trips, CMS provides a 50 percent add-on to the mileage rate for the first 17 miles and a 25 percent add-on for miles 18 through 50, as established in BIPA. Rural air trips receive a 50 percent add-on to the base rate and to all of the miles from the time a patient is placed on board.

The ambulance fee schedule will be phased in through a five-year transition period of blended payments. For April through December 2002, providers were paid 80 percent by the former method and 20 percent according to the new fee schedule. For 2003, the percentage has changed to 60 percent by the former method and 40 percent according to the new fee schedule. By 2006 payments will be 100 percent according to the new fee schedule.

The conversion factor, the air ambulance base rates, and the mileage rates will be updated annually based on the rise in CPI-U. However, during the rule-making process, BIPA mandated an update of 4.7 percent for services furnished between July 1, 2001, and December 31, 2001, 2 percentage points higher than the CPI-U.

The fee schedule applies to all entities providing services and they must accept the fee schedule amount as payment in full. Critical access hospitals that have no other ambulance service provider or supplier within a 35-mile driving distance are the sole exception; they receive cost-based reimbursement.

Payment for durable medical equipment

When medical equipment is needed to treat a beneficiary's illness or injury at

home, it is covered under the durable medical equipment (DME) benefit. Medicare spent about \$7 billion on DME in 2001, about 3 percent of fee-for-service program spending.

Wheelchairs and respirators are typical of the equipment Medicare pays for under this benefit. To be covered, the equipment must:

- withstand repeated use.
- serve a primarily medical purpose.
- generally not be useful to a person without an illness or injury.

Thus, disposable supplies such as bandages or incontinence pads, or otherwise useful equipment such as a humidifier, would not be covered under this benefit.

Medicare also covers prosthetics, orthotics, and some medications under its DME benefit. Covered prosthetics generally are artificial limbs; orthotics include orthopedic braces and some supportive garments. Medication that is necessary to the function performed by durable equipment is also covered under this benefit—for example, heparin administered in a home dialysis system, albuterol in a nebulizer, or chemotherapy drugs in an infusion pump.

Medicare has paid DME suppliers using a fee schedule since 1986. Under the fee schedule, covered items are classified into product groups within six major classes. The payment amount for each product group is a weighted average of local and regional prices, updated annually by the CPI-U. Suppliers are generally paid either a monthly rate for rentals or a lump sum for purchased items. Medicare also covers the cost of repairs, maintenance, delivery, and supplies necessary to use purchased equipment. Beneficiaries are responsible for a 20 percent copayment.

The durable medical equipment Medicare buys

DME payments include a monthly rental fee or a lump-sum purchase fee. Under the

DME fee schedule, Medicare sets prices for equipment by category and product group. Equipment is assigned to one of six categories based on its nature—whether or not it is inexpensive, needs frequent service, or is a rental item subject to an explicitly limited period of use. The six DME categories are:

- inexpensive or routinely purchased equipment.
- items requiring frequent and substantial servicing.
- customized items.
- prosthetic and orthotic devices.
- capped rental items.
- oxygen and oxygen equipment.

Within the 6 categories, equipment is further categorized into about 2,000 product groups. Examples of product groups are high-strength, lightweight wheelchairs and rental portable oxygen systems. All items within the same product group have the same payment rate.

The central issue in DME payment policy is the frequent failure of Medicare's payments to reflect current market prices. It is difficult for CMS to price DME in a way that is consistent with the market because the product definitions are too broad. Each product code has only one payment rate, but one product code can be used for many different items with varying prices in the retail market. Also, changing Medicare's payment rates in any way other than simple updating has been cumbersome.

The BBA gave Medicare the authority to apply a so-called test of inherent reasonability to some items that have well-developed retail markets; this allows CMS some price-setting flexibility. CMS has also conducted a competitive bidding demonstration to test the effects of competition on prices for certain DME items. In three phases of the demonstration, competitive bidding

lowered prices for selected DME items 17 percent, 21 percent, and 22 percent.

Setting the payment rates

To ensure beneficiaries' access to needed DME, the fee schedule must cover efficient suppliers' costs of furnishing equipment for rental or purchase. Generally, the current fees are an average of the allowed charges from 1986 and 1987, adjusted by the CPI-U to account for inflation.

Over time, the inflation-adjusted prices have failed to reflect changes in medical equipment technology and other factors that have caused market retail prices to diverge from Medicare's payment rates. Recent legislation established two alternatives to the inflation adjustment. One is that Medicare can adjust prices by as much as 15 percent in one year for DME that is frequently purchased by other payers. To make the price adjustment, CMS would use an inherent reasonableness test based on a survey of market prices. The other is that Medicare can freeze some prices or put a limit on the amount of the annual increase.

Medicare uses different methods among the six broad equipment categories for capturing variations in prices due to local market conditions. In some instances, Medicare sets a separate fee schedule for each state based on local allowed charges in 1986-87. In other cases, Medicare uses 10 regional fee schedules in which the prices in each region are based on an average of allowed charges in the constituent states. Both the state and regional schedules are subject to floors and ceilings to limit the variability in prices across the country. A third method is an item-by-item determination by the carrier. Rental payments are subject to a national payment limit. The applicable fee schedule is determined by the location of beneficiaries' residences rather than the location of the DME provider. All program payments are reduced by the 20 percent coinsurance paid by beneficiaries.

Medicare+Choice plans

Medicare beneficiaries may choose to receive their Medicare benefits from a private plan participating in the Medicare+Choice program rather than from the traditional program. Under some M+C plans, beneficiaries may receive benefits beyond those offered under traditional Medicare and may pay additional premiums. Medicare pays plans a capitated rate for the 12 percent of beneficiaries currently enrolled. These payments amounted to \$37 billion in 2002, 15 percent of total Medicare spending.

Medicare payment rates for M+C plans are based on enrolled beneficiaries' characteristics and the counties in which they live. Medicare uses beneficiaries' characteristics—primarily age and sex—to develop a measure of their expected relative risk for covered health spending. The payment rate for a plan enrolling a beneficiary is then calculated using the base rate for the beneficiary's county of residence, adjusted for the beneficiary's expected relative health risk. The base rate for each county is based on its historic average per capita spending in the traditional Medicare program, local levels of input prices, and the health risk characteristics of its Medicare population.

In response to concerns that plans could not survive in areas with low payment rates (because of historically low per capita Medicare spending), the Congress set floors to raise the lowest rates.

Many analysts have been concerned that the current risk adjusters, based mostly on demographic variables, do not account for predictable differences in spending for covered services among beneficiaries. More accurate risk adjusters are being phased in.

Defining the Medicare+Choice products Medicare buys

Under the M+C program, Medicare buys monthly insurance coverage for its

beneficiaries from private plans. The coverage must include all Medicare benefits, except that plans may limit enrollees' choices of providers more narrowly than under the traditional fee-for-service program.

Medicare's payment rates for a month of coverage are based on beneficiaries' counties of residence and on their relative expected cost, as predicted by demographic and diagnostic health factors. The county-level rates are determined administratively, based on statutory formulas. The 2003 rate for a county is the highest of three values:

- a floor rate of \$548 for counties in metropolitan areas with 250,000 or more people, or \$495 for all other counties;
- the county's 2001 rate increased by 2 percent; or
- a 50/50 blend of an input price-adjusted national average rate and an updated historical rate based on the county's 1997 payment rate.

All blended rates are adjusted by a budget neutrality factor that constrains national payments. For 2003, budget neutrality could not be achieved; thus, the blended rates were not applicable.

Medicare currently calculates a beneficiary's relative expected cost—as compared with the average expected cost for all Medicare beneficiaries—based on seven factors:

- age,
- sex,
- whether the beneficiary has ESRD,
- whether the beneficiary is also covered by Medicaid,
- whether the beneficiary is institutionalized,
- whether the beneficiary (or spouse) is currently covered as an active worker under an employer-sponsored plan, and

- a health risk factor currently based on diagnoses assigned when the beneficiary used certain Medicare-covered services during the preceding year.

Setting the payment rates

The original theory behind setting payment rates for private plans was that the rates should be based on how much it would cost the traditional Medicare program to provide coverage for those who enrolled in the plans. Before the BBA, rates were set at 95 percent of the expected cost of providing coverage under the traditional Medicare program. Medicare would thus save 5 percent of the expected spending on behalf of a beneficiary when the beneficiary enrolled in a private plan.

The theory raised several concerns in practice, however. Beneficiaries' spending in the traditional Medicare program varies substantially across counties; per capita spending in the highest county was three-and-a-half times that for the lowest county. Therefore, the payment rates for private plans were three-and-a-half times higher in some counties than in others. As a result of low payment rates and other factors, few beneficiaries in lower-spending areas had private plans available to them, while most beneficiaries in higher-spending counties had plans with extra benefits available. The BBA changed the rate-setting to the approach described earlier in an effort to reduce rate variation across the country and entice private plans into serving more counties.

The three county rates are updated annually. The floor rates are updated by the national average growth in per capita spending in the traditional Medicare program. The county's prior-year rates are increased by 2 percent, thus serving as a minimum update of 2 percent. Finally, the blended rates are recalculated and adjusted by a percentage constrained by budget neutrality. In most years, the blended rates have not been applicable because of the budget-neutrality constraint. ■

A P P E N D I X

B

**An introduction to how Medicare
makes coverage decisions**

An introduction to how Medicare makes coverage decisions

Medicare covers items and services that are included in a Medicare benefit category, are not statutorily excluded, and are reasonable and necessary based on section 1862(a)(1)(A) of the Social Security Act. Although the statute sets forth the broad categories of benefits covered by Medicare, neither the statute nor regulations provide an all-inclusive list of the specific items and services that are reasonable and necessary for beneficiaries' medical care. The Centers for Medicare & Medicaid Services (CMS) and the contractors who review, process, and adjudicate Medicare claims—including the fiscal intermediaries (FIs) for Part A services, carriers for certain Part B services, and durable medical equipment regional contractors (DMERCs)—determine whether services are reasonable and necessary, and, therefore, covered under Medicare.

There are several ways for services to be covered under Medicare. The vast majority of explicit coverage decisions are developed by Medicare's contractors. These decisions, referred to as local medical review policies (LMRPs), apply only to specific services provided in the contractor's regional jurisdiction. Contractors also can make individual decisions about the coverage of a

Statutory limits on Medicare coverage

Title VIII of the Social Security Act authorizes Medicare beneficiaries to obtain health services from any institution, agency, or person qualified to participate in the Medicare program. The statute lists categories of items and services eligible for Medicare coverage and specifies that no payment may be made for services that are not "reasonable and necessary for the diagnosis or treatment of illness or injury or to improve the functioning of a malformed body member" (Social Security Act, Title XVIII, Section 1862(a)(1)(A)). In recent years, Medicare has also been statutorily authorized to cover certain preventive services—mainly disease screenings—through statute. ■

particular service for a beneficiary. In addition to developing coverage decisions through Medicare's contractors, CMS implements policies through the national

coverage decision (NCD) process. NCDs are national policies on the coverage of specific medical services. Both the local and the national coverage processes explicitly consider whether services meet Medicare's statutory requirements for "reasonable and necessary" care.

The NCD and LMRP processes are not the only means by which Medicare can develop and implement coverage policies. Policies affecting the coverage of services are also published in Medicare's provider manuals and program memorandums. These policies are developed by CMS; like NCDs, they are binding for all contractors and apply nationwide. Finally, Medicare's coding requirements may also implicitly affect the coverage of services.

It is worth noting that the majority of services—including those that fall into an existing payment method or category—do not go through Medicare's explicit coverage process. Rather, these services are paid through CMS's prospective payment mechanisms. Under Medicare's prospective payment systems (PPSs), providers serve as the purchaser and make decisions about which items and services will be furnished in the payment bundle. Broader payment bundles, such as the diagnosis-related groups in the hospital

inpatient PPS, provide more leeway for providers to furnish services of their choice compared with narrower payment bundles, such as the ambulatory payment classification groups in the hospital outpatient PPS. As discussed in Chapter 4, both the hospital inpatient and outpatient PPSs provide additional payment for certain new technologies.

This appendix summarizes the process by which coverage decisions are made in the Medicare program. First, we describe the process by which NCDs are made. Then we summarize the local coverage decision making process and assess some of the similarities and differences between the national and local coverage decision making process. In the next two sections, we describe examples of coverage policies made in CMS's provider manuals and explain how Medicare's coding process may affect the coverage of new services. Lastly, we describe the current process by which coverage decisions can be appealed and the changes to the appeal process mandated by the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA).

The national coverage determination process

The NCD process, administered by CMS staff in the agency's national office in Baltimore, is usually reserved for those items or services that have the potential to affect a large number of beneficiaries and that have the greatest impact on Medicare

(National Health Policy Forum 2001). NCDs cannot vary from region to region because all contractors and Medicare+Choice (M+C) plans are required to follow NCDs. The NCD process is initiated when CMS receives a formal request from the public. In addition, CMS staff can initiate the process if they find that: (1) inconsistent local coverage policies exist; (2) the service represents a significant medical advance, and no similar service is currently covered by Medicare; (3) the service is the subject of substantial controversy; or (4) the potential for rapid diffusion or overuse exists.

The NCD process is initiated less frequently than the local medical review process. Over the past 30 years, CMS has made about 300 national coverage decisions. By contrast, Medicare's contractors have made about 9,000 local coverage decisions during the past decade (Davison 2002). CMS makes relatively few NCDs because:

- Most decisions to cover services are not controversial.
- Most services do not meet the criteria (listed previously) for CMS to initiate an NCD.
- Limited resources may affect CMS's ability to initiate more NCDs.
- Manufacturers and providers of a medical service may be apprehensive about requesting an NCD because they perceive that the decision could

result in an "all or nothing" scenario in terms of their ability to obtain Medicare reimbursement.

A negative NCD can be especially problematic for providers of a service for which Medicare constitutes a large share of the market. However, NCDs are sometimes written for a specific clinical indication of an item or service and can be modified once new clinical information is available. For example, CMS implemented an NCD in 1991 to cover the implantation of an automatic defibrillator for patients with a documented episode of life-threatening ventricular tachyarrhythmia or cardiac arrest not associated with myocardial infarction. In 1999, CMS modified the NCD to include three additional clinical indications (CMS 1999).¹

CMS uses an evidence-based approach to evaluate items and services for coverage. This approach is based on applying the best available medical evidence according to the generally accepted hierarchy of evidence.² CMS refers most NCD requests to outside impartial groups to supplement the agency's scientific and medical expertise. One such expert group—the Medicare Coverage Advisory Committee (MCAC)—was chartered by the Secretary in 1998 to supplement the agency's clinical expertise and allow for public input and participation. The MCAC, which consists of six medical specialty panels and an Executive Committee, gives CMS its opinion on whether a specific item or service meets the criteria for Medicare coverage.³ The

1 The three additional indications are: (1) a documented episode of cardiac arrest due to ventricular fibrillation not due to a transient or reversible cause; (2) ventricular tachyarrhythmia, either spontaneous or induced, not due to a transient or reversible cause; or (3) familial or inherited conditions with a high risk or life-threatening ventricular tachyarrhythmias such as hypertrophic cardiomyopathy.

2 In reviewing coverage, CMS weighs the medical and scientific evidence in accordance with a fairly standardized hierarchy that ranks the relative authority given to various types of studies. This hierarchy of evidence is as follows, ranked with the most authoritative first:

- (1) Controlled clinical trials published in peer-reviewed medical or scientific journals;
- (2) Controlled clinical trials completed and accepted for publication in peer-reviewed medical or scientific journals;
- (3) Assessments initiated by CMS;
- (4) Evaluations or studies initiated by Medicare contractors; and
- (5) Case studies published in peer-reviewed medical or scientific journals that present treatment protocols.

3 The six specialty panels are: medical and surgical procedures; drugs, biologics and therapeutics; medical devices; durable medical equipment; laboratory and diagnostic services; and diagnostic imaging. An Executive Committee—including the chair and vice chairs of each of these committees, a representative at-large, two industry representatives, and two consumer representatives—tries to ensure that consistent standards for decision-making are applied across the panels. An issue is first reviewed and discussed by one of the specialty panels, which develops specific recommendations. The recommendations are then forwarded to the Executive Committee for review and the preparation of a final recommendation to CMS.

MCAC serves only an advisory role; all final decisions are made by CMS. The agency uses other outside groups, including the Agency for Healthcare Research and Quality, to perform technology assessments—independent, systematic analyses of the safety and effectiveness of medical services.

The process of making most NCDs is relatively lengthy because of the many steps involved, which often include convening the MCAC and conducting a technology assessment. For the 10 NCDs made in fiscal year 2001, the average time from the date of the decision memorandum (announcing CMS's intent to implement a decision) to the date of implementation was 156 days (Thompson 2002).⁴ Six of the 10 decisions exceeded CMS's self-imposed time frame of 180 to 270 days.

National coverage policies are published in Medicare's coverage issues manual. In addition, information about both national and local coverage decisions is available through the Internet. CMS's website includes current information about NCDs being developed as well as those that have been decided and implemented.⁵ CMS's website also provides a mechanism to search through national and local coverage policies, as well as supplying links to contractors' websites which post draft and final LMRPs.

Local medical review process

Medicare's contractors are tasked with reviewing claims for services furnished by providers, physicians, and suppliers and paying only for those services that meet Medicare's coverage requirements.

Consequently, contractors play an important role in protecting the integrity of the Medicare program. LMRPs are administrative and educational tools to assist providers in submitting correct claims for payment. They may contain instructions about any or all of the following types of provisions: coding, benefit category, statutory exclusion, or medical necessity.

LMRPs are developed by each contractor's medical director. These policies outline how contractors will review claims to ensure that they meet Medicare coverage requirements. Each medical director evaluates the medical necessity and reasonableness of services furnished to beneficiaries by providers within the contractor's jurisdiction. Circumstances for which medical directors may develop new or revised LMRP include:

- certain services demonstrating a significant risk to the Medicare trust fund, as identified by potentially high cost or high volume of services;
- need for developing uniform LMRPs across the contractor's multiple jurisdictions; and
- frequent denials being issued or anticipated for an item or service.

LMRPs must be consistent with national guidance that includes decisions and policies made through the NCD process or published in CMS's provider manuals or program memorandums. Contractors can develop LMRPs for services not covered by national guidance. In addition, LMRPs can provide more specific information about an NCD. For example, several contractors have issued LMRPs about the use of intravenous iron therapy furnished

to end-stage renal disease (ESRD) patients to treat iron deficiency anemia.⁶ These LMRPs provide specific instructions about the intravenous iron therapy NCD implemented by CMS in December 2000. Finally, the existence of one or more LMRPs does not preclude CMS from making an NCD. As noted in the previous section, CMS may consider making an NCD because of varying LMRPs.

The process for developing a LMRP includes drafting language based on a review of medical literature and the contractor's understanding of local practices. LMRPs must consider and be based on the strongest evidence available (HCFA 2000). Contractors are required to permit interested parties to submit scientific, evidence-based information and have open meetings for the purpose of discussing draft LMRPs. Carriers must establish carrier advisory committees (CACs) in each state, which provide a forum for information exchange between carriers and physicians. CACs meet at least three times per year and are composed of physicians, a beneficiary representative, and representatives from other medical organizations (CMS 2002a).

In contrast to NCDs, LMRPs apply only in the contractor's jurisdiction. Consequently, coverage policies vary across localities because contractors can each set policies within their specific geographic jurisdiction. CMS encourages contractors who operate in two or more states to develop uniform local coverage policies across all jurisdictions to the extent possible. In addition, medical directors from the carriers and FIs participate in work groups for specific clinical areas, such as chronic pain management, anesthesiology, and clinical

4 The 10 coverage determinations were for: (1) intestinal and multivisceral transplantation; (2) biofeedback for the treatment of urinary incontinence; (3) pelvic floor electrical stimulation for the treatment of urinary incontinence; (4) ocular photodynamic therapy with verteporfin; (5) cryosurgical salvage therapy for recurrent prostate cancer; (6) positron emission tomography for the diagnosis and treatment of selected oncologic conditions; (7) percutaneous transluminal angioplasty of the carotid artery concurrent with stenting; (8) liver transplantation for patients with hepatocellular carcinoma; (9) coverage of liver transplants in nonapproved centers during the emergency in Houston; and (10) coverage of liver transplants in nonapproved centers during the emergency in Houston (amendment).

5 CMS's website, which provides information about national and local coverage policies, is available at <http://www.cms.hhs.gov/coverage/>.

6 Contractors that have implemented LMRPs concerning the use of intravenous iron therapy include First Coast Service Options, Inc. and the Mutual of Omaha Insurance Company.

laboratory services. These groups provide the medical directors an opportunity to discuss issues related to coverage, including issues raised by providers and beneficiaries.⁷ In contrast to the local decisions made by the FIs and carriers, the four DMERCs are required to create one set of coverage policies that apply nationwide.

Generally, contractors cannot develop policies to cover experimental or investigational services. However, beginning in 1995, Medicare has permitted the coverage of certain devices for which the Food and Drug Administration (FDA) has granted an investigational device exemption (IDE) and the coverage of certain services related to those devices (HCFA 1995).⁸ Specifically, contractors can consider covering a device for which the FDA has: (1) granted an IDE; (2) provided a classification of nonexperimental investigational device, for which underlying questions of safety and effectiveness have been resolved for that device type (i.e., the device falls under “category B”); and (3) required that clinical trials be conducted, with beneficiaries participating in the FDA-approved clinical trial. The intent of this rule was to provide the opportunity for beneficiaries to gain quicker access to new services while permitting opportunities for providers and manufacturers of the service to build the body of evidence necessary for seeking broader coverage. Medicare does not cover investigational devices granted an IDE that are classified as “category A”—experimental and investigational devices for which absolute risk of the device type has not been established.

Coverage policies implemented in program manuals

Coverage policies also can be implemented through policies published in Medicare’s program manuals and memorandums.⁹ Program manuals, including the Medicare intermediary manual and the Medicare carrier manual, contain operating instructions, policies, and procedures based on statutes, regulations, and directives. Program memorandums are another vehicle for CMS to transmit new policies and procedures that are often but not necessarily linked to a specific program manual. Policies published in manuals and memorandums can set forth when and under what circumstances services may be covered and paid for by Medicare. For example:

- The Medicare intermediary manual provides coverage information about hemodialysis treatments furnished to ESRD patients. This policy limits Medicare’s payment for hemodialysis furnished to beneficiaries with ESRD to a maximum of three treatments per week even though hemodialysis can be furnished on a daily basis. Medical directors can make individual coverage determinations for beneficiaries who require more than three hemodialysis treatments per week (CMS 2003).
- CMS issued a program memorandum in 2002 about the coverage of diagnostic services furnished by qualified audiologists. The memorandum set forth the specific circumstances for which diagnostic services provided to evaluate the symptoms associated with hearing loss or ear injury would be covered by Medicare and the qualifications

audiologists need to be considered qualified by Medicare (CMS 2002b).

These policies are developed by CMS staff and are binding on all contractors. The number of coverage decisions implemented in this manner is unknown.

Medicare’s coding process

CMS’s coding requirements may implicitly affect the coverage of new services. (See Chapter 4 for a related discussion on paying for new technologies in Medicare’s PPSs.) Medicare’s payment systems are organized around standard sets of codes that describe the services furnished by providers to beneficiaries. All services must be appropriately coded for providers to receive payment from Medicare. Some providers contend that delays in updating codes result in delays in payments for new services, although there is no clear evidence of problems with access to these services. Timely coding updates are especially important in the outpatient sector, where payment bundles are small and most services require a code for providers to be paid. Organizations who assign new outpatient codes include CMS, the American Medical Association, the Health Insurance Association of America, and the Blue Cross Blue Shield Association.

Appeals process

Beneficiaries and providers have the opportunity to appeal the denial of coverage for services that contractors believe do not fall within a Medicare benefit category, are not reasonable and necessary, or are otherwise excluded by statute or regulation. Currently, the appeals process for Part A and Part B services offers up to five levels for beneficiaries and providers wishing to

7 Meetings of these clinical work groups are not required to take place in public settings.

8 Manufacturers submit marketing applications for clearance or approval of devices to the FDA. For certain devices, the FDA may require that clinical trials be conducted to obtain clinical information to determine the device’s safety and effectiveness. Generally, for these devices to be shipped lawfully for purposes of conducting the clinical trial, the sponsor must obtain an approved IDE from the FDA.

9 This section specifically excludes national coverage decisions published in program memorandums and the coverage issues manual.

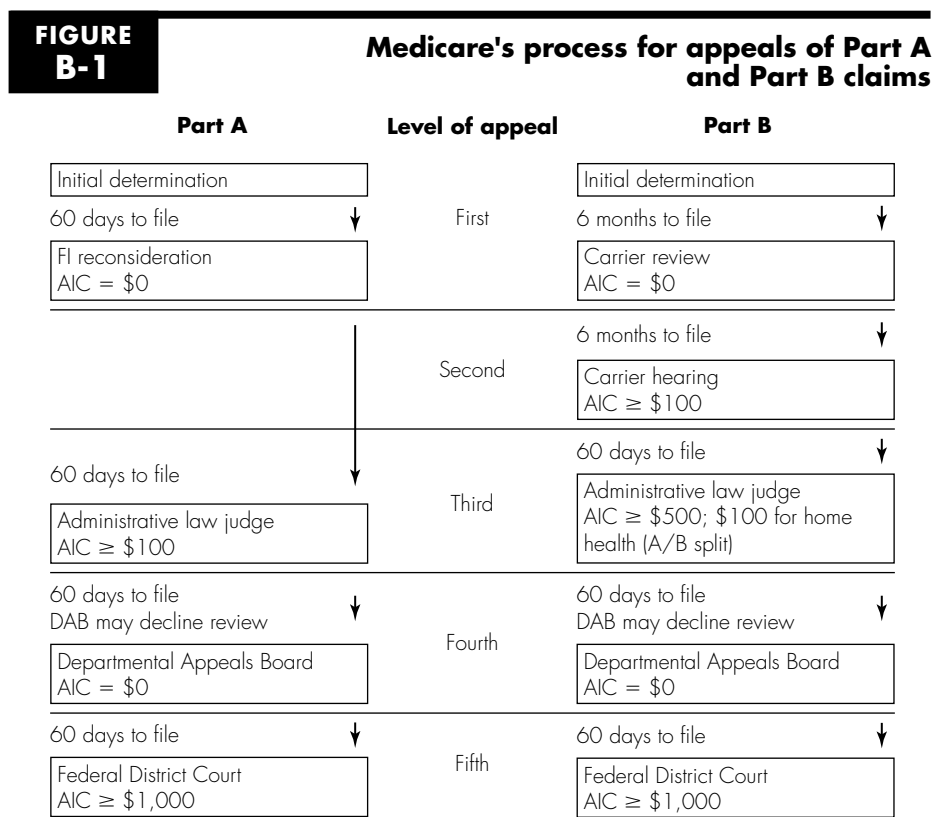
appeal a contractor's initial determination that a claim should not be paid, either in full or in part, by Medicare.¹⁰

The process begins when contractors notify beneficiaries and providers (the appellants) in writing of the reasons that they have denied coverage for a service. The appellants may request that the applicable contractor reconsider or review the denial of coverage (Figure B-1). If dissatisfied with the reconsideration of the denial of coverage, appellants can appeal the decision to Administrative Law Judges (ALJs), who are employed by the Social Security Administration. After the hearing with an ALJ, cases may be appealed to the Departmental Appeals Board of the Department of Health and Human Services, the final level of administrative appeal. Cases may then be appealed to the U.S. Federal District Courts.

As set forth in Figure B-1, the process has separate paths for appeals of Part A and Part B claims. Currently, depending on the type of service that is being appealed, the appeals process differs in terms of:

- the time frames for Medicare to act on an appeal,
- the minimum value amount of a claim to be appealed to an ALJ,
- the availability of an expedited review,
- the use of independent external reviewers, and
- the right of beneficiaries to continue receiving a service.

Figure B-1 shows some of the differences in the time frames for Medicare to act upon an appeal. Appellants have from 60 days for Part A services to 6 months for Part B services to file a reconsideration. The minimum value of services that can be appealed to an ALJ varies for Part A and Part B services. For inpatient hospital services only, appellants can ask for an expedited review by a Quality Improvement Organization (QIO) for a noncoverage decision. Inpatients cannot



Note: FI (fiscal intermediary), AIC (minimum amount in controversy), DAB (Departmental Appeals Board).

Source: Centers for Medicare & Medicaid Services. Medicare and Medicaid programs: changes to the Medicare claims appeal procedures, Federal Register. November 15, 2002, Vol. 67, No. 221, p. 69312-69363.

be discharged from the hospital or charged for additional time in the hospital until the QIO issues a determination within one full working day after receiving the request.

Two sections of BIPA call for CMS to modify the appeals process:

- Section 521 establishes uniform processes for handling appeals of Part A and Part B services after being furnished to a beneficiary. For example, BIPA establishes that disputed services must be worth at least \$100 for appellants to appeal to an ALJ, sets forth a 90-day time limit for the ALJs and the Departmental Appeals Board to each make a decision about the case, and allows appellants to escalate the case to the next level if this deadline is not met. In addition, Section 521 establishes a

new appeals entity—qualified independent contractors—to reconsider contractors' initial determinations.

- Section 522 clarifies when national and local coverage policies can be challenged by beneficiaries before receiving services. Section 522 also requires that CMS submit annual reports to the Congress regarding the amount of time the agency took to complete and fully implement NCDs for the previous fiscal year.

CMS has not yet fully implemented the changes mandated by BIPA. The agency has published proposed rules to implement Sections 521 and 522 and has submitted a report to the Congress on the time required for CMS to complete and fully implement the 10 NCDs made in fiscal year 2001 (Thompson 2002).

¹⁰ The section focuses on appeals related to Part A and Part B services. Medicare has a separate process for appeals related to M+C services, including an external review process and an expedited process for certain types of appeals.

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A P P E N D I X

C

**Inpatient payments for
rural hospitals**

Inpatient payments for rural hospitals

As discussed in Chapter 2A on payment adequacy and updates for hospital payments, MedPAC previously issued four recommendations designed to improve payments for rural hospitals that have been considered by the Congress but not yet enacted (MedPAC 2001a, MedPAC 2002). We are reissuing these recommendations. Chapter 2A summarizes the four recommendations, their rationales, and their combined impact on Medicare inpatient payments. This appendix provides additional background, explanation, and support for the four recommendations, as well as impact estimates for each individual policy change.

The four recommendations would:

- implement a low-volume adjustment to the inpatient base rates;
- reevaluate (with an eye toward reducing) the labor share (which determines the portion of the base payment rate that is adjusted by each area's wage index value);
- eliminate the differential in base rates between hospitals in large urban

areas (defined as a population above 1 million) and those in other urban and rural areas; and

- raise the cap on most rural hospitals' disproportionate share (DSH) payments.

Implementing a low-volume adjustment

Making Medicare payments approximate an efficient provider's costs requires accounting for factors beyond providers' control that may affect the costs of furnishing services. Patient volume may be one such factor, particularly in small and isolated communities where providers frequently cannot achieve the economies of scale of their larger counterparts, and thus have higher per case costs. The current prospective payment system (PPS) rates do not directly account for the relationship between cost and volume, placing low-volume providers at a financial disadvantage.

The critical access hospital (CAH), sole community hospital, and Medicare-

dependent hospital programs benefit many small and isolated hospitals, even though these programs do not directly address the small-scale issue. Eligibility for these programs is not well targeted to low-volume hospitals, however, and payments are based at least partially on hospital-specific costs, which may reflect poor management and other provider inefficiencies. A low-volume adjustment could address these issues more directly; for that reason, MedPAC recommends that the Congress enact such an adjustment.

Effects of low volume on costs and financial performance

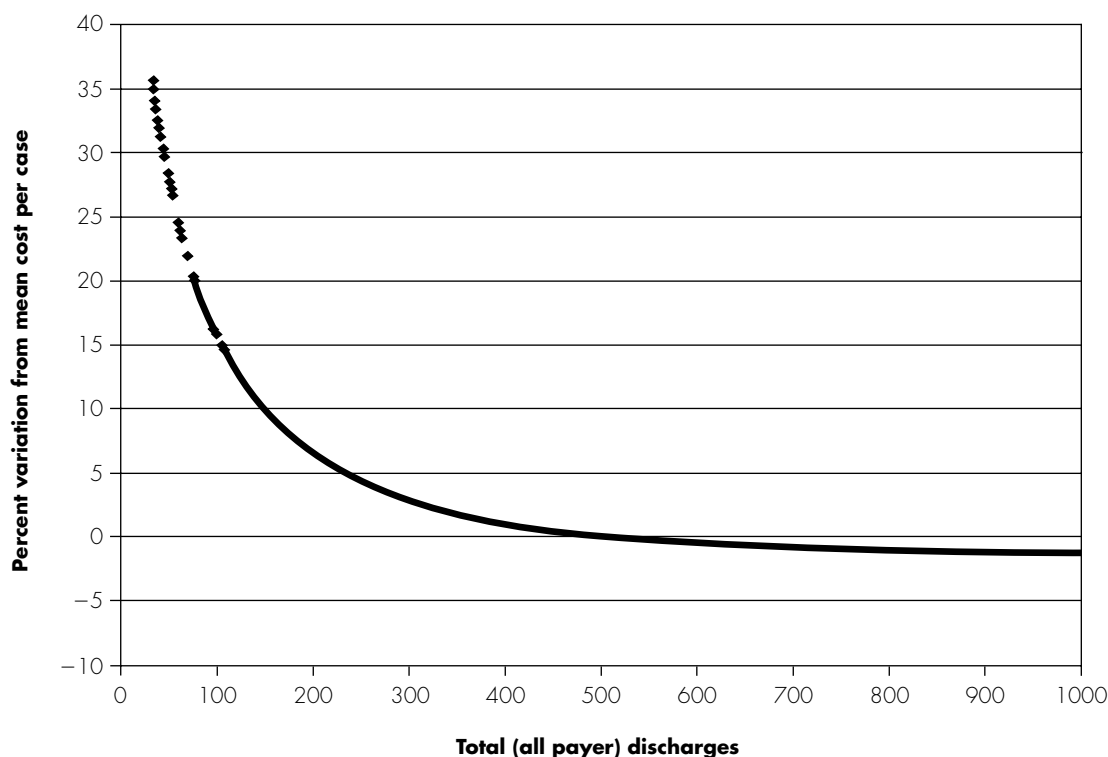
To determine whether low-volume hospitals have higher costs than other hospitals, we examined the relationship between total (all payer) inpatient volume and Medicare costs per discharge.¹ Our analysis showed a statistically significant relationship between discharge volume and costs per discharge, after controlling for cost-related factors in the payment system.² The volume and cost relationship is most pronounced for facilities with fewer than 200 discharges per year

1 Although Medicare payments are intended to cover the costs of treating Medicare patients, a hospital's total volume of service determines its unit costs of production.

2 These factors include case mix as measured by diagnosis related groups, base rate (separate for hospitals in large urban areas and those in other urban and rural areas), area wage index value, outlier frequency, and teaching intensity.

**FIGURE
C-1**

Hospital discharge volume and hospital cost per case, 1997



Source: MedPAC analysis of cost report and MedPAR data from CMS.

(Figure C-1), which have per case costs that are more than 20 percent above average. The relationship becomes relatively flat after about 500 discharges.

Low-volume hospitals account for only a small fraction of acute care facilities; 2 percent of hospitals have fewer than 200 discharges and 11 percent have fewer than 500 discharges. The vast majority of these facilities—85 percent—are in rural counties.

Hospitals' financial performance under Medicare's inpatient PPS is strongly related to inpatient volume: Margins rise as volume increases (Table C-1). The aggregate inpatient margin is negative for hospitals with 500 or fewer discharges, while hospitals in larger-volume groups have margins ranging from 5 to 17 percent.³ This strongly indicates that low-

**TABLE
C-1 Medicare inpatient margin, by discharge volume, 1999**

Total discharges	Margin	Percent of hospitals with negative margin
< 200	-16.4%	66.7%
201 to 500	-2.1	50.2
501 to 1,000	4.6	39.0
1,001 to 2,500	5.0	37.7
2,501 to 5,000	6.5	32.7
5,001 to 10,000	10.1	24.0
10,001 to 20,000	12.3	19.4
> 20,000	17.4	7.4

Note: The Medicare inpatient margin reflects the change in disproportionate share payments enacted by the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA). Analysis based on data from two-thirds of the hospitals covered by prospective payment in 1999, which includes some that have since been designated critical access hospitals.

Source: MedPAC analysis of cost report and MedPAR data from CMS.

3 We show the Medicare inpatient margin for this calculation, despite the fact that it overstates hospitals' financial performance under Medicare in the absolute, because it is inpatient costs that are affected by a hospital's volume of discharges.

volume providers are disadvantaged by rates based on average volume and that current programs targeted to rural providers do not fully correct for this problem.

Access considerations

The issue of a low-volume adjustment is most critical for isolated hospitals, where the facility is important for maintaining beneficiaries' access to care. Such facilities, because of their market circumstances, have little ability to grow and take advantage of economies of scale and scope of services realized by larger facilities. Adjusting payments for a low-volume facility that is near other facilities, on the other hand, is not a priority because beneficiaries' access to care is less likely to be affected. In fact, the close proximity of other hospitals may be one of the primary reasons for the hospital's low volume of service.

Low-volume hospitals are more isolated than those with higher volume, but most low-volume hospitals would not meet the 35-mile distance standard used for designating sole community hospitals. Just over half of low-volume hospitals are more than 25 road miles from the nearest hospital, and 86 percent have no potential competitors within 15 miles.

RECOMMENDATION 2A-2:

The Congress should enact a low-volume adjustment to the rates used in the inpatient PPS. This adjustment should apply only to hospitals that are more than 15 miles from another facility offering acute inpatient care.

The Commission believes that a low-volume adjustment would strengthen the current inpatient PPS by aligning payments better with efficient providers'

costs. The adjustment should reflect the basic underlying relationship between patient volume and costs per discharge, avoiding cliffs (points in the formula where a small change in volume would produce a large change in payment) that might provide inappropriate incentives.

To avoid problems with annual volume variation and to encourage stability in the level of the adjustment over time, the volume adjustment should be set for an individual facility based on a multiyear average volume. The level of the adjustment should be periodically reexamined to reflect improvements made in the inpatient PPS that might affect the measured relationship between volume and cost.⁴

To illustrate the financial impact of a low-volume adjustment, we simulated an adjustment that increases payments by up to 25 percent and drops to zero for hospitals with 500 or more discharges.⁵ This formula, for example, would provide a 20 percent increase in payments for hospitals with 100 discharges and a 10 percent increase for those with 300 discharges. We limited the add-on to hospitals more than 15 miles from the nearest acute care facility. About 10 percent of all PPS hospitals would qualify, and about a quarter of these already receive some assistance from the sole community or Medicare-dependent program but would benefit more from the low-volume adjustment. The increase in payments probably would enable some critical access hospitals to come back into the PPS (if these facilities were allowed to reverse their CAH status), because the adjusted base payment rate would better reflect their underlying cost structure.⁶ Similarly, many hospitals might decide not to become CAHs if a low-volume adjustment were available.

Reevaluating the labor share used in geographic adjustment

The labor share, which CMS revises periodically in updating the market basket index, is an estimate of the national average proportion of hospitals' costs associated with inputs directly or indirectly affected by local wage levels. The labor share is used to determine the portion of the PPS base payment rate to which the wage index is applied for geographically adjusting rates. For inpatient hospital services, CMS has set the labor share at 71.1 percent—its estimate of the share of hospitals' total expenses comprising wages and salaries, fringe benefits, and other labor-related cost elements using locally purchased inputs (Table C-2). For reasons detailed

TABLE C-2 Components of national labor share for inpatient care

Category	Share
Total labor-related	71.1%
Wages and salaries	50.2
Employee benefits	11.2
Nonmedical professional fees	2.1
Postage	0.3
All other labor-intensive	7.3

Note: All other labor-intensive includes business services, computer processing, landscape and horticultural services, building maintenance and repair, laundry services, auto repair, payments to membership organizations, appliance repair, and indirect business taxes.

Source: CMS analysis of hospital data from Medicare cost reports, U.S. Census, Bureau of Economic Analysis, and American Hospital Association.

4 Examples of policy changes that could affect the cost and volume relationship include case-mix refinements, such as all patient refined diagnosis related groups, and an occupational mix adjustment to the wage index, both of which the Commission has recommended in past reports.

5 The payment adjustment we simulated produces a multiplier that is applied to the PPS base payment rate for a case, similar to the way the indirect medical education and disproportionate share adjustments are applied. Only hospitals with fewer than 500 discharges would have their payments adjusted. The low-volume adjustment multiplier = $[1.25 - (0.0005 \times d)]$ if $d < 500$; otherwise the multiplier = 1.0, where d = total inpatient acute care discharges.

6 Rural hospitals that have fewer than 15 beds (25 including swing beds) and are located more than 35 miles from the nearest hospital offering similar services (or alternatively have been designated in a comprehensive state plan as a critical access hospital for care in isolated rural areas) can apply to become a critical access hospital. These hospitals receive full cost-based payment for both inpatient and outpatient services.

below, MedPAC recommends that the Secretary reevaluate (with a view toward reducing) the labor share for inpatient payments.

Rationale for reducing the labor share

The input categories included in the labor share were originally selected in 1983 when the hospital inpatient PPS was adopted. Most of these inputs are still purchased largely in local markets. However, some categories such as postage are likely purchased in national markets and not influenced by local wage levels. Still others (data processing and accounting services, for instance) may include some inputs that are purchased in national markets and some that are bought locally. As a result, the national average labor share may be somewhat lower than the current estimate of 71.1 percent.

This problem could be addressed by reexamining CMS's construction of the national labor share. This would likely result in a lower labor share, which would reduce the proportion of the national base payment amount adjusted by the wage index. Hospitals located in low-wage markets (wage index less than 1.0) would receive higher payments, while those located in high-wage markets would receive lower payments. Overall, this policy change would transfer payments from urban to rural hospitals. Some urban hospitals would benefit, however, because they are located in markets with wage indexes below 1.0, and some rural hospitals would receive reduced payments because they are located in market areas with wage indexes above 1.0.

Developments since MedPAC's rural report

About a year after our rural report (MedPAC 2001a) was published, CMS rebased the input categories in the hospital market basket, as it does routinely every five years. CMS did not alter the input categories included in the wage component of the market basket, but it revised the weight (share of total costs)

for the labor-related inputs based on the latest data, which resulted in a proposal to raise the labor share from 71.1 percent to 72.5 percent.

Around this time, we obtained preliminary results from a multivariate analysis of the factors explaining variation in hospitals' Medicare costs and payments per case. This analysis provided strong evidence that the current labor share of 71.1 percent overstates the labor-related share of national input costs. However, contrary to what many observers have assumed, the study found that the labor-related share of expenses is lower in high-wage markets (most of which are in urban areas) than in low-wage markets (most of which are rural). This pattern occurs because hospitals in major metropolitan areas generally provide more sophisticated services and treat more complex patients, which raises their costs for plants and equipment.

Although CMS remains reluctant to base the labor share calculation on a multivariate analysis approach, because of its complexity and the difficulty of using it to identify a specific point estimate, the agency pulled back its proposal to raise the labor share pending further developmental work.

RECOMMENDATION 2A-3:

The Secretary should reevaluate the labor share used in the wage index system that geographically adjusts rates in the inpatient PPS, with any resulting change phased in over two years.

In the coming year, MedPAC will undertake a follow-up study designed to identify the best labor share value for the hospital industry as a whole. Because the share of labor-related expenses varies according to the circumstances of hospitals, the goal will be to identify the value that minimizes error (that is, results in the smallest possible difference between hospitals' individual labor shares and the national average).

Eliminating the base rate differential

In Medicare's inpatient PPS, the operating base payment rate for hospitals in large urban areas (metropolitan areas with more than 1 million people) is 1.6 percent above the payment rate for other hospitals, and the differential is 3.0 percent for the capital base rate (comprising about 10 percent of the overall rate). Current data do not support this differential, and MedPAC recommends eliminating it.

History of the base rate differential

The current payment differential reflects policy decisions made more than a decade ago. When the Congress established the inpatient PPS, base payment rates for rural hospitals were set 20 percent below those for urban hospitals, and no distinction was made among hospitals in urban areas based on the population of the metropolitan area. This initial differential reflected actual cost differences observed in the base data used to establish the PPS rates.

Starting in 1988, the Congress enacted separate updates for hospitals in large urban, other urban, and rural areas, effectively creating three separate base payment rates, while also substantially reducing the difference in base rates between rural and urban hospitals. Hospitals in large urban areas received higher updates at the time because analysis showed that the higher costs of those hospitals were not fully recognized by PPS payment policies.

In 1990, the operating base rate for rural hospitals was 7.0 percent lower than the rate for other urban hospitals, while the rate for large urban hospitals was 1.6 percent higher than the other urban rate (the current differential). The Omnibus Budget Reconciliation Act of 1990 set update factors to eliminate the gap in payment rates between rural and other urban hospitals by fiscal year 1995, partly because analysis showed that rural

hospital costs were 40 percent below those for urban hospitals while aggregate payments were 45 percent lower.

Rationale for eliminating the differential

Medicare margin data provide support for eliminating the current differential. Inpatient margins for rural and other urban hospitals are substantially lower than those of large urban hospitals (Table C-3). This difference in performance is due in large part to the higher payment rates received by hospitals that qualify for DSH and indirect medical education (IME) adjustments; such hospitals are much more likely to be located in large urban areas. However, even after removing DSH payments and the portion of the IME payment above the measured cost relationship, hospitals in large urban areas still have Medicare margins for the remaining payments that are 3.0 to 3.5 percentage points higher than those of other hospitals. The current base rate differential accounts for about half of this difference in margins.

Statistical analysis also supports eliminating the differential in base rates. When hospitals in large urban areas are compared with all other hospitals, no relationship between large urban location and costs per case is apparent after controlling for cost-related payment adjustments in the inpatient PPS. We found that rural hospital costs were about 2 percent lower than those of large urban hospitals, but this analysis was based on 1997 data and does not account for the 2 percent higher cost growth experienced annually by rural hospitals between 1997 and 2000. If the analysis were run using more recent data, the cost difference between hospitals in large urban and rural areas would likely be much smaller, if not nonexistent.

Providing one base rate for all hospitals would also eliminate the need for geographic reclassification for the base rate.⁷ To qualify for base rate

TABLE C-3

Medicare inpatient margin, by location, 2000

Hospital group	Margin including DSH payments and above-cost IME payments	Margin excluding DSH payments and above-cost IME payments
All hospitals	10.9%	1.5%
Large urban areas	15.3	3.2
Other urban areas	7.2	-0.4
Rural areas	2.6	0.2

Note: DSH (disproportionate share), IME (indirect medical education). Above-cost IME payments are those in excess of MedPAC's estimate of the relationship between teaching intensity and costs per discharge.

Source: MedPAC analysis of Medicare cost report data from CMS.

reclassification, a hospital must demonstrate that it is close to an area with a higher base rate and that its costs are closer to the amount it would be paid if it were reclassified than to the amount under its current classification. In other words, a hospital with costs above its base rate can be reclassified, whereas a hospital with costs below its base rate cannot. This policy produces an undesirable incentive by rewarding high-cost hospitals with a higher base rate without any other justification.

RECOMMENDATION 2A-4:

The Congress should raise the inpatient base rate for hospitals in rural and other urban areas to the level of the rate for those in large urban areas, phased in over two years.

Raising the cap on disproportionate share payments

Medicare's disproportionate share adjustment for hospital inpatient services is designed to offset the financial pressure of uncompensated care. However, the Commission has concluded that the

current system has several design flaws and has previously recommended a major reform of the system. As an interim measure, we recommend raising the cap on DSH payments that currently applies to most rural hospitals.

The current disproportionate share adjustment

Medicare distributes DSH payments through a hospital-specific percentage add-on to the PPS base rate. The add-on for each case is determined by a complex formula and each hospital's share of low-income patients, which is the sum of two ratios—Medicaid patient days as a share of total patient days, and patient days for Medicare beneficiaries who receive Supplemental Security Income (SSI) as a percentage of total Medicare patient days.

Problems with the current system and responses to date

The Commission has previously recommended policy changes to ameliorate two key problems with the existing DSH payment system (MedPAC 2000, MedPAC 2001b):

- The current low-income share measure does not include uncompensated care, and

⁷ This form of geographic reclassification is awarded less frequently than reclassification to obtain a higher wage index, which responds to inaccuracies in the wage index system caused by the use of metropolitan statistical areas (MSAs) to represent health care labor markets.

- The system has separate payment rates for 10 hospital groups, with the least favorable rates given to most rural hospitals and to urban facilities with fewer than 100 beds.

The Balanced Budget Refinement Act of 1999 (BBRA) mandated that CMS collect data on uncompensated care from all PPS hospitals beginning with fiscal year 2002 cost reports, which may pave the way for including uncompensated care in the calculation of hospitals' low-income shares. Then the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA) partially implemented our recommendation by applying the most liberal current threshold (minimum low-income share needed to qualify for a payment adjustment) to all hospitals. We estimate that this made about 840 additional rural hospitals (40 percent of all rural facilities) eligible to receive DSH payments. However, BIPA caps the DSH add-on that most rural hospitals can receive at 5.25 percent, while some urban facilities currently receive far higher adjustments.

Since MedPAC's complete reform package probably cannot be implemented until at least fiscal year 2005 because of the time required to collect and process uncompensated care data, an appropriate interim step is needed to bridge the gap between the BIPA provision and the system MedPAC envisions.

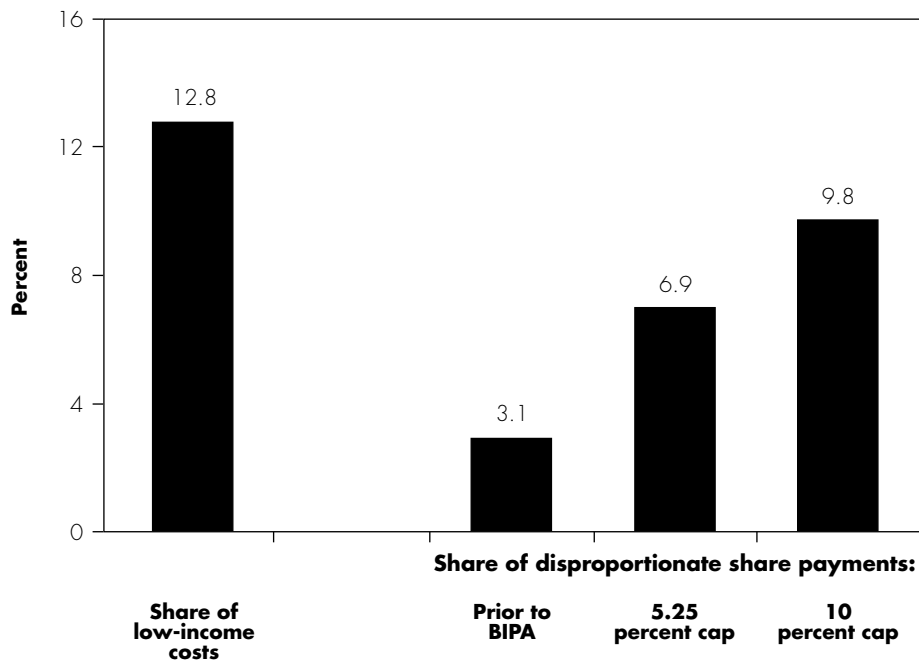
RECOMMENDATION 2A-5:

The Congress should raise the cap on the disproportionate share add-on a hospital can receive in the inpatient PPS from 5.25 percent to 10 percent, phased in over two years.

Although there is no right level for the cap, a cap of 10 percent would bring DSH payments for rural hospitals to roughly the midpoint between the amount that BIPA produced and the amount implied by the proportion of the care furnished by rural

FIGURE C-2

Rural hospitals' shares of low-income patient costs and disproportionate share payments



Note: The 5.25 percent cap on the disproportionate share add-on was enacted by the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA) and went into effect on April 1, 2001. Low-income costs for this analysis include Medicaid and uncompensated care.

Source: MedPAC analysis of data from the American Hospital Association annual survey of hospitals and impact file data from CMS.

hospitals to the two largest groups of low-income patients. Rural facilities were responsible for 12.8 percent of the care provided to Medicaid and uncompensated care patients nationally in 1999 (Figure C-2), but with the DSH payment rules in effect at the time, only 3.1 percent of payments went to rural providers.⁸ BIPA rules increased rural hospitals' share of payments to 6.9 percent, and raising the cap to 10 percent would lift this share to 9.8 percent.

The Congress should not remove the DSH payment cap altogether now, for two reasons. First, it would result in some hospitals receiving large increases in their DSH payments, only to have their payments cut again if uncompensated care

is later brought into the system used to distribute payments.

Second, eliminating the cap might result in unusually large payment increases for some rural hospitals, and the aggregate increase in payments would be three times that of our recommended approach. The current DSH distribution formula is graduated, offering a higher payment rate for the mostly public, inner-city hospitals with the largest low-income shares. This was done in an attempt to compensate for these hospitals' unusually large uncompensated care burdens and their low Medicare penetration (often below 20 percent). Applying this formula in rural areas, where hospitals have much higher Medicare penetration (often above 70 percent), could result in windfall-level

⁸ Because uncompensated care data from the Medicare cost reports are not yet available, this analysis is based on data from the American Hospital Association annual survey of hospitals.

payment adjustments. If the Congress approves revamping the DSH payment system to bring uncompensated care into the low-income share calculation, it should consider avoiding this problem by applying a single formula to all hospitals without a graduated rate structure.

Impact of recommendations

Three of our four recommendations to improve rural hospital payments call for a two-year phase-in schedule. To display the full impact, Table C-4 shows the one-year increase in inpatient payments resulting from each of the recommendations and Table C-5 (p. 260) shows the two-year increase for each. The

combined impact of all four policy changes, reflecting their interactive effects, is presented in Chapter 2A.

Implementing a low-volume adjustment (which we are recommending for immediate implementation) would increase aggregate inpatient payments by less than 0.1 percent. But despite the small overall impact, this policy change would increase payments for hospitals with fewer than 200 discharges by about 8 percent and for those with 201 to 500 discharges by 4 percent. In addition, the aggregate impact might be somewhat larger if critical access hospitals are allowed to return to the PPS to take advantage of the higher payments afforded by this policy change.

Although our recommendation that CMS reevaluate the labor share used in the hospital wage index system does not specify an exact value for the labor share, we simulated an illustrative reduction to 68 percent from the current 71.1 percent. CMS would implement this change budget neutrally, which would increase payments for rural and other urban hospitals by 0.2 percent while decreasing payments for large urban hospitals by the same amount.

Eliminating the differential in base payments rate for hospitals in rural and other urban areas would raise payments for hospitals in these areas by 1.2 percent. This increase is less than the 1.6 percent differential in base rates under current policy because many of the hospitals paid cost-related rates under the sole community hospital and Medicare-dependent programs would not be affected by the policy change.

Raising the cap on DSH payments to 10 percent would increase rural hospitals' payments by 1.2 percent on average. Although urban hospitals with fewer than 100 beds would see similar increases, there are so few of these facilities that the increase for all urban hospitals is less than 0.1 percent.

Our recommendations generally provide the largest payment increases to hospitals that do not benefit from any of the existing programs aimed at helping rural hospitals—the rural referral, sole community, and small rural Medicare dependent programs. The only exception is the low-volume adjustment that likely would not benefit such hospitals if they have more than 50 beds. Hospitals not helped by current programs have the lowest Medicare inpatient margins under current policy—3.7 percent for those with fewer than 50 beds and 2.5 percent for those with more than 50 beds. Raising the cap on DSH payments produces the largest difference, with hospitals not helped by any current program receiving an increase of over 2 percent compared with less than 1 percent for all other rural facilities.

TABLE C-4

One-year impact on Medicare inpatient payments of four recommendations to improve payments for rural hospitals

Hospital group	Baseline margin	Change in payments for each recommendation			
		Implement low-volume adjustment	Reduce labor share to 68 percent	Eliminate base rate differential	Raise DSH cap to 10 percent
All hospitals	10.3%	*	0.0%	0.3%	0.1%
Urban	11.3	0.0%	—*	0.3	*
Rural	3.9	*	0.1	0.6	0.6
Large urban	13.6	0.0	−0.1	0.0	*
Other urban	7.7	0.0	0.1	0.8	*
Rural referral	3.9	0.0	0.1	0.6	0.6
Sole community	4.6	0.1	0.1	0.3	0.1
Small rural Medicare-dependent	7.2	0.2	0.2	0.7	0.5
Other rural < 50 beds	3.7	0.2	0.2	0.8	1.0
Other rural ≥ 50 beds	2.5	*	0.2	0.8	1.1
Major teaching	20.7	0.0	−0.1	0.2	0.0
Other teaching	9.6	0.0	*	0.4	*
Nonteaching	5.4	*	*	0.4	0.2

Note: DSH (disproportionate share). Baseline margin is the actual 2000 margin adjusted to reflect the increase in disproportionate share payments implemented in 2001 and the decrease in indirect medical education payments implemented in 2003. Analysis excludes critical access hospitals.
* Less than 0.05 percent

Source: MedPAC analysis of impact file and MedPAR data from CMS.

**TABLE
C-5****Two-year impact on Medicare inpatient payments
of four recommendations to improve
payments for rural hospitals**

Hospital group	Change in payments for each recommendation				
	Baseline margin	Implement low-volume adjustment	Reduce labor share to 68 percent	Eliminate base rate differential	Raise DSH cap to 10 percent
All hospitals	10.3%	*	0.0%	0.7%	0.2%
Urban	11.3	0.0%	–*	0.6	*
Rural	3.9	*	0.2	1.2	1.2
Large urban	13.6	0.0	–0.2	0.0	*
Other urban	7.7	0.0	0.2	1.5	*
Rural referral	3.9	0.0	0.2	1.2	1.2
Sole community	4.6	0.1	0.1	0.6	0.3
Small rural Medicare-dependent	7.2	0.2	0.4	1.4	0.9
Other rural < 50 beds	3.7	0.2	0.4	1.7	2.1
Other rural ≥ 50 beds	2.5	*	0.4	1.6	2.2
Major teaching	20.7	0.0	–0.2	0.3	0.0
Other teaching	9.6	0.0	*	0.7	*
Nonteaching	5.4	*	*	0.9	0.4

Note: DSH (disproportionate share). Baseline margin is the actual 2000 margin adjusted to reflect the increase in disproportionate share payments implemented in 2001 and the decrease in indirect medical education payments implemented in 2003. Analysis excludes critical access hospitals.

* Less than 0.05 percent

Source: MedPAC analysis of impact file and MedPAR data from CMS.

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A P P E N D I X

D

**A data book on hospital
financial performance**

A data book on hospital financial performance

This appendix provides data on hospital financial performance. Tables in this data book provide variables by hospital group and are presented for 10 years (1991 to 2000) unless otherwise noted below. Tables include data from the Medicare cost reports and the American Hospital Association annual survey of hospitals. Medicare cost report data from 2000 include imputed values for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Hospitals are grouped by several attributes, including location (urban and rural), teaching status (major teaching, other teaching, nonteaching), receipt of disproportionate share payments, census region, and ownership status. All measures, with the exception of distribution data, are national aggregates, not the averages of individual facilities; this provides an overview of the industry as a whole. Definitions of the variables included in these tables can be found in the table notes.

The data book starts with case-based variables:

Table D-1 shows the trends in hospital payments per case, costs per case, and length of stay.

Table D-2 shows the trend in Medicare cost per discharge.

Table D-3 shows the trend in Medicare inpatient length of stay.

Further tables present data on a number of margin measures for prospective payment system (PPS) hospitals, based on Medicare cost report data. This analysis features our overall Medicare margin that incorporates payments and costs for inpatient and outpatient services, as well as hospital-based home health, skilled nursing, and PPS-exempt units. Margins for each of these components and the overall Medicare margin (that includes graduate medical education and Medicare bad debt) are presented by hospital group:

Table D-4 shows the trend in Medicare inpatient margins.

Table D-5 shows the distribution of Medicare inpatient margins for 2000.

Table D-6 shows the trend in Medicare outpatient margins for 1996 through 2000.

Table D-7 shows the distribution of Medicare outpatient margins for 2000.

Table D-8 shows the trend in hospital-based Medicare skilled nursing facility margins for 1996 through 2000.

Table D-9 shows the trend in hospital-based Medicare home health agency margins for 1996 through 2000.

Table D-10 shows the trend in Medicare PPS-exempt unit margins for 1996 through 2000.

Table D-11 shows the trend in the overall Medicare margins for 1996 through 2000.

Table D-12 shows the distribution of the overall Medicare margins for 2000.

The analysis is then expanded from Medicare to comparative tables among payers. These tables contain aggregate values for all community hospitals, which includes all PPS hospitals and most PPS-exempt facilities.

Table D-13 shows the trend in payment-to-cost ratio by source of revenue.

Table D-14 shows the trend in gains or losses by source of revenue.

The appendix concludes with data on hospital total margins. The total margin includes all patient care services funded by all payers, plus nonpatient revenue.

Table D-15 shows the trend in hospital total margins.

Table D-16 shows the distribution of hospital total margins for 2000.

**TABLE
D-1****Change in hospital payment, cost, and length of stay indicators, 1991–2001**

Year	Medicare operating update	Market basket	Medicare payments per discharge	Medicare costs per discharge	Medicare length of stay	Total length of stay	Costs per adjusted admission
1991	3.4%	4.4%	6.1%	7.0%	-2.7%	-1.3%	5.5%
1992	3.0	3.2	6.2	4.6	-3.3	-1.6	5.7
1993	2.7	3.1	3.5	1.2	-5.5	-2.3	3.4
1994	2.0	2.6	3.1	-1.1	-6.0	-3.8	-0.1
1995	2.0	3.2	4.9	-1.2	-6.2	-4.3	-0.5
1996	1.5	2.4	5.5	-0.5	-5.6	-3.5	0.4
1997	2.0	2.0	0.5	0.1	-3.6	-1.9	-1.5
1998	0.0	2.9	-0.1	1.7	-2.2	-0.9	-2.3
1999	1.1	2.5	0.6	2.9	-1.3	-1.8	2.7
2000	1.1	3.6	1.2	2.9	-1.9	-1.9	2.1
2001	3.4	4.3	N/A	N/A	N/A	-1.3	4.7

Note: N/A = not available. Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002) from CMS, and data from the American Hospital Association annual survey of hospitals.

**TABLE
D-2****Change in Medicare inpatient costs per discharge, 1991–2000**

Hospital group	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All hospitals	7.0%	4.6%	1.2%	-1.1%	-1.2%	-0.5%	0.1%	1.7%	2.9%	2.9%
Urban	6.7	4.4	1.1	-1.5	-1.4	-0.6	0.1	1.6	2.9	2.8
Rural	8.7	5.9	2.1	0.8	0.1	0.7	1.4	2.8	3.3	3.4
Large urban	6.1	3.4	1.3	-2.0	-1.5	-0.7	0.2	1.6	2.7	2.6
Other urban	7.6	6.1	0.8	-0.6	-1.2	-0.3	-0.1	1.7	3.3	3.1
Rural referral	8.7	5.6	2.1	0.2	-0.4	-0.1	1.0	3.2	3.8	3.4
Sole community	8.6	4.8	2.5	1.1	1.6	1.2	1.6	2.6	2.4	4.4
Small rural Medicare-dependent	9.2	4.7	1.8	1.5	-2.5	3.7	2.4	2.2	1.3	5.0
Other rural < 50 beds	6.8	6.3	2.2	2.3	2.1	1.9	1.2	4.5	3.1	3.0
Other rural ≥ 50 beds	8.7	7.0	1.5	0.8	-0.3	0.2	1.7	1.9	3.6	2.1
Major teaching	6.9	3.7	2.0	-2.5	-1.1	0.5	-0.2	2.0	3.2	2.6
Other teaching	6.8	4.5	0.8	-1.2	-0.8	-0.9	0.3	1.1	2.4	3.1
Nonteaching	7.2	4.8	1.1	-0.7	-1.8	-0.9	0.3	2.0	3.3	3.0
Major teaching										
Public	7.3	5.6	0.3	-3.5	-1.8	5.3	1.5	0.4	5.3	5.9
Private	6.8	3.3	2.3	-2.4	-0.9	-0.5	-0.5	2.4	2.7	1.9
Other teaching										
Public	8.6	5.2	0.4	-1.1	-1.9	-2.8	-0.6	4.9	2.9	0.9
Private	6.6	4.5	0.9	-1.2	-0.7	-0.8	0.4	0.9	2.4	3.2
Nonteaching										
Public	9.0	5.6	2.1	0.8	-1.0	0.6	0.7	2.3	2.4	4.1
Private	6.8	4.7	0.9	-1.0	-1.9	-1.2	0.2	2.0	3.5	2.8
DSH										
Large urban	6.2	3.0	0.9	-2.1	-1.4	-0.5	0.6	1.3	2.9	2.9
Other urban	7.9	6.5	0.8	-0.4	-1.4	-0.2	0.1	1.6	3.6	3.7
Rural	9.4	7.1	2.3	0.1	-1.4	0.2	1.6	3.6	3.0	3.8
Non-DSH	7.1	4.8	1.5	-0.9	-0.9	-0.7	-0.1	1.9	2.7	2.5
Teaching and DSH	7.0	4.3	0.9	-1.7	-1.0	-0.2	0.2	1.1	3.1	3.1
Teaching and non-DSH	6.5	4.5	2.1	-1.4	-0.6	-1.0	-0.1	2.2	1.6	2.4
Nonteaching and DSH	7.0	4.8	0.8	-0.8	-2.4	-1.6	0.5	2.2	3.0	3.6
Nonteaching and non-DSH	7.4	4.9	1.2	-0.6	-1.3	-0.4	0.1	1.9	3.5	2.6
New England	2.7	4.3	2.6	0.9	-0.5	-1.6	-0.7	0.1	1.2	-0.2
Middle Atlantic	6.7	4.7	2.2	-0.7	0.1	-0.9	0.0	0.7	2.1	1.9
South Atlantic	6.8	4.6	1.0	-1.8	-2.1	-0.8	0.5	1.4	3.5	4.7
East North Central	7.5	5.0	1.0	-0.6	-0.2	-0.4	-0.5	2.2	2.5	2.5
East South Central	10.2	7.3	0.1	-3.2	-1.9	1.2	0.8	2.8	3.3	2.6
West North Central	6.3	4.9	1.4	0.1	-0.6	2.6	1.4	2.5	3.9	2.3
West South Central	8.5	3.9	1.9	-1.6	-3.4	-1.7	0.1	1.5	2.7	4.5
Mountain	6.4	5.4	-0.3	0.4	-1.4	0.3	0.7	2.8	2.7	5.4
Pacific	6.9	3.0	0.2	-1.7	-1.5	-0.2	0.8	2.8	5.2	4.3
Voluntary	6.9	4.6	1.4	-1.0	-0.9	-0.3	0.0	1.7	2.8	2.6
Proprietary	6.2	3.6	-0.7	-3.0	-3.6	-3.8	0.8	1.4	4.1	4.4
Urban government	7.9	5.5	0.8	-1.5	-2.0	1.5	-0.3	1.9	3.6	4.3
Rural government	9.5	6.3	3.1	2.0	0.1	1.7	1.6	2.7	2.0	3.8

Note: DSH (disproportionate share). Major teaching hospitals are defined by a ratio of interns and residents to beds of 0.25 or greater, while other teaching hospitals have a ratio of less than 0.25. Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002) from CMS.

**TABLE
D-3****Change in Medicare inpatient length of stay, 1991–2000**

Hospital group	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All hospitals	-2.7%	-3.3%	-5.5%	-6.0%	-6.2%	-5.6%	-3.6%	-2.2%	-1.3%	-1.9%
Urban	-3.0	-3.4	-5.9	-6.3	-6.6	-5.9	-3.7	-2.2	-1.2	-1.9%
Rural	-1.3	-3.1	-3.5	-4.3	-4.7	-4.2	-3.2	-2.2	-1.6	-2.3%
Large urban	-3.4	-3.8	-5.7	-6.7	-6.4	-5.9	-3.5	-2.1	-1.0	-1.7
Other urban	-2.3	-2.8	-6.0	-5.8	-6.7	-5.9	-3.8	-2.3	-1.4	-2.1
Rural referral	-1.9	-3.7	-4.6	-6.3	-6.0	-5.7	-3.5	-1.7	-1.8	-1.6
Sole community	-1.0	-2.2	-3.0	-2.9	-3.6	-3.5	-3.0	-2.7	-1.4	-2.4
Small rural Medicare-dependent	-0.5	-2.7	-2.3	-2.0	-3.9	-1.2	-1.3	-2.3	-3.0	-1.8
Other rural < 50 beds	-2.0	-2.5	-1.7	-3.4	-1.3	-2.9	-2.8	-3.3	0.0	-4.8
Other rural ≥ 50 beds	-1.1	-3.2	-3.2	-3.6	-5.2	-3.8	-3.6	-2.0	-1.6	-2.6
Major teaching	-3.2	-3.5	-5.8	-7.2	-6.7	-6.6	-4.5	-2.4	-0.9	-1.5
Other teaching	-3.0	-3.4	-6.2	-6.3	-6.3	-6.0	-3.8	-2.5	-1.6	-1.7
Nonteaching	-2.3	-3.4	-4.9	-5.4	-6.1	-5.0	-3.1	-2.0	-1.2	-2.2
Major teaching										
Public	-2.2	-3.1	-5.8	-5.6	-6.8	-5.0	-2.4	-4.3	-0.5	-1.6
Private	-3.4	-3.5	-5.8	-7.5	-6.7	-6.9	-4.9	-2.0	-1.0	-1.5
Other teaching										
Public	-3.6	-2.0	-7.5	-6.2	-6.8	-7.4	-4.7	-0.5	-2.2	-2.3
Private	-3.0	-3.5	-6.1	-6.3	-6.3	-5.9	-3.8	-2.7	-1.6	-1.7
Nonteaching										
Public	-0.9	-3.1	-3.5	-3.5	-4.9	-3.9	-2.7	-2.1	-1.4	-1.6
Private	-2.6	-3.4	-5.1	-5.7	-6.3	-5.3	-3.2	-2.0	-1.1	-2.3
DSH										
Large urban	-3.6	-3.6	-5.8	-6.3	-6.4	-5.9	-3.5	-2.3	-1.0	-1.2
Other urban	-2.4	-2.6	-6.1	-5.8	-6.7	-5.9	-3.7	-2.3	-1.3	-1.9
Rural	-1.2	-2.8	-3.5	-4.4	-5.6	-5.4	-3.8	-2.0	-2.2	-2.2
Non-DSH	-2.3	-3.6	-5.1	-6.0	-5.9	-5.3	-3.6	-2.2	-1.3	-2.3
Teaching and DSH	-3.2	-3.1	-6.1	-6.6	-6.5	-6.5	-4.0	-2.5	-1.4	-1.5
Teaching and non-DSH	-2.7	-3.9	-5.9	-6.7	-6.3	-5.7	-4.2	-2.5	-1.4	-2.0
Nonteaching and DSH	-2.6	-3.3	-5.2	-5.1	-6.5	-5.3	-3.1	-2.0	-1.0	-1.8
Nonteaching and non-DSH	-2.2	-3.5	-4.6	-5.6	-5.8	-4.9	-3.2	-2.0	-1.3	-2.5
New England	-7.8	-4.3	-5.4	-7.5	-8.6	-7.8	-6.4	-3.2	-1.7	-3.3
Middle Atlantic	-2.8	-2.2	-5.8	-6.3	-6.7	-6.7	-4.9	-3.6	-1.5	-2.3
South Atlantic	-2.6	-4.2	-5.0	-6.1	-6.6	-5.7	-3.2	-2.1	-1.5	-0.9
East North Central	-2.8	-3.9	-6.0	-6.5	-5.8	-6.1	-3.5	-1.9	-1.4	-2.1
East South Central	-0.5	-2.5	-5.4	-6.1	-6.4	-4.4	-3.7	-1.7	-1.5	-2.5
West North Central	-2.7	-3.8	-5.6	-4.9	-5.0	-3.0	-2.3	-2.0	-1.4	-2.7
West South Central	-1.3	-3.4	-4.4	-5.4	-6.8	-4.9	-2.7	-1.7	-1.0	-1.4
Mountain	-3.2	-2.7	-6.7	-5.1	-5.7	-3.8	-1.7	-1.7	-0.6	-1.6
Pacific	-3.1	-4.8	-6.2	-4.8	-3.2	-3.1	-0.4	-0.1	0.6	0.3
Voluntary	-2.9	-3.4	-5.6	-6.3	-6.3	-5.7	-3.9	-2.4	-1.4	-2.0
Proprietary	-2.5	-3.7	-5.3	-5.8	-6.6	-5.8	-2.6	-1.3	-0.2	-1.2
Urban government	-2.2	-2.8	-5.8	-5.3	-6.6	-5.3	-3.2	-2.3	-1.1	-1.5
Rural government	-0.7	-3.0	-2.5	-2.7	-4.0	-3.5	-2.7	-2.1	-1.8	-2.0

Note: DSH (disproportionate share). Major teaching hospitals are defined by a ratio of interns and residents to beds of 0.25 or greater, while other teaching hospitals have a ratio of less than 0.25. Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002) from CMS.

**TABLE
D-4****Medicare inpatient margins excluding payments for direct graduate medical education, by hospital group, 1991–2000**

Hospital group	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All hospitals	-2.4%	-0.9%	1.3%	5.6%	11.1%	16.1%	16.5%	14.4%	12.3%	10.8%
Urban	-2.2	-0.8	1.6	6.4	11.8	16.9	17.4	15.6	13.5	12.1
Rural	-3.7	-1.4	-0.5	0.6	6.1	10.7	10.0	6.3	4.4	2.7
Large urban	-1.6	0.4	3.0	8.6	13.9	19.1	19.5	17.9	16.0	14.6
Other urban	-3.3	-2.9	-0.8	2.7	8.3	13.5	14.3	12.2	9.8	8.2
Rural referral	-3.7	-1.0	-1.1	0.0	5.8	10.5	10.0	6.3	4.8	3.1
Sole community	-0.9	2.1	4.1	5.2	8.6	12.9	11.5	8.0	5.8	3.8
Small rural Medicare-dependent	1.2	3.3	2.4	-0.6	6.7	10.9	11.8	10.3	8.9	5.9
Other rural < 50 beds	-5.4	-4.2	-1.2	-0.8	4.5	9.9	9.9	5.6	3.9	2.0
Other rural ≥ 50 beds	-7.1	-5.7	-3.8	-1.8	4.6	9.3	8.3	3.8	1.3	0.5
Major teaching	6.8	8.7	10.9	16.8	21.5	25.8	25.9	24.9	23.1	22.9
Other teaching	-2.8	-1.7	0.7	4.8	10.0	15.0	15.5	13.8	12.1	10.2
Nonteaching	-6.4	-5.0	-3.0	0.6	6.6	11.7	12.4	9.3	6.7	4.9
Major teaching										
Public	10.8	11.4	14.4	21.0	26.1	28.5	28.7	27.5	23.9	21.0
Private	5.9	8.2	10.1	15.8	20.3	25.2	25.2	24.3	22.9	23.3
Other teaching										
Public	-1.5	-0.4	1.9	4.9	10.4	14.3	15.9	11.0	10.0	7.9
Private	-2.9	-1.7	0.7	4.8	10.1	15.0	15.5	14.0	12.3	10.3
Nonteaching										
Public	-6.3	-5.1	-3.5	-2.0	3.9	8.2	7.9	4.8	3.0	0.2
Private	-6.4	-4.9	-2.9	1.0	7.1	12.3	13.2	10.0	7.3	5.7
DSH										
Large urban	2.2	4.6	7.7	13.6	18.5	23.1	22.8	21.5	19.8	18.5
Other urban	-1.4	-0.9	1.2	4.8	10.7	15.6	16.3	14.1	11.7	9.8
Rural	-2.7	-1.1	-0.4	0.1	7.3	12.7	12.1	7.3	5.7	3.8
Non-DSH	-6.7	-5.4	-3.9	-0.4	5.2	10.8	11.6	9.1	7.0	5.6
Teaching and DSH	3.1	4.7	7.4	12.5	17.3	21.5	21.5	20.4	18.4	17.0
Teaching and non-DSH	-4.6	-3.2	-1.8	2.2	7.7	14.0	14.6	12.9	11.7	10.7
Nonteaching and DSH	-4.2	-2.5	-0.1	3.9	10.3	15.6	15.8	12.7	10.3	8.3
Nonteaching and non-DSH	-8.1	-7.0	-5.3	-2.2	3.5	8.4	9.5	6.3	3.6	2.0
New England	-2.1	0.0	1.3	5.3	10.0	17.3	19.3	17.6	15.8	16.8
Middle Atlantic	1.1	2.3	4.5	8.9	12.7	18.2	19.1	20.2	19.8	20.0
South Atlantic	-5.9	-4.3	-2.3	2.7	9.5	14.5	15.5	12.4	10.0	7.0
East North Central	-5.1	-3.4	-1.2	2.2	7.1	12.1	13.3	10.0	7.8	6.4
East South Central	-3.7	-4.4	-1.9	4.0	11.2	15.9	15.2	11.9	10.4	8.2
West North Central	-3.0	-2.7	-1.2	2.4	7.1	10.9	10.3	8.6	6.3	6.3
West South Central	-4.5	-2.3	-0.6	4.0	11.4	17.6	17.0	15.3	12.1	10.5
Mountain	1.7	3.4	6.5	8.4	13.1	17.0	16.6	12.8	9.4	5.8
Pacific	1.4	4.3	7.9	13.2	18.9	23.0	21.6	18.4	15.3	12.9
Voluntary	-2.4	-1.0	1.0	5.1	10.1	15.2	15.9	13.8	11.9	10.7
Proprietary	-4.7	-2.4	1.2	7.8	15.5	21.3	20.7	18.6	15.7	13.5
Urban government	1.5	2.5	5.3	1.3	16.1	19.6	19.6	17.5	14.8	12.1
Rural government	-4.6	-3.1	-2.2	-2.7	3.0	7.4	6.6	3.0	1.5	-0.8

Note: DSH (disproportionate share). Major teaching hospitals are defined by a ratio of interns and residents to beds of 0.25 or greater, while other teaching hospitals have a ratio of less than 0.25. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs. Medicare inpatient margin includes services covered by the inpatient prospective payment system. 2000 values are imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002) from CMS.

**TABLE
D-5****Distribution of Medicare inpatient margins excluding payments for direct graduate medical education, by hospital group, 2000**

Hospital group	Number of hospitals	Percentile					Percent with negative margins
		10th	25th	50th	75th	90th	
All hospitals	4,124	-17.2%	-5.5%	6.0%	16.7%	26.9%	36.3%
Urban	2,458	-13.7	-2.7	7.8	17.9	27.8	31.2
Rural	1,666	-22.4	-9.0	2.9	14.4	24.6	43.7
Large urban	1,405	-12.5	-1.0	10.1	20.8	29.6	27.3
Other urban	1,053	-14.9	-5.0	5.0	14.0	22.8	36.4
Rural referral	222	-13.2	-6.9	1.9	11.8	19.1	44.6
Sole community	515	-21.7	-8.2	4.8	17.2	28.6	39.8
Small rural Medicare-dependent	221	-18.9	-6.0	7.4	17.0	27.1	35.7
Other rural < 50 beds	354	-29.8	-12.9	2.3	15.6	24.8	46.6
Other rural ≥ 50 beds	354	-24.4	-9.9	-0.2	9.2	19.1	50.8
Major teaching	280	5.4	15.0	23.2	31.4	38.9	5.7
Other teaching	755	-7.3	1.6	9.4	18.1	27.3	21.9
Nonteaching	3,089	-20.4	-8.0	3.4	14.1	23.7	42.5
Major teaching							
Public	76	5.9	13.4	22.2	30.5	37.2	3.9
Private	204	5.1	15.2	23.8	31.5	39.1	6.4
Other teaching							
Public	57	-21.1	-3.8	6.8	14.6	21.6	35.1
Private	698	-6.8	1.8	9.5	18.3	27.6	20.8
Nonteaching							
Public	813	-25.2	-10.5	1.1	13.4	23.6	47.2
Private	2,276	-18.3	-6.8	4.0	14.3	23.8	40.9
DSH							
Large urban	748	-4.2	6.1	15.9	25.6	34.2	15.2
Other urban	579	-9.5	-1.2	8.0	16.2	25.6	27.1
Rural	375	-21.0	-6.8	5.5	18.8	28.5	37.6
Non-DSH	2,422	-21.6	-8.8	2.3	12.6	21.7	44.7
Teaching and DSH	683	-2.7	6.4	15.7	25.7	34.5	12.3
Teaching and non-DSH	352	-10.8	-1.3	7.7	16.9	25.6	27.6
Nonteaching and DSH	1,019	-13.7	-3.7	7.5	18.3	27.2	32.2
Nonteaching and non-DSH	2,070	-23.0	-9.9	0.9	11.8	21.2	47.6
New England	172	-17.9	-6.7	8.2	21.2	28.8	33.1
Middle Atlantic	467	-8.6	1.8	12.2	24.1	35.4	20.6
South Atlantic	598	-14.9	-4.4	4.4	14.0	21.6	37.5
East North Central	652	-23.1	-11.2	-0.2	10.8	19.8	50.5
East South Central	386	-11.4	-1.0	9.2	19.7	27.8	27.5
West North Central	499	-19.9	-9.5	1.5	11.8	20.9	47.9
West South Central	569	-16.2	-3.7	8.4	18.8	28.7	32.0
Mountain	267	-23.5	-7.4	3.9	16.0	25.0	41.6
Pacific	514	-17.1	-3.7	9.0	19.5	29.6	29.4
Voluntary	2,520	-15.4	-5.1	5.7	16.0	26.0	36.3
Proprietary	658	-11.5	-0.7	10.1	20.2	29.5	26.4
Urban government	312	-17.4	-5.5	7.9	18.7	29.6	34.0
Rural government	634	-26.9	-10.8	0.9	13.4	23.9	47.5

Note: DSH (disproportionate share). Major teaching hospitals are defined by a ratio of interns and residents to beds of 0.25 or greater, while other teaching hospitals have a ratio of less than 0.25. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs. Medicare inpatient margin includes services covered by the inpatient prospective payment system. Data are imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002) from CMS.

**TABLE
D-6****Medicare outpatient margins excluding
payments for direct graduate medical
education, by hospital group, 1996–2000**

Hospital group	1996	1997	1998	1999	2000
All hospitals	-7.6%	-6.7%	-16.1%	-16.4%	-13.7%
Urban	-7.9	-6.9	-16.2	-16.5	-13.6
Rural	-6.4	-5.9	-15.7	-16.1	-13.9
Large urban	-8.3	-7.1	-16.9	-16.7	-13.9
Other urban	-7.4	-6.6	-15.3	-16.2	-13.3
Rural referral	-5.4	-5.1	-14.4	-14.4	-11.1
Sole community	-4.3	-2.8	-13.7	-14.3	-12.0
Small rural Medicare-dependent	-9.6	-8.8	-18.4	-18.3	-17.5
Other rural < 50 beds	-10.1	-9.4	-18.6	-20.0	-19.9
Other rural ≥ 50 beds	-7.8	-7.5	-17.8	-18.3	-17.2
Major teaching	-10.5	-10.0	-19.3	-18.3	-17.8
Other teaching	-6.9	-6.4	-15.0	-15.3	-12.0
Nonteaching	-7.0	-5.7	-15.6	-16.4	-13.2
Major teaching					
Public	-12.6	-13.1	-20.3	-19.3	-21.8
Private	-10.0	-9.3	-19.0	-18.0	-16.9
Other teaching					
Public	-7.9	-7.5	-13.8	-14.5	-15.4
Private	-6.9	-6.3	-15.1	-15.4	-11.8
Nonteaching					
Public	-7.1	-7.5	-16.4	-16.2	-16.1
Private	-7.0	-5.3	-15.5	-16.4	-12.6
DSH					
Large urban	-8.8	-8.0	-17.6	-17.2	-15.5
Other urban	-7.5	-6.6	-15.7	-16.5	-13.7
Rural	-5.4	-4.0	-16.0	-16.8	-16.0
Non-DSH	-7.2	-6.2	-15.4	-15.9	-12.4
Teaching and DSH	-8.8	-8.4	-17.2	-17.0	-15.5
Teaching and non-DSH	-7.1	-6.4	-15.4	-15.3	-11.5
Nonteaching and DSH	-6.6	-5.1	-15.9	-16.7	-13.6
Nonteaching and non-DSH	-7.2	-6.1	-15.4	-16.2	-13.0
New England	-7.8	-7.4	-14.9	-14.6	-13.0
Middle Atlantic	-10.6	-9.2	-18.0	-17.4	-13.0
South Atlantic	-6.3	-5.3	-13.8	-14.6	-13.1
East North Central	-7.8	-7.9	-17.4	-17.8	-15.6
East South Central	-6.6	-6.4	-16.9	-18.4	-16.4
West North Central	-6.5	-5.6	-14.2	-14.2	-12.7
West South Central	-7.0	-4.3	-14.8	-16.2	-14.0
Mountain	-6.1	-4.3	-13.9	-13.7	-11.2
Pacific	-7.9	-6.6	-18.4	-18.4	-12.6
Voluntary	-7.6	-6.6	-16.0	-16.1	-13.0
Proprietary	-6.5	-4.3	-15.5	-17.8	-14.0
Urban government	-9.7	-9.7	-17.5	-17.3	-18.1
Rural government	-6.9	-7.6	-16.8	-16.2	-16.5

Note: DSH (disproportionate share). Major teaching hospitals are defined by a ratio of interns and residents to beds of 0.25 or greater, while other teaching hospitals have a ratio of less than 0.25. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs. 2000 values were imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002 for 1996, 1998–2000 data; fourth quarter 1999 for 1997 data) from CMS.

**TABLE
D-7****Distribution of Medicare outpatient margins excluding payments for direct graduate medical education, by hospital group, 2000**

Hospital group	Number of hospitals	Percentile					Percent with negative margins
		10th	25th	50th	75th	90th	
All hospitals	3,897	-31.6%	-22.8%	-15.3%	-8.6%	-1.3%	91.7%
Urban	2,346	-31.7	-22.4	-14.4	-7.2	0.3	89.8
Rural	1,551	-31.2	-23.5	-16.7	-10.3	-4.1	94.5
Large urban	1,351	-32.0	-22.3	-14.0	-6.8	1.0	88.7
Other urban	995	-31.5	-22.5	-14.5	-7.6	-1.0	91.2
Rural referral	207	-24.6	-18.0	-11.6	-6.7	1.0	89.4
Sole community	488	-27.9	-20.5	-14.3	-8.9	-3.4	93.0
Small rural Medicare-dependent	204	-33.6	-27.0	-19.2	-12.8	-8.0	96.6
Other rural < 50 beds	331	-36.7	-26.6	-20.3	-14.6	-7.5	97.3
Other rural ≥ 50 beds	321	-31.2	-24.3	-18.0	-12.3	-6.0	96.0
Major teaching	253	-34.5	-25.4	-16.9	-9.7	-1.1	92.9
Other teaching	718	-29.6	-20.1	-13.0	-6.3	0.9	88.4
Nonteaching	2,926	-31.7	-23.2	-15.8	-9.1	-2.1	92.3
Major teaching							
Public	55	-51.6	-29.3	-15.8	-8.0	-0.8	92.7
Private	198	-31.7	-25.2	-16.9	-9.8	-1.3	92.9
Other teaching							
Public	44	-31.0	-21.8	-14.6	-9.2	-1.2	90.9
Private	674	-29.5	-20.0	-12.9	-6.2	0.9	88.3
Nonteaching							
Public	761	-36.1	-25.1	-18.1	-11.0	-5.1	96.3
Private	2,165	-30.6	-22.3	-15.0	-8.4	-1.0	90.9
DSH							
Large urban	702	-33.7	-23.1	-14.7	-7.3	1.2	88.7
Other urban	545	-29.8	-21.6	-14.6	-8.3	-1.2	91.2
Rural	338	-32.4	-24.2	-16.7	-10.7	-5.2	95.6
Non-DSH	2,312	-31.4	-22.8	-15.5	-8.6	-1.5	92.1
Teaching and DSH	631	-31.3	-22.2	-14.7	-7.8	-0.8	91.3
Teaching and non-DSH	340	-31.0	-20.3	-12.0	-4.6	2.7	86.5
Nonteaching and DSH	954	-32.6	-23.6	-15.3	-8.8	-1.2	90.9
Nonteaching and non-DSH	1,972	-31.4	-23.0	-16.0	-9.2	-2.5	93.1
New England	172	-25.2	-18.1	-13.8	-8.2	-4.0	95.3
Middle Atlantic	452	-29.2	-20.3	-11.0	-1.4	6.4	78.5
South Atlantic	586	-29.2	-21.5	-15.3	-9.1	-3.3	94.9
East North Central	638	-32.3	-24.5	-16.8	-10.0	-1.9	92.5
East South Central	303	-35.6	-24.5	-17.9	-10.6	-5.0	96.0
West North Central	444	-29.0	-21.4	-15.6	-9.3	-3.4	94.6
West South Central	544	-34.3	-23.8	-15.2	-9.4	-3.3	94.9
Mountain	261	-29.2	-21.1	-14.0	-7.5	-1.0	91.2
Pacific	497	-37.4	-25.1	-15.8	-8.5	1.0	88.9
Voluntary	2,410	-29.5	-21.1	-14.4	-7.5	0.3	89.7
Proprietary	627	-35.2	-25.1	-16.0	-8.8	-3.0	93.5
Urban government	272	-39.4	-26.3	-16.9	-8.8	-1.6	92.6
Rural government	586	-34.3	-24.6	-18.1	-11.6	-6.7	97.3

Note: DSH (disproportionate share). Major teaching hospitals are defined by a ratio of interns and residents to beds of 0.25 or greater, while other teaching hospitals have a ratio of less than 0.25. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs. Data are imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report and impact file data (fourth quarter 2002) from CMS.

**TABLE
D-8****Hospital-based Medicare skilled nursing facility
margins excluding graduate medical
education, by hospital group, 1996–2000**

Hospital group	1996	1997	1998	1999	2000
All hospitals	-10.2%	-12.0%	-25.3%	-56.0%	-57.3%
Urban	-10.2	-12.2	-25.4	-54.9	-56.7
Rural	-10.6	-11.0	-24.6	-60.8	-60.0
Large urban	-9.9	-12.3	-23.9	-51.4	-53.2
Other urban	-10.7	-12.2	-27.8	-60.1	-62.2
Rural referral	-9.0	-9.7	-26.2	-68.9	-71.1
Sole community	-13.6	-13.6	-25.8	-49.8	-51.0
Small rural Medicare-dependent	-15.6	-15.6	-36.8	-63.0	-58.8
Other rural < 50 beds	-7.6	-8.8	-20.3	-32.1	-19.3
Other rural ≥ 50 beds	-10.9	-11.0	-19.4	-65.4	-64.4
Major teaching	-10.4	-11.2	-23.4	-58.6	-57.2
Other teaching	-10.5	-12.8	-27.6	-54.4	-55.2
Nonteaching	-10.1	-11.7	-24.4	-56.4	-58.5
Major teaching					
Public	-6.4	-15.4	-20.2	-88.5	-100.2
Private	-10.7	-10.8	-23.7	-56.4	-53.9
Other teaching					
Public	-7.6	-9.7	-25.5	-55.9	-71.6
Private	-10.6	-13.0	-27.7	-54.4	-54.5
Nonteaching					
Public	-11.5	-10.5	-23.3	-58.3	-60.7
Private	-9.9	-11.9	-24.6	-56.1	-58.1
DSH					
Large urban	-10.6	-12.6	-23.2	-51.4	-52.6
Other urban	-11.0	-13.1	-29.0	-58.9	-62.2
Rural	-8.4	-9.3	-19.7	-70.0	-65.1
Non-DSH	-9.8	-11.4	-25.5	-56.1	-57.3
Teaching and DSH	-11.3	-12.8	-26.6	-55.6	-55.9
Teaching and non-DSH	-8.8	-11.9	-26.9	-54.5	-55.0
Nonteaching and DSH	-9.9	-12.2	-23.7	-56.0	-58.9
Nonteaching and non-DSH	-10.3	-11.2	-25.0	-56.7	-58.2
New England	-19.2	-20.9	-30.5	-56.4	-60.4
Middle Atlantic	-6.8	-6.2	-33.1	-47.2	-36.7
South Atlantic	-7.2	-10.6	-21.7	-60.7	-63.8
East North Central	-10.3	-12.7	-23.6	-63.9	-67.5
East South Central	-4.7	-7.1	-25.9	-62.3	-66.6
West North Central	-13.7	-14.8	-24.4	-58.1	-54.5
West South Central	-11.7	-14.2	-25.8	-58.0	-64.7
Mountain	-10.1	-11.7	-29.8	-53.9	-56.9
Pacific	-11.3	-12.8	-22.8	-42.7	-48.2
Voluntary	-10.6	-12.0	-26.7	-56.4	-56.7
Proprietary	-8.6	-12.8	-20.8	-51.5	-55.6
Urban government	-10.1	-12.2	-26.0	-57.1	-65.7
Rural government	-11.6	-8.6	-19.5	-63.7	-62.0

Note: DSH (disproportionate share). Major teaching hospitals are defined by a ratio of interns and residents to beds of 0.25 or greater, while other teaching hospitals have a ratio of less than 0.25. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs. 2000 values are imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002) from CMS.

**TABLE
D-9****Hospital-based Medicare home health agency
margins excluding graduate medical
education, by hospital group, 1996–2000**

Hospital group	1996	1997	1998	1999	2000
All hospitals	-4.4%	-4.0%	-24.1%	-13.2%	-10.0%
Urban	-4.5	-3.9	-22.3	-11.9	-8.9
Rural	-4.2	-4.3	-30.0	-17.6	-13.9
Large urban	-4.5	-3.4	-19.6	-10.3	-8.2
Other urban	-4.4	-4.5	-26.6	-14.5	-10.2
Rural referral	-3.5	-4.2	-32.3	-18.0	-12.8
Sole community	-5.6	-6.2	-35.4	-21.9	-18.5
Small rural Medicare-dependent	-3.1	-3.3	-27.0	-16.3	-9.4
Other rural < 50 beds	-2.3	-3.4	-24.4	-16.0	-12.5
Other rural ≥ 50 beds	-5.1	-3.6	-26.8	-14.2	-13.5
Major teaching	-5.6	-4.4	-17.6	-13.3	-11.6
Other teaching	-4.6	-3.8	-21.3	-11.3	-8.1
Nonteaching	-4.2	-4.0	-26.6	-14.2	-10.8
Major teaching					
Public	-8.0	-12.8	-31.9	-32.4	-34.9
Private	-5.5	-4.0	-16.7	-11.8	-10.4
Other teaching					
Public	-4.8	-1.9	-25.9	-13.6	-8.6
Private	-4.6	-3.9	-21.0	-11.2	-8.1
Nonteaching					
Public	-3.6	-4.1	-31.2	-20.4	-16.2
Private	-4.3	-4.0	-25.7	-13.0	-9.8
DSH					
Large urban	-4.5	-3.8	-20.9	-11.4	-9.5
Other urban	-4.5	-4.4	-25.7	-14.4	-9.9
Rural	-3.0	-3.3	-28.7	-15.8	-13.2
Non-DSH	-4.5	-4.0	-24.6	-13.4	-10.0
Teaching and DSH	-5.0	-4.3	-21.0	-12.6	-10.2
Teaching and non-DSH	-4.4	-3.1	-19.2	-10.2	-6.6
Nonteaching and DSH	-3.7	-3.7	-26.2	-13.5	-10.0
Nonteaching and non-DSH	-4.6	-4.3	-26.9	-14.8	-11.4
New England	-1.6	-0.5	-11.3	-7.6	-5.5
Middle Atlantic	-3.8	-3.0	-16.4	-8.9	-9.5
South Atlantic	-3.5	-2.6	-24.3	-11.6	-9.0
East North Central	-4.9	-4.5	-21.6	-12.1	-6.5
East South Central	-1.9	-2.2	-23.7	-9.7	-6.5
West North Central	-5.1	-4.5	-31.6	-20.9	-14.5
West South Central	-5.9	-6.9	-36.1	-20.7	-18.0
Mountain	-7.3	-6.8	-32.0	-20.9	-16.7
Pacific	-6.3	-6.4	-24.9	-16.0	-12.4
Voluntary	-4.4	-3.9	-20.9	-12.1	-9.1
Proprietary	-4.8	-4.2	-37.0	-13.8	-11.4
Urban government	-4.4	-4.0	-28.6	-20.7	-17.5
Rural government	-3.6	-4.1	-32.2	-19.4	-14.3

Note: DSH (disproportionate share). Major teaching hospitals are defined by a ratio of interns and residents to beds of 0.25 or greater, while other teaching hospitals have a ratio of less than 0.25. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs. 2000 values are imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002) from CMS.

**TABLE
D-10****Hospital Medicare PPS-exempt unit margins
excluding graduate medical education,
by hospital group, 1996–2000**

Hospital group	1996	1997	1998	1999	2000
All hospitals	4.3%	2.3%	-1.7%	-2.3%	-0.7%
Urban	3.9	1.8	-2.3	-2.7	-1.0
Rural	7.2	5.9	2.2	0.4	1.4
Large urban	4.3	1.7	-3.1	-4.4	-2.3
Other urban	3.3	2.0	-1.0	-0.1	1.1
Rural referral	10.5	10.1	9.3	5.0	4.5
Sole community	-0.7	-4.2	-11.9	-7.9	-8.3
Small rural Medicare-dependent	7.0	2.4	-6.4	-0.2	0.1
Other rural < 50 beds	-0.6	1.6	-5.5	-5.3	-5.7
Other rural ≥ 50 beds	8.2	7.1	1.8	-0.6	4.7
Major teaching	1.5	-0.3	-8.7	-8.2	-7.3
Other teaching	4.2	0.9	-1.4	-3.2	0.2
Nonteaching	5.7	4.6	1.2	1.0	1.6
Major teaching					
Public	-5.3	-0.6	-26.3	-31.3	-24.3
Private	3.0	-0.2	-3.1	-1.6	-1.8
Other teaching					
Public	7.1	5.1	-5.1	-5.3	-0.3
Private	4.0	0.6	-1.1	-3.0	0.2
Nonteaching					
Public	4.4	3.1	-0.5	0.1	-2.2
Private	5.9	4.8	1.4	1.2	2.2
DSH					
Large urban	3.9	1.5	-4.2	-6.7	-4.1
Other urban	3.9	1.8	-0.7	-0.5	1.1
Rural	11.3	13.4	8.6	7.1	7.0
Non-DSH	4.1	2.2	-1.0	-0.3	0.6
Teaching and DSH	2.8	0.5	-5.5	-6.6	-3.8
Teaching and non-DSH	4.0	0.4	-0.6	-0.6	0.6
Nonteaching and DSH	7.3	5.8	3.5	2.2	2.6
Nonteaching and non-DSH	4.1	3.3	-1.2	-0.2	0.5
New England	-4.9	-7.3	-2.3	-1.8	-4.3
Middle Atlantic	4.9	2.6	-7.3	-6.6	-4.4
South Atlantic	3.8	5.6	3.5	2.4	3.3
East North Central	3.4	-0.2	-2.3	-1.1	0.8
East South Central	4.1	1.6	-0.9	1.3	1.0
West North Central	4.4	1.9	-3.4	-4.5	-2.7
West South Central	3.2	3.3	0.2	-5.2	-2.1
Mountain	9.4	-1.3	-5.6	-1.1	2.1
Pacific	10.5	7.2	0.7	-1.9	-0.5
Voluntary	3.8	1.2	-0.8	-0.9	0.0
Proprietary	8.1	7.1	1.8	-0.7	4.3
Urban government	1.4	2.9	-12.4	-14.3	-11.3
Rural government	2.2	2.5	-3.9	-2.7	-4.8

Note: DSH (disproportionate share). PPS (prospective payment system). PPS-exempt units include inpatient psychiatric and rehabilitation services. Major teaching hospitals are defined by a ratio of interns and residents to beds of 0.25 or greater, while other teaching hospitals have a ratio of less than 0.25. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs. 2000 values are imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002) from CMS.

**TABLE
D-11****Overall Medicare margins including
payments for direct graduate medical
education, by hospital group, 1996–2000**

Hospital group	1996	1997	1998	1999	2000
All hospitals	9.9%	10.4%	6.5%	5.1%	5.0%
Urban	10.7	11.5	7.8	6.4	6.3
Rural	5.0	4.1	-1.2	-2.5	-2.9
Large urban	12.3	13.2	9.5	8.4	8.4
Other urban	8.2	8.8	5.1	3.3	2.9
Rural referral	5.9	5.4	0.0	-1.7	-1.9
Sole community	6.1	4.8	-0.7	-1.6	-2.1
Small rural Medicare-dependent	3.2	3.3	-0.6	-0.7	-1.5
Other rural < 50 beds	2.4	1.7	-4.0	-3.4	-4.3
Other rural ≥ 50 beds	4.2	2.9	-3.1	-5.0	-5.6
Major teaching	17.2	19.0	15.3	13.7	14.9
Other teaching	9.6	10.1	6.7	5.7	5.0
Nonteaching	6.5	6.7	2.0	0.1	-0.2
Major teaching					
Public	18.3	19.5	15.1	10.6	11.4
Private	16.8	18.9	15.3	14.4	15.7
Other teaching					
Public	9.5	11.0	4.4	4.4	2.6
Private	9.7	10.1	6.9	5.8	5.2
Nonteaching					
Public	3.6	2.9	-1.8	-3.2	-4.8
Private	7.1	7.4	2.6	0.7	0.6
DSH					
Large urban	15.5	16.1	12.4	11.3	11.5
Other urban	10.0	10.5	6.7	4.8	4.2
Rural	7.5	6.4	0.3	-1.0	-1.7
Non-DSH	5.6	6.2	2.1	0.8	0.7
Teaching and DSH	14.4	15.2	11.7	10.3	10.4
Teaching and non-DSH	8.4	9.4	6.0	5.4	5.5
Nonteaching and DSH	10.0	9.8	4.9	3.2	2.8
Nonteaching and non-DSH	3.8	4.2	-0.5	-2.4	-2.6
New England	10.4	11.7	9.0	7.7	9.0
Middle Atlantic	12.0	13.7	11.5	11.7	13.5
South Atlantic	9.1	9.7	5.9	4.4	2.4
East North Central	6.7	7.3	2.7	0.9	0.9
East South Central	10.2	9.4	4.5	3.5	2.8
West North Central	5.5	5.5	1.7	0.0	0.9
West South Central	10.1	10.1	6.5	3.8	3.4
Mountain	10.5	10.5	5.2	2.6	1.0
Pacific	15.1	14.4	9.8	7.2	6.4
Voluntary	9.3	10.2	6.3	5.0	5.1
Proprietary	13.6	13.0	10.0	8.2	7.7
Urban government	12.3	12.6	7.8	5.3	4.5
Rural government	2.6	1.4	-3.8	-4.8	-5.9

Note: DSH (disproportionate share). Major teaching hospitals are defined by a ratio of interns and residents to beds of 0.25 or greater, while other teaching hospitals have a ratio of less than 0.25. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs. 2000 values are imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002) from CMS.

**TABLE
D-12****Distribution of overall Medicare margins including payments for direct graduate medical education, by hospital group, 2000**

Hospital group	Number of hospitals	Percentile					Percent with negative margins
		10th	25th	50th	75th	90th	
All hospitals	3,866	-18.8%	-9.3%	0.1%	9.1%	17.6%	49.8%
Urban	2,325	-15.9	-6.9	2.5	10.6	19.3	43.1
Rural	1,541	-22.4	-12.6	-3.6	5.5	13.9	60.0
Large urban	1,338	-14.7	-5.1	4.5	13.2	21.7	37.7
Other urban	987	-16.9	-8.8	-0.1	7.8	14.4	50.4
Rural referral	207	-17.9	-10.8	-3.3	4.7	11.5	60.9
Sole community	487	-22.2	-12.0	-1.9	7.9	17.3	57.3
Small rural Medicare-dependent	203	-20.7	-9.9	0.2	7.7	15.0	49.8
Other rural < 50 beds	324	-28.4	-14.4	-4.2	4.8	14.1	59.0
Other rural ≥ 50 beds	320	-24.9	-13.8	-6.0	2.1	10.5	70.9
Major teaching	252	-1.4	7.6	15.2	22.2	28.9	11.5
Other teaching	715	-9.4	-2.4	4.2	11.0	19.2	33.4
Nonteaching	2,899	-21.3	-11.7	-2.4	6.3	14.4	57.2
Major teaching							
Public	55	-2.2	1.8	12.3	19.6	26.1	16.4
Private	197	-0.8	8.8	16.3	22.6	29.6	10.2
Other teaching							
Public	44	-11.0	-5.1	0.7	6.1	12.5	45.5
Private	671	-9.3	-2.0	4.6	11.2	19.6	32.6
Nonteaching							
Public	752	-26.0	-14.7	-4.6	4.6	13.4	63.0
Private	2,147	-19.4	-10.9	-1.8	6.9	15.0	55.1
DSH							
Large urban	699	-8.2	0.5	9.1	17.8	24.7	23.7
Other urban	544	-12.4	-4.2	2.3	9.7	16.4	41.4
Rural	336	-22.1	-10.6	-1.3	8.3	17.2	53.9
Non-DSH	2,287	-21.9	-12.5	-3.1	5.5	13.2	59.2
Teaching and DSH	630	-5.8	0.8	8.8	17.4	25.1	22.5
Teaching and non-DSH	337	-12.4	-4.8	2.9	11.0	18.5	37.4
Nonteaching and DSH	949	-16.1	-7.2	1.5	10.0	18.0	45.3
Nonteaching and non-DSH	1,950	-22.5	-13.6	-4.3	4.5	11.9	62.9
New England	171	-18.0	-9.7	1.6	10.8	19.3	44.4
Middle Atlantic	448	-9.9	-1.4	7.0	16.4	26.4	30.4
South Atlantic	583	-15.8	-8.6	-0.9	8.3	14.4	53.0
East North Central	635	-22.7	-13.9	-5.3	3.8	12.1	63.9
East South Central	300	-14.5	-4.6	2.5	10.4	17.4	39.7
West North Central	443	-19.9	-13.2	-4.2	4.3	11.9	62.5
West South Central	538	-19.4	-7.9	1.0	9.0	17.6	46.5
Mountain	259	-23.2	-11.7	-1.6	8.4	16.1	54.8
Pacific	489	-18.9	-8.0	2.5	12.0	21.1	42.9
Voluntary	2,396	-17.2	-8.8	0.1	9.0	17.8	49.6
Proprietary	619	-14.7	-4.8	3.9	12.7	19.9	37.6
Urban government	270	-20.4	-11.0	-0.4	9.0	18.2	50.4
Rural government	581	-26.6	-14.4	-4.5	4.5	13.6	63.2

Note: DSH (disproportionate share). Major teaching hospitals are defined by a ratio of interns and residents to beds of 0.25 or greater, while other teaching hospitals have a ratio of less than 0.25. A margin is calculated as revenue minus costs divided by revenue; margins are based on Medicare-allowed costs. Data are imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002) from CMS.

**TABLE
D-13****Hospital payment-to-cost ratios,
by source of revenue, 1991–2001**

Year	Medicare	Medicaid	Uncompensated care	Private payers
1991	88.4%	81.6%	19.6%	129.7%
1992	88.8	90.9	18.9	131.3
1993	89.4	93.1	19.5	129.3
1994	96.9	93.7	19.3	124.4
1995	99.3	93.8	18.0	123.9
1996	102.4	94.8	17.3	121.5
1997	103.6	95.9	14.1	117.6
1998	102.6	97.9	13.2	113.6
1999	101.1	96.7	13.2	112.3
2000	100.2	96.1	12.1	112.5
2001	99.4	98.0	12.2	113.2

Note: Payment-to-cost ratios indicate the relative degree to which payments from each payer cover the costs of treating its patients. Operating subsidies from state and local governments are considered payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Data are for community hospitals and reflect all types of patient care services. Imputed values are used for missing data (about 35 percent of observations), which corrects for underrepresentation of proprietary and public hospitals relative to voluntary institutions. Most Medicare and Medicaid managed care patients are included in the private payers category. The costs allocated to Medicare and Medicaid include CMS's allowed and nonallowed costs.

Source: MedPAC analysis of data from the American Hospital Association annual survey of hospitals.

**TABLE
D-14****Gains or losses as a percent of total hospital costs, by source of revenue, 1991–2000**

Year	Medicare	Medicaid	Other government payers and subsidies	Uncompensated care	Private payers	Nonpatient	Total gains
1991	-4.4%	-2.3%	0.4%	-4.8%	11.6%	3.5%	4.0%
1992	-4.4	-1.2	0.2	-4.9	11.8	3.3	4.8
1993	-4.1	-0.9	0.2	-4.8	10.9	3.3	4.4
1994	-1.2	-0.9	0.2	-4.9	8.7	3.1	5.0
1995	-0.3	-0.9	-0.1	-5.0	8.5	3.7	6.0
1996	0.9	-0.7	-0.1	-5.1	7.9	4.3	7.2
1997	1.4	-0.5	-0.1	-5.2	6.7	4.9	7.2
1998	1.0	-0.2	0.0	-5.2	5.5	5.1	6.1
1999	0.4	-0.4	0.1	-5.4	5.2	5.1	4.9
2000	0.1	-0.4	0.1	-5.3	5.4	5.1	4.8

Note: Gains or losses are the difference between the cost of providing care (or operating a nonpatient service) and the payment received. Operating subsidies from state and local governments are considered payments for uncompensated care, up to the level of each hospital's uncompensated care costs. Subsidies in excess of uncompensated care costs are combined with revenue from other government payers. Nonpatient reflects both other operating and nonoperating revenue. Data are for community hospitals and reflect both inpatient and outpatient services. Imputed values are used for missing data (about 35 percent of observations), which corrects for underrepresentation of proprietary and public hospitals relative to voluntary institutions. Most Medicare and Medicaid managed care patients are included in the private payers category. Gains and losses from the sources shown sum to total gains (except due to rounding). The costs allocated to Medicare and Medicaid include CMS's allowed and nonallowed costs.

Source: MedPAC analysis of data from the American Hospital Association annual survey of hospitals.

**TABLE
D-15****Hospital total margins, by hospital group, 1991–2000**

Hospital group	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All hospitals	4.4%	4.4%	4.4%	5.0%	5.8%	6.1%	6.0%	4.3%	3.8%	3.4%
Urban	4.3	4.3	4.3	4.9	5.6	5.9	5.8	4.2	3.6	3.3
Rural	5.2	5.3	5.2	5.6	6.6	7.3	6.9	5.1	4.9	4.4
Large urban	3.7	3.7	3.9	4.3	4.9	5.2	5.2	3.8	3.0	2.7
Other urban	5.5	5.2	5.2	6.0	6.9	7.2	7.0	5.0	4.7	4.3
Rural referral	6.7	6.9	6.3	6.8	8.4	9.2	9.3	6.9	7.4	6.4
Sole community	5.1	5.1	5.1	5.6	5.7	6.5	6.1	4.8	3.9	3.9
Small rural Medicare-dependent	3.1	2.4	3.9	3.3	3.9	4.7	4.5	2.3	3.3	2.7
Other rural < 50 beds	2.2	2.3	2.5	2.1	2.8	4.3	2.8	1.1	1.3	1.0
Other rural ≥ 50 beds	4.5	4.8	4.7	5.6	6.7	7.1	5.9	4.6	3.3	3.4
Major teaching	3.7	3.4	3.4	3.3	4.0	3.5	4.8	3.3	2.8	1.5
Other teaching	4.6	4.5	4.6	5.3	6.3	7.0	6.5	4.2	3.9	4.2
Nonteaching	4.8	5.0	4.9	5.9	6.5	7.1	6.3	5.0	4.3	4.1
Major teaching										
Public	4.5	4.2	4.5	2.8	3.1	2.8	5.1	4.5	3.2	-0.1
Private	3.3	3.0	3.0	3.4	4.3	3.7	4.7	2.9	2.6	2.1
Other teaching										
Public	5.4	4.2	4.4	3.8	4.9	6.0	4.2	3.1	2.7	2.9
Private	4.6	4.5	4.7	5.5	6.4	7.1	6.6	4.3	4.0	4.3
Nonteaching										
Public	4.3	4.6	4.2	4.7	5.5	6.0	5.7	4.0	3.1	3.3
Private	4.8	5.0	5.1	6.1	6.7	7.3	6.4	5.2	4.6	4.2
DSH										
Large urban	3.2	3.4	3.6	3.9	4.4	4.4	4.7	3.2	2.5	1.9
Other urban	5.9	5.6	5.5	6.3	6.9	7.2	7.2	5.1	4.8	4.2
Rural	7.2	7.5	5.8	6.1	7.2	7.8	6.9	4.9	4.7	4.2
Non-DSH	4.6	4.5	4.6	5.3	6.3	7.1	6.4	4.9	4.4	4.4
Teaching and DSH	4.0	4.0	4.0	4.2	4.8	4.9	5.5	3.6	3.0	2.4
Teaching and non-DSH	4.9	4.0	4.5	4.9	6.5	7.1	6.5	4.6	4.6	4.7
Nonteaching and DSH	5.1	5.2	5.3	6.3	6.7	7.2	6.3	4.8	4.5	4.0
Nonteaching and non-DSH	4.5	4.7	4.6	5.5	6.2	7.1	6.3	5.1	4.2	4.2
New England	2.2	2.2	3.1	2.6	3.0	4.0	5.1	2.7	1.5	1.6
Middle Atlantic	1.4	0.9	1.9	2.6	3.0	3.1	3.5	1.6	0.4	0.9
South Atlantic	6.0	6.2	5.7	6.6	7.5	8.4	8.0	5.7	6.0	4.2
East North Central	4.8	4.8	4.8	5.6	6.3	6.4	6.9	4.7	5.3	3.9
East South Central	6.4	5.6	4.9	5.2	6.6	7.3	5.0	3.4	3.2	3.2
West North Central	4.9	4.5	4.7	6.6	7.3	7.4	7.8	5.8	4.9	4.9
West South Central	5.8	7.4	6.2	6.7	7.4	7.3	6.4	5.6	4.2	3.9
Mountain	5.5	5.4	7.0	7.4	7.7	8.2	4.5	5.3	3.7	4.3
Pacific	4.7	4.1	4.1	3.6	4.4	4.5	5.3	4.5	3.6	4.4
Voluntary	4.3	4.1	4.1	4.7	5.7	5.8	6.2	4.0	3.1	3.2
Proprietary	5.0	6.3	6.9	8.9	8.3	9.8	5.7	6.8	9.0	7.7
Urban government	4.6	4.2	4.3	3.5	4.0	4.0	5.1	4.2	3.0	1.2
Rural government	4.6	5.0	4.5	4.7	5.8	6.5	5.3	3.7	3.5	3.5

Note: DSH (disproportionate share). Major teaching hospitals are defined by a ratio of interns and residents to beds of 0.25 or greater, while other teaching hospitals have a ratio of less than 0.25. A margin is calculated as revenue minus costs divided by revenue. Total margin includes all patient care services funded by all payers, plus nonpatient revenue. 2000 values are imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002) from CMS.

**TABLE
D-16****Distribution of hospital total margins, by hospital group, 2000**

Hospital group	Number of hospitals	Percentile					Percent with negative margins
		10th	25th	50th	75th	90th	
All hospitals	4,051	-9.7%	-1.9%	2.7%	7.0%	12.0%	32.8%
Urban	2,402	-10.6	-2.2	2.7	7.2	13.0	33.3
Rural	1,649	-8.5	-1.6	2.6	6.5	10.8	31.9
Large urban	1,365	-11.1	-3.0	2.1	6.9	13.1	36.9
Other urban	1,037	-9.9	-1.1	3.6	7.4	12.5	28.6
Rural referral	217	-1.5	2.3	5.8	8.3	14.2	14.7
Sole community	506	-8.6	-1.7	2.5	6.5	11.0	34.6
Small rural Medicare-dependent	222	-9.9	-3.1	1.8	5.4	9.6	37.8
Other rural < 50 beds	352	-10.4	-3.1	1.6	5.6	9.1	36.4
Other rural ≥ 50 beds	352	-6.3	-1.0	2.7	6.2	9.8	30.4
Major teaching	269	-10.8	-3.2	0.8	4.6	8.8	41.3
Other teaching	724	-7.3	-0.6	3.3	7.1	12.1	27.9
Nonteaching	3,058	-10.0	-2.0	2.7	7.1	12.3	33.2
Major teaching							
Public	71	-14.8	-5.6	-0.3	3.1	8.8	50.7
Private	198	-7.8	-2.2	1.4	4.9	8.7	37.9
Other teaching							
Public	50	-6.3	-2.1	1.8	5.4	10.3	34.0
Private	674	-7.3	-0.5	3.4	7.1	12.2	27.4
Nonteaching							
Public	813	-8.6	-1.9	2.2	6.0	9.6	32.3
Private	2,245	-10.5	-2.0	2.9	7.5	13.5	33.5
DSH							
Large urban	732	-11.6	-3.7	1.2	5.9	12.3	40.2
Other urban	567	-9.0	-0.4	3.7	7.5	13.1	26.5
Rural	369	-12.4	-3.6	1.9	6.6	10.3	38.8
Non-DSH	2,383	-8.5	-1.5	3.0	7.1	12.0	31.1
Teaching and DSH	665	-9.6	-2.2	1.8	5.8	11.1	34.6
Teaching and non-DSH	328	-6.6	0.0	3.8	8.0	12.0	25.3
Nonteaching and DSH	1,003	-12.4	-3.3	2.3	7.3	12.8	35.6
Nonteaching and non-DSH	2,055	-8.6	-1.6	2.9	7.0	12.1	32.0
New England	171	-7.2	-1.0	2.3	4.6	10.0	30.4
Middle Atlantic	466	-11.1	-3.2	0.7	4.0	7.2	42.1
South Atlantic	594	-11.0	-1.6	3.2	7.9	14.8	31.3
East North Central	648	-6.8	-0.4	3.8	7.4	11.4	26.2
East South Central	382	-12.4	-3.6	2.1	5.9	9.6	39.0
West North Central	488	-4.7	0.0	3.6	7.3	12.1	24.6
West South Central	548	-11.8	-3.9	2.3	7.1	12.6	39.6
Mountain	262	-7.9	-1.3	4.1	8.7	14.1	27.9
Pacific	492	-10.5	-2.2	2.3	7.6	14.8	33.3
Voluntary	2,479	-8.5	-1.3	2.8	6.5	10.6	31.2
Proprietary	638	-15.1	-4.1	3.4	13.8	21.5	37.3
Urban government	300	-10.7	-2.1	2.0	5.4	9.3	34.7
Rural government	632	-8.7	-2.2	2.0	6.2	9.6	33.4

Note: DSH (disproportionate share). Major teaching hospitals are defined by a ratio of interns and residents to beds of 0.25 or greater, while other teaching hospitals have a ratio of less than 0.25. A margin is calculated as revenue minus costs divided by revenue. Total margin includes all patient care services funded by all payers, plus nonpatient revenue. Data are imputed for hospitals whose 2000 cost reports were not available (about 27 percent of observations). Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data (fourth quarter 2002) from CMS.

A P P E N D I X

E

**Commissioners' voting
on recommendations**

Commissioners' voting on recommendations

In the Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000, the Congress required MedPAC to call for individual Commissioner votes on each recommendation, and to document the voting record in its report. The information below satisfies that mandate.

Chapter 1: Context for Medicare spending

No recommendations

Chapter 2: Assessing payment adequacy and updating payments in fee-for-service Medicare

Section 2A: Hospital inpatient and outpatient services

2A-1 The Secretary should add 13 DRGs to the post-acute transfer policy in fiscal year 2004 and then evaluate the effects on hospitals and beneficiaries before proposing further expansions.

Yes: Burke, DeBusk, DeParle, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Rowe, Smith, Stowers

No: Wolter

Not voting: Wakefield

2A-2 The Congress should enact a low-volume adjustment to the rates used in the inpatient PPS. This adjustment should apply only to hospitals that are more than 15 miles from another facility offering acute inpatient care.

Yes: Burke, DeBusk, DeParle, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Rowe, Smith, Stowers, Wakefield, Wolter

2A-3 The Secretary should reevaluate the labor share used in the wage index system that geographically adjusts rates in the inpatient PPS, with any resulting change phased in over two years.

Yes: Burke, DeBusk, DeParle, Durenberger, Feezor, Hackbarth, Muller, Nelson, Raphael, Reischauer, Rosenblatt, Rowe, Smith, Stowers, Wakefield, Wolter

Not voting: Newhouse

2A-4 The Congress should raise the inpatient base rate for hospitals in rural and other urban areas to the level of the rate for those in large urban areas, phased in over two years.

Yes: Burke, DeBusk, DeParle, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Rowe, Smith, Stowers, Wakefield, Wolter

2A-5 The Congress should raise the cap on the disproportionate share add-on a hospital can receive in the inpatient PPS from 5.25 percent to 10 percent, phased in over two years.
Yes: Burke, DeBusk, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Reischauer, Rosenblatt, Rowe, Smith, Stowers, Wakefield, Wolter
No: DeParle
Not voting: Raphael

2A-6 The Congress should increase payment rates for the inpatient PPS by the rate of increase in the hospital market basket, less 0.4 percent, for fiscal year 2004.
Yes: Burke, DeBusk, DeParle, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Rowe, Smith, Stowers, Wakefield, Wolter

2A-7 The Congress should increase payment rates for the outpatient PPS by the rate of increase in the hospital market basket, less 0.9 percent, for calendar year 2004.
Yes: Burke, DeBusk, DeParle, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Rowe, Smith, Stowers, Wakefield, Wolter

Section 2B: Physician services

2B The Congress should update payments for physician services by the projected change in input prices, less an adjustment for productivity growth of 0.9 percent, for 2004.
Yes: Burke, DeBusk, DeParle, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Smith, Stowers, Wakefield, Wolter
Absent: Rowe

Section 2C: Skilled nursing facility services

2C-1 The Secretary should continue a series of nationally representative studies on access to skilled nursing facility services (similar to studies previously conducted by the Department of Health and Human Services' Office of Inspector General).
Yes: Burke, DeBusk, DeParle, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Smith, Stowers, Wakefield, Wolter
Absent: Rowe

2C-2 The Congress should eliminate the update to payment rates for skilled nursing facility services for fiscal year 2004.
Yes: Burke, DeBusk, DeParle, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Smith, Stowers, Wakefield, Wolter
Absent: Rowe

2C-3A Consistent with previous MedPAC recommendations, the Secretary should develop a new classification system for care in skilled nursing facilities.
Because it may take time to develop this system, the Secretary should draw on new and existing research to reallocate payments to achieve a better balance of available resources between the rehabilitation and nonrehabilitation groups.
To allow for immediate reallocation of resources, the Congress should give the Secretary the authority to:

- remove some or all of the 6.7 percent payment add-on currently applied to the rehabilitation RUG–III groups.
- reallocate money to the nonrehabilitation RUG–III groups to achieve a better balance of resources among all of the RUG–III groups.

2C-3B If necessary action does not occur within a timely manner, the Congress should provide for a market basket update, less an adjustment for productivity growth of 0.9 percent, for hospital-based skilled nursing facilities to be effective October 1, 2003.

Yes: Burke, DeBusk, DeParle, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Rowe, Smith, Stowers, Wakefield, Wolter

Section 2D: Home health services

2D-1 The Secretary should continue a series of nationally representative studies on access to home health services (similar to studies previously conducted by the Department of Health and Human Services’ Office of Inspector General).

Yes: Burke, DeBusk, DeParle, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Smith, Stowers, Wakefield, Wolter

Absent: Rowe

2D-2 The Congress should extend for one year add-on payments at 5 percent for home health services provided to Medicare beneficiaries who live in rural areas.

Yes: Burke, DeBusk, DeParle, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Smith, Stowers, Wakefield, Wolter

Absent: Rowe

2D-3 The Congress should eliminate the update to payment rates for home health services for fiscal year 2004.

Yes: Burke, DeBusk, DeParle, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Reischauer, Rosenblatt, Smith, Stowers, Wakefield, Wolter

Not voting: Raphael

Absent: Rowe

Section 2E: Outpatient dialysis services

2E The Congress should update the composite rate payment by the projected change in input prices, less 0.9 percent, for calendar year 2004.

Yes: Burke, DeBusk, DeParle, Durenberger, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Smith, Stowers, Wakefield, Wolter

Not voting: Feezor

Absent: Rowe

Section 2F: Ambulatory surgical center services

2F-1 The Secretary should expedite collection of recent ASC charge and cost data for the purpose of analyzing and revising the ASC payment system.

Yes: Burke, DeBusk, DeParle, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Smith, Stowers, Wakefield, Wolter

Absent: Rowe

2F-2 The Congress should eliminate the update to payment rates for ASC services for fiscal year 2004.

Yes: Burke, DeBusk, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Smith, Stowers, Wakefield, Wolter

Not voting: DeParle

Absent: Rowe

2F-3 Until the Secretary implements a revised ASC payment system, the Congress should ensure that payment rates for ASC procedures do not exceed hospital outpatient PPS rates for those procedures, after accounting for differences in the bundle of services covered.

Yes: Burke, DeBusk, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Smith, Stowers, Wakefield, Wolter

Not voting: DeParle

Absent: Rowe

Chapter 3: Access to care in the Medicare program

No recommendations

Chapter 4: Payment for new technologies in Medicare's prospective payment systems

The Secretary should introduce clinical criteria for eligibility of drugs and biologicals to receive pass-through payments under the outpatient prospective payment system.

Yes: Burke, DeBusk, DeParle, Durenberger, Feezor, Hackbarth, Muller, Nelson, Newhouse, Raphael, Reischauer, Rosenblatt, Smith, Stowers, Wakefield, Wolter

Absent: Rowe

Chapter 5: Health insurance choices for Medicare beneficiaries

No recommendations

Acronyms

Acronyms

AAHP	American Association of Health Plans
ACE-PRO	Access to Care for the Elderly Project
ADL	activity of daily living
AHA	American Hospital Association
AHCA	American Health Care Association
AHRQ	Agency for Healthcare Research and Quality
AIC	minimum amount in controversy
ALJ	administrative law judge
AMA	American Medical Association
APC	ambulatory payment classification or ambulatory payment category
ASC	ambulatory surgical center
AWP	average wholesale price
BBA	Balanced Budget Act of 1997
BBRA	Balanced Budget Refinement Act of 1999
BIPA	Medicare, Medicaid, and SCHIP Benefits Improvement and Protection Act of 2000
BLS	Bureau of Labor Statistics
CAC	carrier advisory committee
CAH	critical access hospital
CAHPS	Consumer Assessment of Health Plans Survey
CalPERS	California Public Employees' Retirement System
CAT	computerized automated tomography
CBO	Congressional Budget Office
CC	complication or comorbidity
CCP	coordinated care plan
CMG	case-mix group
CMS	Centers for Medicare & Medicaid Services
COLA	cost of living adjustment
CPI-U	consumer price index for all urban consumers
CPT	Current Procedural Terminology
DAB	Departmental Appeals Board
DME	durable medical equipment
DMERC	durable medical equipment regional contractor
DoD	Department of Defense
DRG	diagnosis related group
DSH	disproportionate share
ECI	employment cost index
ED	emergency department
ESRD	end-stage renal disease
FDA	Food and Drug Administration

FEHBP	Federal Employees Health Benefits Program
FFS	fee-for-service
FI	fiscal intermediary
FY	fiscal year
GAO	General Accounting Office
GDP	gross domestic product
GI	gastrointestinal
GME	graduate medical education
GPCI	geographic practice cost index
GPO	group purchasing organization or Government Printing Office
HCBC	home and community-based care
HCFA	Health Care Financing Administration
HCPCS	Healthcare Common Procedure Coding System
HHA	home health agency
HHRG	home health resource group
HHS	Department of Health and Human Services
HI	Hospital Insurance (Medicare Part A)
HMO	health maintenance organization
HPSA	health professional shortage area
HSC	Center for Studying Health System Change
HWI	hospital wage index
HWI_r	hospital wage index with geographic reclassification
HWI_u	hospital wage index unreclassified
ICD-9-CM	International Classification of Diseases, Ninth Revision, Clinical Modification
IDE	investigational device exemption
IHS	Indian Health Service
IME	indirect medical education
IOM	Institute of Medicine
IPS	interim payment system
IRF	inpatient rehabilitation facility
LMRP	local medical review policy
LOS	length of stay
LTC	long-term care
LTC-DRG	long-term care diagnosis related group
LTCH	long-term care hospital
LUPA	low utilization payment adjustment
M+C	Medicare+Choice
MB	market basket
MCAC	Medicare Coverage Advisory Committee
MCBS	Medicare Current Beneficiary Survey
MCO	managed care organization
MDC	major diagnostic category
MedPAC	Medicare Payment Advisory Commission
MedPAR	Medicare Provider Analysis and Review

MEI	Medicare Economic Index
MEPS	Medical Expenditure Panel Survey
MPR	Mathematica Policy Research, Inc.
MRI	magnetic resonance imaging
MSA	metropolitan statistical area
NAIC	National Association of Insurance Commissioners
NCD	national coverage decision
NCFE	National Century Financial Enterprises
NCHS	National Center for Health Statistics
NHAMCS	National Hospital Ambulatory Medical Care Survey
NHE	national health expenditure
NHIS	National Hospital Indicators Survey or National Health Interview Survey
NHS	National Health Service (United Kingdom)
NICE	National Institute for Clinical Excellence (United Kingdom)
NKF	National Kidney Foundation
NLA	national limitation amount
OACT	Office of the Actuary
OASIS	Outcomes and Assessment Information Set
OBRA	Omnibus Budget Reconciliation Act
OIG	Office of Inspector General
OMB	Office of Management and Budget
OPD	outpatient department
OR	operating room
OSCAR	Online Survey, Certification, and Reporting system
PAC	post-acute care
PACE	Program of All-Inclusive Care for the Elderly
PBM	pharmaceutical benefit management organization
PE	practice expense
PET	positron emission tomography
PFFS	private fee-for-service
PHI	private health insurance
PLI	professional liability insurance
POS	point-of-service (plan)
PPO	preferred provider organization
PPS	prospective payment system
ProPAC	Prospective Payment Assessment Commission
PTCA	percutaneous transluminal coronary angioplasty
QI-1	Qualifying Individuals–1
QIO	quality improvement organization
QMB	qualified Medicare beneficiary
RUG–III	resource utilization group, version III
S/HMO	Social Health Maintenance Organization
SCHIP	State Children’s Health Insurance Program
SGR	sustainable growth rate

SHIP	State Health Insurance Assistance Program
SLMB	specified low-income Medicare beneficiary
SMI	Supplementary Medical Insurance (Medicare Part B)
SMS	Socioeconomic Monitoring System
SNF	skilled nursing facility
SSI	Supplemental Security Income
TEFRA	Tax Equity and Fiscal Responsibility Act of 1982
UK	United Kingdom
USRDS	United States Renal Data System
VA	Department of Veterans Affairs

More about MedPAC

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Sheila P. Burke, M.P.A., R.N., F.A.A.N., is the Smithsonian Institution's undersecretary for American Museums and National Programs. Before joining the Smithsonian, she was executive dean and lecturer in public policy at the John F. Kennedy School of Government, Harvard University, Cambridge. From 1986 to 1996, Ms. Burke was chief of staff for former Senate Majority Leader Bob Dole and was elected Secretary of the Senate in 1995. She currently serves as a board member of the Kaiser Family Foundation, the Kaiser Commission on Medicaid and the Uninsured, the Center for Health Care Strategies, Inc., the Academy for Health Services Research and Health Policy, the American Board of Internal Medicine Foundation, WellPoint Health Networks, Chubb Insurance, Community Health Systems, the University of San Francisco, and Marymount University. She also sits on the national advisory council at the Center for State Health Policy and has chaired the National Academy of Social Insurance's project on Restructuring Medicare for the Long-Term. Ms. Burke holds a B.S. in nursing from the University of San Francisco and an M.P.A. from Harvard University.

Autry O.V. "Pete" DeBusk is chairman, chief executive officer, and founder of DeRoyal, a global supplier of medical products and services in the acute care, patient care, wound care, and original equipment manufacturing markets. Mr. DeBusk formed his first company in 1970 with a patent he received on an orthopedic product. In 1976 he consolidated his many product lines into one company, DeRoyal Industries. A member of several community organizations, Mr. DeBusk is also chairman of the Board of Trustees at Lincoln Memorial University in Harrogate, Tenn., as well as a founder of the Autry O.V. DeBusk facility, Boys and Girls Club, Powell, Tenn. As an innovative leader in the medical industry, he received a prestigious award from Duke University in 2000 recognizing his original contributions to orthopedic surgery. He received his B.S. degree from Lincoln Memorial University and attended graduate school at the University of Georgia.

Nancy-Ann DeParle, J.D., is a senior advisor to JPMorgan Partners, LLC, and adjunct professor at the Wharton School of the University of Pennsylvania. From 1997 to 2000, she served as administrator of the Health Care Financing Administration (HCFA), which is now the Centers for Medicare & Medicaid Services. After resigning from HCFA, Ms. DeParle became a joint fellow of Harvard University's Institute of Politics at the Kennedy School of Government and the Interfaculty Health Policy Forum. Before joining HCFA, Ms. DeParle was associate director for health and personnel at the White House Office of Management and Budget. From 1987 to 1989 she served as the Tennessee Commissioner of Human Services. She has also worked as a lawyer in private practice in Nashville, Tenn., and Washington, DC. Ms. DeParle received a B.A. degree from the University of Tennessee; B.A. and M.A. degrees from Oxford University, where she was a Rhodes Scholar; and a J.D. degree from Harvard Law School.

David F. Durenberger, J.D., is president of Policy Insight, LLC; senior health policy fellow at the University of St. Thomas; and chairman and chief executive officer of the National Institute of Health Policy. He is also chairman of Citizens for Long Term Care, president of the Medical Technology Leadership Forum, and a member of the Kaiser Foundation Commission on Medicaid and the Uninsured. From 1978 to 1995, he served as the senior U.S. Senator from Minnesota, as well as a member of the Senate Finance Committee and chair of its Health Subcommittee. He was a member of the Senate Environment Committee as well as the committee now known as the Health, Education, Labor, and Pensions Committee, and chaired the Senate Select Committee on Intelligence. He was vice chairman of the Pepper Commission and a member of the Congressional Bio-Ethics Commission, the Advisory Commission on Intergovernmental Relations, and the Congressional Advisory Committee to the Office of Technology Assessment. Senator Durenberger is a graduate of St. John's University, received his J.D. degree from the University of Minnesota, and served as an officer in the U.S. Army.

Allen D. Feezor is assistant executive officer, Health Benefit Services, California Public Employees' Retirement System (CalPERS). Previously, Mr. Feezor was vice president for planning, marketing and managed care for University Health Systems of East Carolina in Greenville, NC. From 1985 to 1995, he was chief deputy commissioner for the North Carolina Department of Insurance, where he chaired two national task forces that pioneered state health insurance and small group reform. He has headed the 430,000-member North Carolina Teachers,' State Employees' and Retirees' Health Plan and has served as Senior Representative in Washington, DC, for the Blue Cross/Blue Shield Association. He was a founding faculty member of the National Academy for State Health Policy and a contributor to two Institute of Medicine studies—one on the future of health benefits and another on improving Medicare. He currently serves on the boards of Pacific Business Group on Health and the Integrated Health Association. Mr. Feezor earned his B.A. and M.A. degrees in political science from Duke University.

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The Medicare Payment Advisory Commission (MedPAC) is an independent federal body established by the Balanced Budget Act of 1997 (P.L. 105–33) to advise the U.S. Congress on issues affecting the Medicare program. In addition to advising the Congress on payments to health plans participating in the Medicare+Choice program and providers in Medicare’s traditional fee-for-service program, MedPAC is also tasked with analyzing access to care, quality of care, and other issues affecting Medicare.

The Commission’s 17 members bring diverse expertise in the financing and delivery of health care services. Commissioners are appointed to three-year terms (subject to renewal) by the Comptroller General and serve part time. Appointments are staggered; the terms of five or six Commissioners expire each year. The Commission is supported by an executive director and a staff of analysts, who typically have backgrounds in economics, health policy, public health, or medicine.

MedPAC meets publicly to discuss policy issues and formulate its recommendations to the Congress. In the course of these meetings, Commissioners consider the results of staff research, presentations by policy experts, and comments from interested parties. (Meeting transcripts are available at www.medpac.gov.) Commission members and staff also seek input on Medicare issues through frequent meetings with individuals interested in the program, including staff from congressional committees and the Centers for Medicare & Medicaid Services (CMS), health care researchers, health care providers, and beneficiary advocates.

Two reports—issued in March and June each year—are the primary outlet for Commission recommendations. This volume fulfills MedPAC’s requirement to submit an annual report on Medicare payment policy. In addition to annual reports and occasional reports on subjects requested by the Congress, MedPAC advises the Congress through other avenues, including comments on reports and proposed regulations issued by the Secretary of the Department of Health and Human Services, testimony, and briefings for congressional staff.