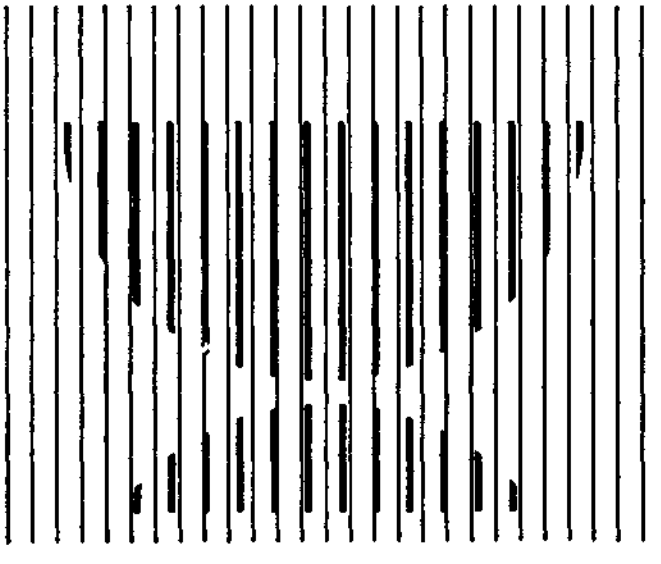
CBO STAFF MEMORANDUM

MANAGED CARE AND THE MEDICARE PROGRAM: BACKGROUND AND EVIDENCE

MAY 1990



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CONGRESSIONAL BUDGET OFFICE
SECOND AND D STREETS, S.W.
WASHINGTON, D.C. 20515

This Congressional Budget Office Staff Memorandum was prepared in response to requests from the Committee on Finance of the United States Senate and the Committee on Ways and Means of the U.S. House of Representatives. It provides information on the Medicare program's managed care alternatives, including Health Maintenance Organizations and the Administration's Medicare Plus proposal that would offer a Preferred Provider Organization option to Medicare beneficiaries. As background to the description of these programs and the review of the evidence on their effects, the memorandum also includes a section that defines the various approaches to managed care that are in use in the private sector and reviews the evidence of the effectiveness of managed care, generally.

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INTRODUCTION

Managed health care in the United States has increased dramatically over the past decade. In 1990, a substantial majority of the health care paid for by employment-based group insurance is subject to utilization management, although specific requirements vary across insurers and employers. The reason for this rapid expansion is the strong perception that the rapid rise in health care costs is unwarranted because a substantial amount of unnecessary and inappropriate care is being provided. Utilization management, through prospective review and intervention and through retrospective review and feedback, is believed by many observers to be effective in reducing health care costs while leaving quality unaffected or, possibly, enhancing it.

There is considerably less managed care being provided to Medicare beneficiaries than to the younger, insured population. While Medicare beneficiaries in many parts of the country have HMO options available to them, only about 3 percent of the Medicare population is enrolled in these plans. If managed care can reduce health care costs, while maintaining or improving the quality of care, then it is potentially a valuable tool for addressing rising costs in the Medicare program. In recognition of this potential, the Budget of the U.S. Government for Fiscal Year 1991 contains proposals to increase the proportion of Medicare services subject to managed care. First, the Administration proposes to increase payments to HMOs that serve Medicare enrollees and, in addition, to provide some financial incentives to Medicare beneficiaries to enroll in HMOs. Second, the Administration would make a new voluntary managed care option available to Medicare beneficiaries. This "Medicare Plus" program would combine private Medicare supplemental insurance (generally known as Medigap insurance) with a Preferred Provider Organization (PPO), to provide utilization management services to insured Medicare beneficiaries. Presumably, the new Medigap-PPO package would be offered for a lower premium than is typical for private Medigap policies without utilization management.

Both the rapid growth of managed care in the private sector and the encouragement of managed care options for Medicare beneficiaries are based on the assumption that managed care can reduce health care costs. The evidence on this point, however, is difficult to assess. First, managed care has not been precisely defined. HMOs and other organizations that provide managed care can operate in very different ways, intervening in the health care process aggressively or minimally. Thus, a general statement about the effectiveness of "managed care" is not meaningful, although the effectiveness of a specific utilization management technique may be assessed. Second, the nature of managed care is changing rapidly. The number and organizational characteristics of HMOs today are vastly different from the HMO industry in the 1970s. Much of the research that suggests that HMOs are effective in reducing health care costs was based on data from the well-established HMOs that were operating prior to 1980. Less evidence on the effectiveness of newer HMO organizational forms is available. Similarly, PPOs and "managed fee-for-service"--that is, indemnity insurance with some utilization review requirements--have emerged as significant phenomena only since the mid-1980s. Little research is yet available on these approaches to managed care.

The purpose of this memorandum is to provide background information that may be useful in assessing the current Medicare HMO program and proposals that would encourage managed care within the Medicare program. The first section of the memorandum focuses on managed care, broadly: definitions, trends, and evidence on its effects. This background provides a context for the discussion of Medicare's HMO program in the second section, including trends in participation, evidence on its effects, and issues. The final section of the memorandum describes current demonstration programs funded by the Health Care Financing Administration that will provide information on the feasibility and potential effects of the Medicare Plus option and other managed care initiatives.

MANAGED CARE: DEFINITIONS, TRENDS, AND EVIDENCE

This section defines the many forms of managed care, describes their growing use over time, and presents evidence about their effectiveness in controlling the growth in health care costs.

What is Managed Care?

The term "managed care" encompasses a variety of interventions in health care delivery and financing, all of which are intended to eliminate unnecessary and inappropriate care and to reduce costs. The major dimensions of managed care include:

- reviewing and intervening in decisions about health services to be provided -- either prospectively or retrospectively;
- limiting or influencing patients' choice of providers; and
- negotiating different payment terms or levels with providers.

Each of these dimensions of managed care, however, are defined broadly and not all managed care organizations employ all these mechanisms.

Types of Utilization Review. The review and intervention in decisions about health services to be provided may include:

- second surgical opinions;
- prior authorizations for hospital admission/surgery/specialist services;
- primary care physician "gatekeepers", who must be seen first to obtain referrals to specialist physicians;
- concurrent review of hospital use;
- discharge planning;
- profiling of physician practices.

A managed care organization may use any of these utilization management strategies, singly or in combination, to ensure that only appropriate and necessary services are being provided to their members. Review of utilization decisions may lead to disapproval of the service for payment purposes, establishment of guidelines

for the anticipated utilization (for example, number of hospital days, number of visits to referral physicians), or efforts to educate physicians whose practice patterns are assessed to vary substantially from accepted norms.

Limiting Provider Choice. Limitations on or influencing the patient's choice of providers may be accomplished in two ways:

- The patient's health care is only insured when specific providers associated with the managed care organization are used. When another provider is used, the patient bears full responsibility for payment for those services.

- The patient is offered differential financial incentives to use specific providers associated with the managed care organization. For example, use of a specified provider might involve a coinsurance rate of 10 percent versus a 30 percent coinsurance rate for using other providers.

Managed care organizations that limit choice of providers do so in order to direct patients to selected providers who have demonstrated practice patterns that are consistent with the organizations' interest in limiting unnecessary and inappropriate care, or providers who have agreed to abide by the organizations' utilization management rules.

Provider Discounts. In addition to utilization review and shifting patients to providers who are more economical in their use of health services, some managed care organizations also are able to negotiate with providers for lower prices or different payment arrangements. These negotiations may take several forms:

- Providers may be offered a capitation arrangement where they receive a fixed payment per patient, covering a specified set of services (for example, all office-based services required by the organizations' members) and a specified time period. When providers are capitated, managed care organizations can budget prospectively for the costs of these services. In addition, since providers are at risk for costs that exceed the capitation payment, this arrangement provides incentives for providers to offer only necessary and appropriate services.

- Managed care organizations may seek discounts from full charges from providers. Discounts are usually most obtainable when the managed care organization can offer increased and/or a more steady volume of patients to providers.

- Whether capitated or paid on a discounted fee-for-service basis, providers may be asked to assume some of the financial risk for excessive utilization and costs of services provided to the organizations' patients. This risk may be imposed by withholding a portion of the capitation or fee-for-service payment that is only distributed to the provider if pre-specified targets for use rates or expenditures are not exceeded. Alternatively, providers may be offered a bonus related to profits or surplus revenues achieved by the managed care organization.

While capitation may create the strongest incentives for providers to limit unnecessary and inappropriate use, withholding part of the payments and offering bonuses provide similar incentives. Discounts, on the other hand, serve the purpose of reducing per unit costs but do not necessarily change providers' practice patterns in the desired direction.

Types of Managed Care Organizations. Managed care organizations include Health Maintenance Organizations, Preferred Provider Organizations, and utilization review for managed fee-for-service-based insurance. Each of these organizations approaches managed care in different ways, although the distinctions among these entities are not clearcut in all cases.

HMOs provide the greatest degree of intervention in health care decisionmaking through an integrated delivery and financing system. Nearly all HMOs employ a specific set of utilization review techniques -- with over 80 percent reporting prior authorization requirements for inpatient care, concurrent utilization review, and a primary care gatekeeper approach to controlling services. Until recently, all HMOs strictly limited members' choice of providers to those under contract (aside from emergency and out-of-area services). Within the past five years, some HMOs have begun offering an "open-ended" provider option which permits members to use out-of-plan providers but subjects them to greater cost-sharing when this option is used. In addition, HMOs negotiate favorable financial arrangements with providers. For example, the overwhelming majority (over 75 percent) of HMOs pay their physicians on either a capitation or a salary basis. The remaining HMOs pay discounted fee-for-service charges.

It is worth noting that all HMOs are not the same, with respect to the intensity and breadth of their approach to utilization management. Two contrasting HMO organizational structures illustrate this diversity:

- A Group Model HMO, contracting on a capitation basis with a medical group that exclusively serves the HMO, owns its own hospital, and requires a primary care gate keeper, prior authorization for non-emergency hospital admissions, discharge planning, and profiling of physicians.

- An Independent Practice Association (IPA), contracting on a discount, fee-for-service basis with solo practitioners, pays full charges at hospitals, permits patients to self-refer to specialists, requires prior authorization for elective surgical procedures and conducts retrospective utilization review, and offers enrollees an "open-ended" option with enrollees paying a deductible amount and 20 percent coinsurance.

This Group Model HMO offers an integrated delivery and financing arrangement to its enrollees and intervenes much more aggressively in the decisionmaking of physicians and patients, as well as exerting greater prospective control over costs, than does the IPA.

Preferred Provider Organizations (PPOs) attempt to influence patients' choice of providers through offering differential cost-sharing that rewards the patient who selects a provider from the PPO network. Individuals may be offered

a PPO option, along with an indemnity insurance and HMO option, by their employer. The incentives to choose the PPO option may be lower premiums and the opportunity for lower cost-sharing, on a service-by-service basis, when a PPO provider is used. Alternatively, the PPO may be an integral component of an insurance package. In this case, the insured patient is usually expected to use the PPO provider network and may face substantially higher cost-sharing when a non-PPO provider is used.

Individual PPOs' approaches to managed care differ widely:

- Some PPOs rely solely on selecting providers with existing practice patterns that are consistent with the PPOs' objectives, rather than applying utilization review or negotiating discounts on charges. These PPOs expect to achieve savings by shifting patients from high cost providers to preferred providers, without any other intervention.

- Some PPOs focus primarily upon their utilization management and review techniques, including review of physicians' practice profiles both prior to contracting with them and on an ongoing basis. These PPOs expect to achieve savings through direct intervention in utilization decisions and by channeling patients to physicians (and other providers) who agree to abide by the utilization guidelines and review decisions. In addition, some may seek discounts from providers, to further reduce costs.

- Some PPOs are principally organized mechanisms for seeking discounts from providers who anticipate an increase in volume of patients through the PPOs. For these PPOs, the savings to be achieved come primarily through lower per unit costs.

The first and last of these PPO approaches involve relatively little direct intervention in the practice decisions of providers, but instead rely on selection of providers to lead to reductions in costs (where the selection may be on the basis of practice patterns or willingness to accept lower prices for services).

What is characterized as "managed fee-for-service" ordinarily involves the use of utilization review, prospectively and retrospectively, overlaid on a traditional insurance package. The strength of the utilization review varies substantially across programs, with over 80 percent of convential group insurance now incorporating high-cost case management and approximately 45 percent requiring preadmission certification and concurrent hospital review.[1] Nearly 10 percent of group insurance now includes physician profiles as one component of utilization review.

Managed fee-for-service, however, may be as minimal a program as the insurer simply adopting a new policy of retrospective review of inpatient care. Alternatively, managed fee-for-service can be a strongly oriented intervention in

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1. Concurrent hospital review usually involves the review and monitoring of the patient's status after admission to the hospital in order to ensure that only necessary days of hospital care are provided, and to facilitate the patient's discharge to home or to a less intensive setting as soon as is medically indicated.

medical decisionmaking involving preadmission certification, mandatory second surgical opinion, concurrent inpatient review, and discharge planning. In either case, the utilization process does not always lead to intervention. Some utilization review may be associated with coverage decisions and the proportion of a claim that the insurer will pay, providing incentives for patients and providers to concur with the utilization review decision, particularly when offered prospectively. Yet another possibility is that utilization review may be primarily oriented to assisting the insurer and employer to identify areas of unusually high costs and utilization, with the information feeding into the design of future insurance coverage decisions.

Trends in Managed Care

During the 1980's, managed care -- defined broadly -- has grown dramatically. The Health Insurance Association of America (HIAA) estimates that 1.4 percent of the commercial group insurance market involved managed care in 1982. By 1989, over 80 percent of commercial business had some managed care component -- 17 percent HMO coverage, 16 percent PPO coverage, and 49 percent managed fee-for-service coverage. Similar trends are observed in the nonprofit insurance market. Blue Cross and Blue Shield plans report 52 percent of enrollees in managed care in 1989, including 6 percent of total enrollment in HMOs, 15 percent in PPOs, and 31 percent in managed fee-for-service.

In 1980, there were 236 HMOs with 9.1 million members; by December 1989, there were 591 HMOs with 34.7 million members (Table 1). The number of HMOs increased by 150 percent over the decade and enrollment increased by 280 percent. The composition of the HMO industry has changed substantially over that period, with most of the growth coming from new IPA Model HMOs, that contract with fee-for-service physicians and can expand with minimal capital investment. By 1987, 63 percent of HMOs were IPAs compared with 41 percent in 1980. The other significant change in the HMO industry during the 1980s was the growth of national HMO firms. In 1980, 12 percent of HMOs (29 HMOs), accounting for 52 percent of HMO members, were affiliated with a national HMO firm. By 1986, 50 percent of HMOs were affiliated with a national organization; these 310 affiliated HMOs accounted for 61 percent of HMO enrollment in that year (Gruber et al., 1988). It also is noteworthy that the number of HMOs peaked at 662 in mid-1987, declined to 650 by year-end 1987, and by December 1989 only 591 HMOs were operational. This reduction in the number of operational HMOs is the result both of mergers and of closures of unsuccessful HMOs.

Growth in the population covered by PPOs also has been substantial during the 1980s. In 1984, only 1.3 million households were eligible to use PPOs; by mid-1985, the number eligible had grown to 5.75 million, rising to 16.5 million households by mid-1986, and to 19 million by January 1988. During 1988, however, PPO enrollment actually declined somewhat and by January 1989, the American Association of Preferred Provider Organizations reported 18.3 million households eligible to use PPOs. Preliminary 1990 data indicate a modest increase in PPO enrollment but clearly the period of continuous dramatic expansion of PPO coverage has ended.

TABLE 1. TRENDS IN NUMBER AND ENROLLMENT IN HMOs

Year	Number of HMOs	Enrollment in HMOs (millions)
1976	175	6.0
1980	236	9.1
1981	243	10.2
1982	265	10.8
1983	280	12.5
1984	306	15.1
1985	393	18.9
1986	626	25.7
1987	650	29.3
1988	614	32.7
1989	591	34.7

SOURCE: InterStudy and Group Health Association of America data.

Trends in managed fee-for-service are available only for the commercial insurance sector through HIAA. They report that 98 of 194 commercial insurers offered a managed fee-for-service option to employers in 1986. By 1988, 122 of these insurers reported offering this type of product. Over one-third of commercial insurers' business in 1988 involved a managed fee-for-service product.

Does Managed Care Reduce Utilization and Save Money?

Because relatively little evidence is available on the extent to which managed care reduces utilization, only a few tentative conclusions about the effect of managed care on use and costs seem warranted at this time:

- Some HMOs – particularly Group and Staff Model HMOs that offer a closed physician panel (that is, the physicians serve only HMO patients and have no fee-for-service practice) – appear to be able to reduce hospital use and costs significantly.

- Utilization management, in general, appears to have an impact on hospital use, but ambulatory care services are either unaffected or increase, perhaps because care is shifted from more expensive inpatient settings to less costly outpatient settings.

- Utilization management may have the greatest impact in geographic areas and for populations with exceptionally high use of hospital services.

- Administrative costs of managed care may be substantial and may outweigh potential savings in some situations.

- The impact of managed care is a one-time effect; managed care does not appear to affect the rate of increase of costs in subsequent years.

Of particular concern is the fact that there is insufficient evidence on whether the impact of managed care comes from selection of providers with economical practice patterns or from specific utilization management strategies that are effective with all providers. The potential to obtain what benefits come from managed care, in a broad national context, would differ considerably depending upon which mechanism proved to be most important. The remainder of this section describes the existing evidence on the effectiveness of managed care.

Although there were a number of studies conducted in the 1970s that appeared to indicate that HMOs were very effective at reducing hospital use -- primarily through lower hospital admissions -- data to measure the health status of these HMOs enrollees were not generally available and, consequently, the reported hospital use impacts may have been due to the greater tendency for healthier persons to choose HMO enrollment. Moreover, these studies focused on a handful of well-established HMOs (for example, Kaiser Permanente, Group Health of Puget Sound, HIP-New York) that offered well-integrated delivery and financing systems. These HMOs account for a very small proportion of today's HMOs, because they require a substantial capital investment in facilities and medical staff in order to expand -- unlike IPAs and Network Model HMOs that expand by contracting with fee-for-service providers with their own facilities.

One well-designed study of the impact of HMO-style managed care on use and costs of services was conducted by the Rand Corporation as one component of the Health Insurance Experiment (HIE) (Manning et al., 1984). Again, this study was limited to one well-established prepaid group practice HMO but the HIE methodology did permit impacts to be assessed for a population of enrollees for whom biased selection was not an issue. The Rand study results indicated that this HMO was able to reduce hospital admissions by about 40 percent compared with expected use had these individuals remained in the fee-for-service sector.

Another recent study by the Rand Corporation (Hosek et al., 1989) examined the impact of several Preferred Provider Organizations on use and costs of services. The PPOs studied were diverse and there were considerable data problems confronting the analysis, including difficulty in defining who were PPO users. Also, the data to control for biased selection were inadequate. The study findings, however, do provide some indication of PPO effects. First, the probability of using any health services at all was higher for PPO enrollees, a result consistent with the expectation that when consumers pay less per service they will demand more services. They also found that, while the probability of admission to a hospital and the number of hospital days used were not significantly different for PPO users and non-PPO users, PPO users had fewer outpatient physician visits than non-PPO users. As a result of the lower ambulatory use, and discounts from PPO providers, reimbursements for PPO users were estimated to be 5 to 37 percent lower per year for four of the plans studied. Higher reimbursements were estimated to have occurred in the fifth PPO.

When the study team examined use and costs per episode of care for PPO and non-PPO patients treated by the same physicians, however, they found that PPO users had more consultations and higher reimbursements per episode. These findings suggest that PPOs may be effective at shifting individuals to providers who tend to be more economical in health care decisionmaking, regardless of whether their patients are in PPOs or not (with the higher use and reimbursements for PPO users perhaps attributable to increased demand when cost-sharing is lower). The Rand study results for impacts on hospital use and ambulatory use, however, are somewhat perplexing since other research has indicated a greater impact of managed care on hospital admissions. No obvious explanation for this finding is clear.

The only major study of the effects of managed fee-for-service was reported by Feldstein et al., (1988). This analysis, which examined a utilization review program instituted by a large private insurance carrier in 88 employee groups between 1983 and 1985, found that utilization review reduced hospital expenditures by 11.9 percent and total medical care expenditures by 8.3 percent, compared to the experience of 134 groups that had not instituted a utilization review program. Groups with high initial levels of hospital admissions had substantial (35 percent) and significant reductions in hospital use and expenditures. No significant impact was observed in groups that had low initial utilization rates. When administrative costs were added ($1.58 per employee per month) to claims payments, substantial savings were present even for groups with average utilization prior to the utilization review program.

While the Rand Corporation PPO study and the Feldstein study suggest that substantial savings may be achieved by adopting managed care outside of HMOs, two recent reviews (Ermann, 1988; Institute of Medicine, 1989) of all the available evidence indicate that "systematic evidence about the impact of utilization management methods on the quality of care and on patient and provider costs is virtually nonexistent" (IOM, 1989). One reason for this conclusion is that utilization management is a term that encompasses a broad set of activities, some of which may be effective, but these effects are difficult to disentangle when a package of managed care strategies are being offered. Both of these reviews recommend that more research on utilization management be conducted.

MEDICARE AND HMOS

The rapid expansion of managed care in the private sector has not been duplicated in the Medicare sector, despite considerable interest in its potential to reduce Medicare's costs. In part, the slower pace of Medicare managed care is due to regulations that emphasized cost-reimbursement and fee-for-service payment systems prior to 1985. In addition, there has been considerable controversy about the methodology that has been used by the Medicare program to set the capitation fees Medicare pays HMOs that have enrolled beneficiaries since 1985.

History of Medicare's Contracting with HMOs

Between the time the original Medicare legislation was enacted in 1966 and the present, Medicare has offered a number of different contracting options to Health Maintenance Organizations wishing to participate in the Medicare program. Initially, these options involved payment provisions that were based on the traditional cost-reimbursement philosophy of the original Medicare program. Because HMOs in the private sector are paid on a capitation basis, most do not have accounting systems that permit them to track costs and generate fee-for-service billings. Therefore, the cost-reimbursement contracts offered by Medicare were not a viable option for the majority of HMOs. Only 31 HMOs had accepted these cost contracts by December 31, 1979, with a total Medicare enrollment of 23,498 beneficiaries.

In order to test methods of contracting that might increase HMO participation in the Medicare program, the Health Care Financing Administration (HCFA) solicited interest in a series of demonstration projects in the early 1980s to test the feasibility of prospective payment to HMOs. The methodology developed to set the capitation payments for these demonstrations, and for subsequent HMO risk contracts, is based on the average costs for Medicare beneficiaries in the enrollee's county of residence, adjusted for age, sex, disability status, Medicaid eligibility, and whether the enrollee is institutionalized.[2] HMOs are expected to reduce health care use and costs and, therefore, the capitation payment is set at a fraction of the Adjusted Average Per Capita Costs (AAPCC) so that the Medicare program will share in these savings.

The first of the HCFA demonstrations, the Medicare Capitation Demonstrations, tested various reimbursement models in eight HMOs that began enrolling Medicare beneficiaries under risk contracts between 1980 and 1981. Reimbursements to individual plans ranged from 85 percent to 95 percent of the AAPCC, and were linked to a number of risk-sharing arrangements. Under a second demonstration, the Medicare Competition Demonstrations, another 27 HMOs and Competitive Medical Plans (CMPs) began enrolling Medicare beneficiaries between 1982 and 1984.[3] All of the HMOs in this second demonstration received 95 percent of the AAPCC as their capitation payment and were fully at financial risk for the health care required by their Medicare enrollees.

In January, 1985, the final regulations were published that implemented a Medicare HMO risk contracting program as of April 1, 1985. Nearly all of the demonstration HMOs operating at the end of 1984 converted to permanent program status during 1985. By August, 1986, 142 HMOs had signed Medicare risk contracts and had enrolled over 735,000 Medicare beneficiaries. This rapid growth, both in the number of HMOs with Medicare risk contracts and in the number of Medicare enrollees in these HMOs, continued through 1987.

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2. Appendix A contains a detailed description of the methodology used to determine the Adjusted Average Per Capita Costs.

3. Because CMPs differ from HMOs only to the extent that the former are not federally qualified, any reference to HMOs should be understood to include all of the HMOs and CMPs that participated in the Medicare market either under demonstrations or the risk contract program.

Table 2 presents the trends in the number of HMOs participating in Medicare under risk contracts and in Medicare enrollments of these HMOs. After a rapid increase from 1986 to 1987, enrollment has grown slowly from 1987 to 1990. The number of HMOs participating in risk contracts peaked in 1987, when there were 157 risk contracts. By 1990, only 97 HMOs still had risk contracts under Medicare. Despite the slowing of enrollment growth and HMO participation, in some geographic areas HMOs have a substantial segment of the Medicare market. Table 3 shows the penetration in the Medicare market of risk HMOs in the top 20 states. While only 3 percent of Medicare beneficiaries nationwide are in HMOs, in five States more than 10 percent of beneficiaries elected this option in 1988.

The decline in the number of HMOs participating in Medicare, and the slow expansion of Medicare beneficiaries' enrollment in these HMOs, are consistent with the consolidation occurring in the HMO industry generally. They also may suggest that there is limited potential for extending managed care to a larger segment of the Medicare population through the current HMO risk contracting program.

What is Known About Medicare HMOs?[4]

There have been two evaluations of the Medicare HMO demonstration programs and a current evaluation of the Medicare HMO program[5] is underway. The results (Langwell and Hadley, 1989) of the completed evaluations indicate that:

- Medicare beneficiaries who were low income, but who were not eligible for Medicaid, who did not have Medigap insurance, and who did not have a regular source of medical care were four times more likely to join an HMO than were more affluent, better insured beneficiaries. This finding suggests that Medicare HMOs may be associated with improved financial access to care for some beneficiaries.

- Medicare beneficiaries who remained in HMOs and those in the fee-for-service sector were, on average, equally satisfied with their health care arrangements. HMO enrollees, however, were more satisfied with costs but less satisfied with specific aspects of the HMO related to their perceptions of the quality of care.

- Disenrollment from Medicare HMOs was high -- approximately 30 percent disenroll within two years. Disenrollment was most frequent from Staff Model HMOs, which tend to limit choice of providers most stringently. Since disenrollees were more likely than continuing enrollees to have characteristics associated with a high propensity to use health services, these disenrollment patterns are a potential source of

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4. HMOs that serve the Medicare population are required to maintain a non-Medicare, non-Medicaid enrollment that is at least equal to the total number of Medicare and Medicaid eligibles served. The term "Medicare HMO" is used throughout this memorandum to refer to HMOs that have Medicare contracts and serve Medicare enrollees, as well as having other members.

5. This evaluation, which began in 1988, examines the experience of the HMOs that have risk contracts as defined under the Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982.

biased selection for HMOs and, in addition, may result in some disruption in beneficiaries' medical care.

- The quality of care offered in HMOs was not significantly different, or was even somewhat better, than the care provided in fee-for-service settings. This finding held for basic care, management of chronic conditions, and management of conditions for which hospitalization was required.

- Voluntary enrollment of Medicare beneficiaries into HMOs resulted in favorable selection -- that is, healthier beneficiaries were more likely to join --into the overwhelming majority of HMOs. Medicare expenditures on behalf of HMO enrollees' in the two years preceding their HMO enrollment were only 79 percent, on average, of expenditures for Medicare beneficiaries who did not join, after accounting for age, sex, and other factors considered in the payment methodology (see Appendix B, Table 1).

- Medicare HMOs appeared to have little impact on Medicare enrollees' use of hospital services during the initial enrollment year, based on data from nine of the demonstration HMOs, but there was a measurable and significant reduction in use of hospital services during the second year. This impact, however, was accounted for entirely by three HMOs. These three HMOs included one group model, one staff model, and one mixed model HMO with a staff model component. There was no significant reduction in hospital use observed in the IPA-HMOs in the study. Overall, hospital days were 8 percent lower for Medicare HMO enrollees during the two years examined than would have been predicted had they remained in the fee-for-service sector.

- The evidence from the demonstration suggests that HCFA's payments to HMOs on behalf of Medicare beneficiaries, based on the AAPCC methodology, were between 50 and 74 percent higher than would have been the case had the enrollees remained in the fee-for-service sector (see Appendix B, Table 2). The source of these increased costs is favorable selection into HMOs and, possibly, flaws in the methodology and data available for setting the AAPCC. Favorable selection, alone, accounted for payments to HMOs that were 15 to 33 percent higher than projected costs.

Although there has been some concern about generalizing these findings to the permanent Medicare risk-contracting program, the initial results of the evaluation of the 1985 to 1989 HMO risk contracting period are very similar:

- Disenrollment remained high during the 1985 to 1988 period -- over 33 percent of those who enrolled in 1985 and 1986 had disenrolled by 1988.

- Preliminary results from the analysis of biased selection suggest that, as in the earlier demonstrations, healthier individuals are more likely to join Medicare HMOs.

TABLE 2. PARTICIPATION OF HMOs AND MEDICARE BENEFICIARIES IN RISK CONTRACTING, 1986 THROUGH 1990

Month and Year	Number of HMOs With Risk Contracts	Number of Medicare Beneficiaries Enrolled in Risk Contract HMOs	Percent of all Medicare Beneficiaries
March 31, 1986	119	556,191	1.8
August 31, 1986	142	735,600	2.4
August 31, 1987	157	958,345	3.1
January 1, 1988	133	981,145	3.1
January 1, 1989	133	1,039,901	3.2
January 1, 1990	97	1,109,000	3.3

SOURCE: HCFA's Office of Prepaid Health Care.

TABLE 3. PERCENTAGE OF POPULATION OF MEDICARE BENEFICIARIES ENROLLED IN HMOs BY TOP 20 STATES WITH ANY ENROLLMENT, DECEMBER 1988

State	HMO and CMP Medicare Enrollees December 1988	Percentage of Medicare Beneficiaries Enrolled	Ranking of State
Minnesota	128,331	23.9	1
Oregon	46,243	12.7	2
Nevada	11,149	11.4	3
California	286,021	10.2	4
Colorado	29,961	10.2	5
Florida	173,970	8.9	6
Massachusetts	53,920	6.8	7
New Mexico	8,128	5.6	8
Illinois	58,426	4.2	9
Arizona	14,831	3.7	10
Rhode Island	3,779	2.6	11
Indiana	17,145	2.5	12
New York	51,831	2.2	13
Kansas	7,116	2.1	14
Washington	9,830	1.9	15
Iowa	7,424	1.7	16
Michigan	18,755	1.7	17
Nebraska	3,421	1.5	18
Connecticut	4,560	1.1	19
Pennsylvania	18,602	1.1	20

SOURCE: L.F. Rossiter and M. Kordosky (1990) unpublished computations based on data provided by the Health Care Financing Administration, Office of Prepaid Health Care, Demographic Report.

In addition, the program evaluation included site visits to 40 TEFRA risk contracting HMOs. During these site visits, 20 (50 percent) of the HMOs' managers indicated that they were losing money on their Medicare contracts and 28 (70 per cent) reported that they were not actively marketing to Medicare beneficiaries, other than the minimal level necessary to fulfill their contractual requirements with the Medicare program.

Reasons HMOs May Lose Money on Medicare Enrollees, Even if Medicare's Payment Methodology is Accurate

Medicare risk contracting HMOs may be losing money, even if the payments they receive from HCFA accurately reflect Medicare's expected costs for these enrollees.

One possible reason is that Medicare beneficiaries who enroll in risk contracting HMOs may be disproportionately low-income, but not eligible for Medicaid, and without Medigap insurance before joining the HMO. To the extent that financial considerations caused them to forego health services before joining the HMO, this group could have substantial unmet need for care that the HMO identifies and treats in the first year or two of enrollment. The analyses of selection into HMOs would identify these individuals as low users (as they would presumably continue to be had they stayed in the fee-for-service sector) but they would be perceived as high users by the HMO. For these Medicare beneficiaries, the Medicare HMO program is improving financial access to care, but the HMOs are incurring higher than average costs to do so.

A second possibility is that the administrative costs associated with managed care may be much higher than the administrative costs associated with traditional fee-for-service claims payment. Estimates of administrative costs of Medicare HMOs suggest that, inclusive of marketing, these costs may average 20 percent of total costs (see Table 4). The Medicare program pays approximately 2.4 percent in administrative costs for fee-for-service claims handling. If HMO administrative costs are as high as has been estimated, then HMOs must achieve savings, through utilization management and discount arrangements, of over 20 percent just to break even when HCFA is paying them 95 percent of the AAPCC, assuming that selection is neutral. (If favorable or adverse selection is present, then the necessary savings would be a higher or lower percentage of costs in the fee-for-service sector.)

Is There a Problem with the AAPCC Methodology?

The decline in participation of HMOs in Medicare risk contracting, and the fact that many of the HMOs that remain in risk contracts claim they are losing money on their Medicare business also may be due to problems with the methodology for setting the AAPCC. A large number of studies have examined this issue. A Technical Advisory Panel convened by the Health Care Financing Administration reviewed the evidence and reached several conclusions. First, there are large random fluctuations in average Medicare payments from year-to-year in some counties. This variability may come about because of small county populations or because of high HMO market penetration in the county. In response to HMOs' concerns, HCFA's Office of Prepaid Health Care now permits HMOs to limit their Medicare enrollment to a subset of the counties from which they enroll non-Medicare members. A number of HMOs have discontinued Medicare enrollment in counties where the AAPCC is low, while continuing to enroll Medicare beneficiaries in other, higher AAPCC counties.

TABLE 4. DISTRIBUTION OF COSTS BY TYPE OF EXPENSE (In percent)

Expense Categories	Risk-Based Demonstrations		Fee-for-Service Medicare	
	All Costs	Nonadministrative Costs	All Costs	Nonadministrative Costs
Medical Services	31.6	39.0	22.7	23.3
Institutional Services a/	42.3	52.2	69.4	71.1
Supplementary Services b/	7.1	8.8	5.4	5.5
Administrative/Other	9.0	---	2.4	---
Total	100.0	100.0	100.0	100.0

SOURCE: Brown (1987).

a. Expenses incurred for services provided in hospitals and nursing homes.

b. Expenses incurred for health services other than medical and institutional (for example, therapy services, durable medical equipment).

Second, the county may not be the best geographic unit for payment purposes, due to their large numbers (over 3,000), lack of homogeneity, and boundary problems. The boundary issue results in an HMO being paid different amounts for Medicare beneficiaries who reside in different counties within the HMO's market area, although the benefits, providers, and use patterns within the HMO's enrollment are essentially the same.

A major concern of the Technical Advisory Panel was that the AAPCC factors (that is, county of residence, age, sex, disability status, Medicaid eligibility, and institutionalization) explain less than 1 percent of the variation in health care reimbursements for individual Medicare beneficiaries. The failure of the AAPCC to account for health status is particularly important since there is substantial evidence that favorable selection and retention in HMOs is occurring.

Several methodologies that would improve the AAPCC's ability to adjust for health status are under consideration, including a Diagnostic Cost Grouping (DCG) adjustment, an adjustment for "frailty", and adjustments based on enrollees' prior Medicare reimbursements. The DCG approach involves higher payments to HMOs for enrollees in selected diagnostic categories that are associated with a permanent increase in expected health care costs. HMOs would be paid less for enrollees without these diagnoses. The Technical Advisory Panel recommended to HCFA that a demonstration of the DCG methodology be initiated. Two points about the DCG methodology, however, should be noted: (1) it requires more data collection and reporting, and more HCFA monitoring, yet increases in the proportion of explained variance in reimbursements are limited; and (2) HCFA has found it

nearly impossible to persuade any of the risk-contract HMOs to participate in the DCG demonstrations, because the DCG payment methodology would result in lower total revenues to most HMOs due to the favorable selection they have experienced. Three HMOs agreed to participate in Summer 1989, but two of the three withdrew by December 1989 and HCFA has had to recruit new participants for the demonstration.

Finally, the Advisory Panel noted that, in some geographic areas, the AAPCC may be low because of access barriers faced by Medicare beneficiaries in the fee-for-service sector. HMOs may refuse to operate in these areas because beneficiaries' use and costs would increase substantially once they were in an HMO that reduced those barriers.

HCFA is continuing to consider the issues raised by the Advisory Panel, but to date no significant changes in the AAPCC methodology have been implemented.

OTHER MEDICARE MANAGED CARE PROPOSALS

The slow growth of Medicare HMO enrollment may be due to Medicare beneficiaries' reluctance to sever existing relationships with physicians, as well as to HMOs' perceptions that the AAPCC in not adequate. An alternative means of expanding managed care within the Medicare program would be to introduce a Preferred Provider Organization option or other managed fee-for-service approaches. These alternatives would offer the potential for utilization management, within an environment that permitted Medicare beneficiaries to maintain key provider relationships but encouraged the use of preferred providers for other services.

Medicare Plus

The Administration's Medicare Plus program is intended to encourage Medicare beneficiaries to participate in managed care arrangements to a greater extent. While the Medicare Plus program has not yet been fully developed by the Department of Health and Human Services, the principal elements appear to be:

- HCFA would select Medigap insurers and Preferred Provider Organizations to develop and market to Medicare beneficiaries a managed care alternative to HMOs, which completely restrict choice of providers, and to unconstrained traditional Medicare fee-for-service arrangements.

- A standard Medicare Plus benefit package would be specified by HCFA, with insurers and PPOs permitted to exceed the minimum requirement.

- The incentives for Medicare beneficiaries to participate in Medicare Plus would be a reduced premium and/or cost-sharing under their Medigap policies, rather than any direct financial incentives that would require higher Medicare payments on behalf of these enrollees.

The Medicare PPO Demonstrations

Although the final form of Medicare Plus is uncertain there has been a demonstration program underway at HCFA since mid-1988 which provides some information on the potential structure of the Medicare Plus program. The objectives of the Medicare PPO demonstrations were:

- To assess the potential cost effectiveness of PPOs in controlling the volume of services performed or ordered by physicians;
- To gain information on the willingness of Medicare beneficiaries to choose a non-HMO managed care plan;
- To increase understanding about PPO utilization management programs and their effects.

The original demonstration design was intended to provide information on the extent to which Medicare beneficiaries would voluntarily enroll in PPOs and, when they did, on the effectiveness of PPOs in controlling the use and costs of ambulatory health care.

The Medicare PPO demonstrations were solicited in late 1988 and five cooperative agreements were issued to selected PPOs in early 1989 for the design stage of the demonstrations. A design acceptable to HCFA was necessary prior to HCFA's final approval of a demonstration, in each case. By early 1990, only two of the PPOs that had received these cooperative agreements had submitted a demonstration design that had been approved by HCFA. It is uncertain, at this time, whether the other three PPOs will eventually implement a demonstration.

The five PPOs selected for the design phase offered HCFA both geographic diversity and potentially interesting variations on the PPO approach to utilization management:

- Blue Cross and Blue Shield of Arizona (Phoenix) applied for demonstration status for an existing Medicare supplemental insurance-PPO option that they planned to begin offering to their enrollees in January 1989. Medicare beneficiaries who chose the PPO option paid approximately $10 per month less in Medigap premiums. This PPO relies entirely upon selection of preferred providers, rather than on utilization review and management interventions, to achieve savings.
- CAPPCare (Orange County, California) proposed to provide utilization review and management of services provided to Medicare beneficiaries who use a physician who is a member of the CAPPCare PPO provider network. Medicare beneficiaries will not have an opportunity to decide whether to participate in this demonstration, but will be subject to the demonstration rules when they use a CAPPCare provider. A mailing to all Medicare beneficiaries in Orange County will inform them about the demonstration and provide a list of CAPPCare doctors (approximately 25 percent of all Orange County physicians). CAPPCare has developed an extensive utilization review program and combines this intervention

with selection of providers who exhibit practice patterns that are consistent with the PPO's objectives.

- Northwest Managed Health Care (Portland, Oregon) proposed to offer and market a free-standing PPO option with reduced cost-sharing for PPO members when they used PPO providers. This package also would be offered to retirees of the Oregon state government, under an agreement between the PPO and the state.

- Family Health Plan (Minneapolis, Minnesota) proposed to offer and market a PPO option that would be free-standing, but would also be offered to employers who provide Medicare supplemental insurance to retirees. Enrollees would be offered reduced cost-sharing when using PPO providers.

- Health Link (St. Louis, Missouri) proposed to offer and market a free-standing PPO option that would offer reduced cost-sharing to Medicare PPO enrollees.

Appendix C provides more information on the characteristics of the potential PPO demonstrations and their market areas.

Under four of the proposed PPO demonstrations, Medicare beneficiaries would volunteer to participate. These "enrollment model" PPOs were intended to provide information on the willingness of Medicare beneficiaries to voluntarily participate in managed care arrangements in response to financial incentives. In addition, the Blue Cross and Blue Shield of Arizona demonstration will provide information on the responsiveness of Medicare supplemental insurance policyholders to differences in premiums associated with options that affect their patterns of care. The CAPPCare demonstration is not an enrollment model and, consequently, is expected to provide information on the potential of utilization review to achieve savings for the Medicare program when applied randomly to beneficiaries who are not voluntarily choosing to participate in a managed care program.

Current Status of the Implemented Medicare PPO Demonstrations

As of April 1, 1990, only two of the Medicare PPO demonstrations had become operational -- BC/BS of Arizona and CAPPCare. BC/BS of Arizona began offering its Medicare supplemental insurance PPO option in early 1989 to its Medigap enrollees. This initial PPO option provided essentially the same Medigap coverage to enrollees, at a cost of approximately $10 less per month. PPO enrollees are not penalized for using non-PPO physicians, but do pay a greater share of their hospital costs if they use non-PPO hospitals. During the initial offering year, the response was disappointing -- only 890 BC/BS subscribers elected the PPO option. BC/BS concluded that their marketing approach had been inappropriate, since it was targeted to relatively affluent policy holders who would not be likely to respond to a small monthly difference in premiums. In early 1990, BC/BS initiated a new marketing effort, with a new premium differential:

	Monthly Premium			
	1989 Medigap	1990 Medigap	1990 PPO Option	1990 Difference
Age				
65-69	$47.60	$68.70	$48.50	$20.20
70-79	60.00	86.60	60.00	26.60
80 and over	67.00	96.00	65.00	31.00

By April 1, 1990, over 5,000 BC/BS Medicare supplemental subscribers had elected the PPO option. While some of the increase in enrollment may be attributable to better targeting of the marketing effort, it seems likely that the substantial differential in the premium in 1990 may explain much of the increased enthusiasm of Medigap holders for the PPO option.

The CAPPCare demonstration was implemented on April 1, 1990. Since Medicare beneficiaries are not enrolling in this demonstration, it is too early to assess the proportion of Medicare services that will be reviewed by the CAPPCare utilization management system. HCFA has assigned CAPPCare the responsibility for prospective review of the appropriateness of services to be provided to Medicare beneficiaries in Orange County, removing that function from the Peer Review Organization (PRO) that would normally perform these reviews. The PRO will retain retrospective medical quality review functions for services provided to beneficiaries in Orange County.

Other Related HCFA Demonstrations

Two other demonstrations will provide information on the potential of managed care to constrain Medicare costs and to ensure that appropriate services are provided to Medicare beneficiaries. Rather than managing all the health care of Medicare beneficiaries, however, these demonstrations will focus on methods for increasing the appropriateness of, and reducing the price paid for, selected procedures.

The demonstration of managed care for coronary artery bypass graft (CABG) procedures will involve HCFA in contracting with selected hospitals and their medical staff to implement defined appropriateness review procedures and for a lower total price to Medicare for the services associated with these procedures. Under this demonstration, the selected providers will have a higher volume of Medicare patients, if Medicare beneficiaries respond positively to the information on the demonstration program provided by HCFA. Medicare beneficiaries will benefit from a reduction in unnecessary procedures and from lower cost-sharing when the procedure is performed at a demonstration hospital. Medicare program costs will fall if fewer unnecessary CABG procedures are performed and a lower cost is paid for those provided by the selected providers.

The CABG demonstration will be implemented in the near future. The hospitals that will participate in the demonstration have been selected and the demonstration agreements have been worked out between HCFA and the sites. Considerable attention has been paid by HCFA and the demonstration sites to ensuring and reviewing quality of care throughout the demonstration period, since HCFA will be encouraging Medicare beneficiaries in the locales served by the selected providers to use these hospitals and staff physicians when they are considering a CABG procedure.

HCFA also is in the process of designing a similar demonstration for cataract procedures. However, this demonstration is still in the early stages of development and neither the details of the demonstration, nor the selection of providers, has been determined.

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APPENDIX A

THE AAPCC AND DEMOGRAPHIC COST FACTOR METHODOLOGY

The methodology for calculating the AAPCC each year, for each county, involves several steps. First, the national average Medicare per-capita costs (USPCC) are projected by HCFA actuaries for the year, separately for Part A (hospital) and Part B (largely physician) services. Then, the county geographic adjustment factor is calculated to reflect the historical relationship between county per-capita costs and the USPCC. Next, the county non-HMO average per-capita cost is estimated by extracting costs attributable to HMO enrollees. Finally, the Part A and Part B county AAPCC values are calculated, reflecting Medicare enrollment status and demographic variables. The geographic adjustment is further amended by a factor intended to account for trends in Part A costs due to the introduction of Medicare's Prospective Payment System for reimbursing hospitals in 1983. An allowance for administrative cost savings to HCFA, since the HMO handles all claims internally, is also included in the AAPCC, after adjustment for hospital claims paid by the Medicare fiscal intermediary (FI) on the HMO's behalf.

APPENDIX B TABLES

TABLE B-1. ENROLLEE/NONENROLLEE DIFFERENCES IN TOTAL MEDICARE REIMBURSEMENTS DURING TWO YEARS PRIOR TO ENROLLMENT, ADJUSTED FOR AAPCC FACTORS

HMOs	Enrollee Mean	Nonenrollee Mean (Unadjusted)	Enrollee/ Unadjusted Nonenrollee	Nonenrollee Mean (Adjusted)	Enrollee/ Adjusted Nonenrollee
IPAs					
AvMed	2,532	3,841	0.66**	3,551	0.71**
Central Massachusetts	2,103	2,579	0.82*	2,076	1.01
Health Plus	2,744	3,841	0.71**	3,444	0.80*
Health Care Network	2,345	3,571	0.66**	3,092	0.76**
Choice Care	2,801	2,518	1.11	2,215	1.26**
Mixed Models					
IMC	2,358	3,676	0.64**	3,420	0.69**
United Heath Plan	3,473	4,043	0.86	3,612	0.96
Preferred Health Plan	3,178	3,594	0.88	3,107	1.02
Group Models					
Healthway	1,807	2,658	0.68**	2,195	0.82*
Fallon	1,687	2,579	0.65**	2,076	0.81*
Genesee Valley	1,101	1,866	0.59*	1,592	0.69**
Staff Models					
CAC	2,626	4,453	0.59**	4,036	0.65**
HealthAmerica	2,042	3,171	0.64**	3,019	0.68**
Metropolitan	2,152	3,307	0.65**	2,888	0.75**
Medical East	1,570	3,285	0.48**	2,738	0.57**
Medical West	1,230	2,257	0.55**	1,826	0.67**
Family Health Program	2,119	3,875	0.55**	3,473	0.61**
All IPAs	2,505	3,270	0.77**	2,876	0.87**
All Mixed Models	3,000	3,774	0.79**	3,385	0.89**
All Group Models	1,532	2,368	0.65**	1,955	0.78**
All Staff Models	1,956	3,306	0.59**	2,888	0.68**
All HMOs	2,252	3,243	0.69**	2,846	0.79**

SOURCE: Brown (1987)

NOTE: Conventional tests of the statistical significance of enrollee-nonenrollee differences in means were conducted, but the ratio of the means is presented here to facilitate comparisons across plans.

*Indicates enrollee-nonenrollee difference in means is significantly different from zero at the .05 level, using a two-tailed test.

**Indicates enrollee-nonenrollee difference in means is significantly different from zero at the .01 level, using a two-tailed test.

TABLE B-2. POST-ENROLLMENT COST TO HCFA FOR ENROLLEES: ACTUAL VERSUS PROJECTED

	Post-Enrollment Cost Per Enrollee-Year			Actual/Projected	
	Actual (1)	Projected From Year -1 (2)	Projected From Year -2 (3)	Ratio (1/2)	Ratio (1/3)
Total Costs					
All Plans	2,731	1,571	1,822	1.74**	1.50**
IPA 1	3,128	1,884	2,057	1.66**	1.52**
IPA 2	2,838	2,099	2,343	1.35**	1.21**
IPA 3	2,983	1,953	2,057	1.53**	1.45**
IPA 4	2,466	1,791	2,013	1.38**	1.23**
Mixed 1	3,043	1,594	1,962	1.91**	1.55**
Mixed 2	3,545	2,361	2,921	1.50**	1.21**
Mixed 3	2,938	2,601	2,504	1.13*	1.17**
Group 1	2,424	1,505	1,478	1.61**	1.64**
Group 2	1,892	1,009	999	1.88**	1.89**
Group 3	2,320	921	1,440	2.52**	1.61**
Staff 1	3,569	1,864	1,604	1.91**	2.23**
Staff 2	2,679	1,501	2,022	1.78**	1.32**
Staff 3	2,139	1,433	1,967	1.49**	1.09
Staff 4	2,601	785	1,104	3.31**	2.36**
Staff 5	1,949	731	1,235	2.67**	1.58**
Staff 6	3,200	1,670	1,503	1.92**	2.13**
All IPA models	2,854	1,932	2,117	1.48**	1.35**
All mixed models	3,180	2,178	2,462	1.46**	1.29**
All group models	2,212	1,145	1,305	1.93**	1.70**
All staff models	2,689	1,417	1,651	1.90**	1.63**

SOURCE: Nelson and Brown (1989)

NOTE: Actual costs in column 1 are capitation payments made by HCFA. Projected costs in columns 2 and 3 are estimates of the costs that HCFA would have incurred for enrollees in the fee-for-service sector.

*Indicates that the difference between actual and projected costs is significantly different from zero at the .05 level.

**Indicates that the difference between actual and projected costs is significantly different from zero at the .01 level.

APPENDIX C TABLE

APPENDIX C: TABLE 1

PRELIMINARY IDENTIFICATION OF UNIQUE FEATURES OF EACH DEMONSTRATION PPO

	ORGANIZATIONAL FEATURES			ORGANIZATIONAL FEATURES				
	Sponsorship	Years in Operation	Total Enrollment 1988	Percent Enrollment Through Group Contracts	Percent Increase in Physician Network, 1985-1987	Percent Use of PPO: Physicians	Percent Use of PPO: Hospitals	Claims Processin
DC/AZ	Blue Cross/ Blue Shield	6	63,500	100	-12.5	76	70	Yes
CAPPCARE	Physician	7	108,164	100	270	33	40	No
Northwest Managed Health Care	Hospital/ Physician Joint Venture	4	33,600	100	41	58	64	No
HealthLink	Hospital	4	190,000	20	250	65	65	Yes
Family Health Plan	Private Venture/TPA	7	85,000	100	68	67	70	No

SOURCE: Mathematica Policy Research, October 1, 1989

APPENDIX C: TABLE 1 (continued)

PRELIMINARY IDENTIFICATION OF UNIQUE FEATURES OF EACH DEMONSTRATION PPO

	Market Area Features					Demonstration Features			
	Medicare Part A and B Reimbursements, 1982	Medicare Hospital Days/1000 1985	Inpatient Surgery/1000 Population, 1985	Physician Population Ratio, 1985	Number Medicare Risk HMO Enrollees, 1988	Requires Additional Premium	Offers Lower Premium for Medigap	Reduction in Cost-Sharing	Voluntary Enrollm
BC/AZ	1,605	3,296	58.1	.18	10,951	No	Yes	Yes	Yes
CAPPCARE	2,559	3,821	50.2	.09	112,059	No	No	No	No
Northwest Managed Health Care	1,368	1,714	36.9	.08	5,564	Yes	No	Yes	Yes
HealthLink	1,863	927	12.3	.11	389	No	No	Yes	Yes
Family Health Plan	1,695	3,787	78.8	.11	55,982	No	No	Yes	Yes

SOURCE: Mathematica Policy Research, October 1, 1989