

5

Impact of PAC Policy Change on Medicare Expenditures

Various estimates of the impact of the policy change on Medicare expenditures have been made. In their proposed rules published in the Federal Register (May 8, 1998), HCFA estimated that the implementation of the postacute care transfer payment policy would lower PPS program expenditures by \$480 million, without taking into account possible offsetting changes in hospital treatment and discharge patterns. The Congressional Budget Office adjusted for anticipated offsetting changes in hospital behavior and estimated program expenditure savings at only \$100 million (Federal Register, May 8, 1998). HCIA estimated a total reduction in program expenditures in fiscal year 1999 of \$653 million, representing a 10 percent decline in total PPS outlays across the postacute care transfer pilot DRGs over the previous year (www.hcia.com/findings/990914_bba.htm). MedPAC estimated a 0.7 percent reduction in aggregate payments (MedPAC, Report to Congress, March 2000).

This chapter provides preliminary evidence regarding the actual Medicare savings from the new postacute care transfer policy for the first two quarters after implementation in October of 1998. Section 5.1 first provides a mathematical summary of the two new postacute care per diem payment schemes used to qualify the new payments. Discount factors are calculated for each scheme that show at a glance how much payments fall per postacute care transfer paid on a per diem. Section 5.2 provides estimates of actual Medicare outlays in the 10 postacute care DRGs before and after implementation. Section 5.3 then decomposes the payment changes into price and volume effects. Price effects are analogous to HCFA's estimation method assuming no change in postacute care rates

or lengths of stay. Volume effects show by how much, if any, expected per diem price reductions are offset by volume responses of providers.

5.1 Mathematical Summary of Per Diem Payment Methodology

As stated in Chapter 2 of this report, the basic unadjusted postacute transfer payment methodology under inpatient PPS can be summarized in the following way:

$$(5-1) \text{ Base Payment Amount} = \text{MIN} (\text{DRG Amount}, \text{Per Diem Amount}).$$

Hospitals receive the lesser (MIN) of the per diem payment amount or the full DRG rate, with adjustments in each case for medical education, disproportionate share, and cost outliers.

5.1.1 The Standard Transfer Per Diem

The standard per diem payment amount for all acute hospital transfers is defined at the level of the hospital, h , the DRG, j , and the length of stay of the individual patient, i , measured in discrete days:

$$(5-2) \text{ Per Diem Amount}_{ijh} = 2 \times PD_{ijh} + \sum_{l=2}^{LOS-1} PD_{ijhl} .$$

The graduated per diem total payment amount is calculated as twice the daily per diem, PD , on the first day plus the per diem for each additional day up to 1 day less than the geo-mean, at which point the hospital is paid the full DRG rate and the patient is no longer “short stay” for payment purposes.

The daily per diem rate, PD , is defined over hospitals h and j DRGs:

$$(5-3) \quad PD_{hj} = \frac{SA_{hj} \times DRGWT_j}{GLOS_j}.$$

It is calculated as the full DRG rate, or standardized amount (SA) times the DRG weight (DRGWT), divided by the national geometric mean length of stay (GLOS) for each DRG.

Eq. (5-2) gives the per diem payment for each individual patient in hospital h and DRG j. An average per diem payment across all patients within a hospital can be written as (for a proof see Appendix B.1):

$$(5-4) \quad \overline{PD}_{jh} = SA_h \times DRGWT_j \left[\left(\overline{LOS}^{pd} + 1 \right) / GLOS \right]$$

where \overline{LOS}^{pd} = the average length of stay of short-stay patients paid on per diem. The bracketed term represents a “discount factor” on full DRG payment (i.e., the amount outside the brackets). This enables us to construct discount factors from arithmetic and geometric mean stays alone, thereby avoiding summing actual Medicare per diem payments across claims in a DRG. The discount formula also shows at a glance the relation between DRG average length of stay and expected payment reductions, directly depending on the relative arithmetic to geometric mean lengths of stay.

5.1.2 The Blended Transfer Per Diem

For three of the pilot DRGs where the conventional per diem methodology was shown to result in under-payments because of unusually high costs during the first few days of treatment, the per diem payment amount was modified to a blended rate as follows:

$$(5-5) \quad \text{Per Diem Amount}_{jh} = \frac{1}{2} \left(2 \times PD_{jh} + \sum_{l=2}^{LOS-1} PD_{jh} \right) + \frac{1}{2} \left(SA_h \times DRGWT_j \right)$$

For three DRGs (209, 210 and 211), hospitals receive one-half of the full DRG payment up-front but have the usual transfer per diem halved for any days in the hospital. Again, per diem payments are capped at the full DRG amount and are adjusted for medical education, disproportionate share, and cost outliers. The average per diem under the blended rate relates to the short-stay postacute care length-of-stay as follows (for a proof see Appendix B.2):

$$(5-6) \quad \overline{PD}_{hj} = SA_h \times DRG_j \left[.5 + .5 \left(\overline{LOS}^{pd} + 1 \right) / GLOS \right].$$

The bracketed discount factor for the blended rate is always higher (i.e., less discount) than the standard per diem discount factor. The two factors both reach full DRG payment, however, at lengths-of-stay one day short of the geo-mean. For example, if the standard per diem discount factor is .4, then the blended factor for the same arithmetic-to-geometric ratio would be .7. For a standard factor discount of .9 (i.e., a 10 percent discount on full payment), the blended discount would be .95 (i.e., only a 5 percent discount).

5.2 Impact of Policy Change on PPS Expenditures

This section looks at the net or actual change in program expenditures for the 10 pilot DRGs between the two payment periods under review. PPS payments include the hospital standardized amount (adjusted for wage and urban/rural cost differentials) times the DRG weight plus adjustments for medical education, disproportionate shares, capital and cost outliers. Since the focus of this

chapter is on Medicare expenditures, beneficiary payments and payments from third party sources are excluded from the calculations. Medicare payments are shown for the 10 DRGs separately and jointly. The first table shows payment changes for short-stay transfers only. To capture the impact of the new policy on total program expenditures, the second table shows payment changes for all transfer and non-transfer cases in the 10 pilot DRGs combined. The overall mean represents the sum of the DRG means, weighted by the DRG share of total cases. All figures are expressed in constant 1999 dollars, having been inflated by the fiscal year 1999 PPS market basket inflation update of 2.4 percent. The results of the expenditure comparisons are summarized in the tables that follow.

As shown in Table 5-1, average per case payments for short-stay postacute care transfers were \$10,344 during the first half of fiscal year 1998. During the first six months of fiscal 1999 when the policy reform was in effect, per case payments for short-stay transfers were \$9,326. The claims data show that the policy reform resulted in a decline in PPS payments per postacute care transfer case of \$1,018, representing a reduction in average expenditures of 9.8 percent. The decrease in per case payments for short-stay transfer cases holds true for each of the 10 DRGs, ranging from a decline of \$21,272 (or 26.9 percent) for DRG 483 to a reduction of \$348 (or 12.5 percent) for DRG 236. These figures are based on actual discharges and reflect changes in treatment and discharge policies discussed earlier. They also reflect the fact that in 1999 four-day postacute transfers under DRGs 14 and 209 did not qualify for the lower per diem payment methodology because of the change in the GLOS, but rather were paid the full DRG amount.

Table 5-2 gives similar figures for all patients discharged from a PPS hospital under one of the 10 pilot DRGs, regardless of whether the patient received postacute care services. Per case payments for all discharges were \$10,667 during the first half of fiscal year 1998 and \$10,375 during the same six-month period in fiscal year 1999. Overall average payments declined over the study period in constant dollars by \$292, or 2.7 percent.

Table 5-1

Average PPS Payments for Short-Stay PAC Transfers
Pre versus Post Policy Change Periods

	<u>Pre-Policy Change Period</u>	<u>Post-Policy Change Period</u>	<u>Change in Payments</u>	<u>Percent Change in Payments</u>
<u>DRG</u>	<u>Per Case Payments</u>	<u>Per Case Payments</u>	<u>Per Case Payments</u>	<u>Per Case Payments</u>
14	\$4,866	\$3,787	-\$1,079	-22.2%
113	11,926	8,706	-3,220	-27.0
209	9,664	8,428	-1,236	-12.8
210	7,733	7,071	-662	-8.6
211	5,135	4,707	-428	-8.3
236	2,797	2,449	-348	-12.5
263	9,213	6,563	-2,651	-28.8
264	4,827	3,798	-1,029	-21.3
429	3,512	2,801	-712	-20.3
483	79,146	57,874	-21,272	-26.9
Total	\$10,344	\$9,326	-\$1,018	-9.8%

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.

Payments include hospital base rate times DRG weight (or per diem amount) plus IME, DSH, capital and outliers adjustments.

Payments are in current 1999 dollars, having been inflated by HCFA's PPS market basket update of 2.4%.

Totals are weighted averages of DRG-specific means, weighted by DRG's share of total cases.

SOURCE: MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

Table 5-2

**Average and Total PPS Payments for All Discharges from Pilot Transfer DRGs
Pre versus Post Policy Change Periods**

	<u>Pre-Policy Change Period</u>	<u>Post-Policy Change Period</u>	<u>Change in Payments</u>	<u>Percent Change in Payments</u>
<u>DRG</u>	<u>Per Case Payments</u>	<u>Per Case Payments</u>	<u>Per Case Payments</u>	<u>Per Case Payments</u>
14	\$4,977	\$4,978	\$1	0.0%
113	13,073	12,338	-735	-5.6
209	9,382	9,225	-157	-1.7
210	7,896	7,759	-137	-1.7
211	5,006	5,056	50	1.0
236	2,781	2,691	-90	-3.2
263	9,872	9,061	-811	-8.2
264	4,751	4,591	-159	-3.4
429	3,680	3,521	-159	-4.3
483	87,703	83,876	-3,828	-104.0
Total	\$10,667	\$10,375	-\$292	-2.7%

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Payments include hospital base rate times DRG weight (or per diem amount) plus IME, DSH, capital and outliers adjustments.

Payments are in current 1999 dollars, having been inflated by HCFA's PPS market basket update of 2.4%.

Totals are weighted averages of DRG-specific means, weighted by DRG's share of total cases.

SOURCE: MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

5.3 Decomposing the Impact of Policy Change on PPS Expenditures

As stated earlier, the overall impact of the postacute care transfer policy under inpatient PPS on Medicare expenditures can be decomposed into two distinct components: (1) a change in payments per discharge holding treatment decisions constant (i.e., the 'price' effect) and (2) a change in the quantity and type of services provided (i.e., the 'volume' effect). The price effect isolates the payment rollbacks stemming from the conversion of short-stay cases to the lower per diem rates. The volume effect, on the other hand, relates to hospital responses to the lower per diem rates. Its impact depends on two interrelated treatment decisions: (1) the change in the share of short-stay postacute care transfers within DRGs, and (2) the change in the average length of stay of postacute care transfers paid on a per diem basis.

5.3.1 Theoretical Decomposition

The decomposition model can be expressed in the following explicit form:

$$(5-7) \quad E = P \times Q$$

$$(5-8) \quad \Delta E = (\Delta P \times Q) + (\Delta Q \times P)$$

where E is total Medicare expenditures in a DRG, and the variables P and Q represent price and volume for that DRG, respectively. Delta symbols signify time changes in variables. The change in expenditures, ΔE , after the postacute care transfer policy has been implemented is assumed to be negative, i.e., less Medicare hospital outlays. In what follows, we consider ΔE as positive savings to the Medicare program. Changes in the volume of services is assumed to be a function of price changes as hospitals attempt to offset revenue reductions from per diem payment. As will become clearer later on, the volume effect of the policy change, ΔQ , can be further decomposed into (a) the change in the share of postacute care transfers paid on a per diem basis, and (b) the change

in the average length of stay of those short-stay postacute care transfers in the PPS facility.

Because per diem payments under the new policy are capped at the DRG payment level, the price effect must reduce overall Medicare expenditures, holding the volume responses of hospitals constant. The sign of the ΔP component on the right-hand side of eq. (5-8) will thus be positive assuming price reductions are interpreted as positive Medicare savings. The savings generated by lower prices, however, are likely to be offset to some degree by both of the volume effects included in ΔQ . A reduction in the *rate* of short-stay postacute care transfers will reduce projected Medicare savings. Reductions in postacute care can be accomplished by eliminating the provision of postacute care services, by shifting the provision of those services back into the PPS inpatient setting, or by delaying the provision of postacute care services until after the same day transfer period has passed (three days in the case of home health). Similarly, an increase in the length of inpatient stay prior to postacute care transfer for short-stay patients will lower anticipated savings by increasing per diem outlays. Thus, the second component on the right-hand side of eq. (5-8) should be negative, again assuming $\Delta E < 0$ is interpreted as positive savings.

The decomposed price and volume effects of the postacute care transfer policy are estimated in three steps. First, we calculate the change in overall Medicare expenditures by taking the difference between actual payments in the pre and post-policy change periods. This is the total change to be explained. Second, we isolate the price effect by taking the difference between actual and simulated payments in the pre-policy change period. By applying the postacute care per diem payment policy to the pre-policy postacute care inpatient claims, the simulation analysis holds potential volume changes constant and expresses the lower per case payments in terms of “expected” Medicare dollars saved absent any behavioral response by providers. Finally, the volume, or behavioral, effects triggered by the shift in reimbursement incentives are identified as a residual after subtracting the simulated price effects from total Medicare savings calculated in the first step. The

volume effects are expressed as a negative offset to the positive savings generated by lower payments per discharge.

Total Medicare Savings. Ignoring the annual updates to average standardized payments, SA, or changes in DRG weights, total Medicare inpatient PPS savings generated by the implementation of the postacute care transfer policy can be summarized mathematically in the following way (See Appendix C.1 for derivation):

$$(5-9) \quad \text{Total Savings} = SA \times \text{DRGWT} \left[N^{Pre} - N^{Post} (1 + \partial(\theta - 1)) \right]$$

where

$$(5-10) \quad \partial = \frac{N_{PD}^{Post}}{N^{Post}}$$

$$(5-11) \quad \theta = \frac{\left(\overline{LOS}_{PD}^{Post} + 1 \right)}{GLOS^{Post}}.$$

The variables, N^{Pre} and N^{Post} , represent the total number of DRG discharges in the pre- and post-policy change periods, respectively. The variable, N_{PD}^{Post} , represents the number of postacute care transfer cases during the pre-period whose inpatient LOS fell at least one day below the geometric mean LOS for that DRG and was subsequently paid on a per diem basis. The parameter, ∂ , represents the share of postacute care transfer cases in the post-period paid on a discounted per diem basis out of all discharges under the postacute care transfer DRGs. The parameter, θ , represents the average length of stay of postacute care transfer cases paid on a per diem basis in the post-period relative to the geometric mean across all discharges nationally in a given DRG. This ratio would vary by hospital.

An intuitive explanation of eq. (5-9) is as follows. The term outside the brackets, SA x

DRGWT, represents pre-period per case outlays for a given DRG. The bracketed term represents program savings in terms of the change in pre- versus post-period volumes, or discharges. Total post-period discharges, N^{Post} , are “devalued” by two factors: (1) ρ = share of all discharges in the post-period paid on per diem; and (2) θ = the average discount factor on post-period per diem postacute care patients. For example, if $\rho = 0.30$ and $\theta = .7$, then post-period discharges are devalued by 9 percent, i.e., $.91 = (1+.3(.7-1))$ Why devalue post-policy discharges? Because 30 percent of post-policy discharges are incurring a 30 percent discount due to per diem payment. In other words, post-policy discharges only cost Medicare 91 percent of what they would have under full DRG payment.

Assuming no change in the total number of PPS inpatient discharges, $(N^{Pre} = N^{Post})$, eq. (5-9) can be simplified and rewritten as:

$$(5-12) \text{ Total Savings} = SA \times DRGWT \times N^{Pre} [\rho(1 - \theta)].$$

Eq. (5-12) measures the reduction in Medicare expenditures (or overall net savings) resulting from the expanded transfer payment policy assuming no change in (a) the average standardized amount, (b) the DRG weight, or (c) the total number of hospital admissions. These are necessary assumptions to isolate the effects of the payment policy. Presumably, any updates in standardized amounts or DRG weights have nothing to do with the postacute care policy change, nor do any changes in the total number of discharges in a DRG (as distinct from the number of postacute care discharges which hospitals can manipulate).

Because average length of stay across all per diem cases will, by definition, be less than the geometric mean length of stay for the same DRGs, θ is less than one and the per diem discount

factor $(1-\theta)$ will be positive. The per diem discount factor reflects the fractional differential between DRG and per diem payments. Adjusted total savings can thus be measured by the pre-period DRG payments, $SA \times DRGWT \times N^{Pre}$, adjusted downward by the product of the post-period per diem discount factor and the post-period share of discharges paid on a per diem basis, i.e., the bracketed term in eq. (5-12). The smaller the differential between per diem and full DRG rates (e.g., the greater the increase in the average length of stay of per diem cases relative to the geometric mean length of stay), the smaller the per diem discount factor and the smaller will be the Medicare savings. Similarly, a reduction in the short-stay postacute care transfer rate will also reduce projected Medicare savings.

The Price Effect. The next step in the estimation strategy is to decompose total savings into its price and volume components. The price effect can be measured by taking the difference between actual payments in the pre-policy change period and simulated payments calculated by applying the postacute care transfer payment policy to the same pre-period set of observations. The price effect can be expressed mathematically as (See Appendix C.2 for derivation):

$$(5-13) \quad \text{Price Effect} = SA \times DRGWT \times N^{Pre} [\alpha(1 - \lambda)]$$

where

$$(5-14) \quad \alpha = \frac{N_{PD}^{Pre}}{N^{Pre}} \text{ and}$$

$$(5-15) \quad \lambda = \frac{\left(\overline{LOS}_{PD}^{Pre} + 1 \right)}{GLOS^{Pre}}.$$

The price effect of Medicare savings is measured as the total DRG payments in the pre-policy

change period factored downward by the product of the simulated pre-policy per diem discount factor, $(1 - \lambda)$, and the share of discharges that would have been paid on a per diem basis had the new reimbursement policy been in effect. Note that price effects are simulated exclusively based on pre-period claims (and parameters). The greater the share of postacute care transfer cases “expected to qualify” for per diem payments and/or the lower the average arithmetic length of stay of per diem cases relative to the geo-mean of all cases, the larger the expected Medicare savings absent any modifications in hospital treatment policy.

The Behavioral Volume Effects. Finally, the offsetting behavioral volume effects of the policy change can be identified as a residual of total savings after subtracting the pure price effect. Subtracting eq. (5-13) from eq. (5-12) and rearranging gives us the following expression (See Appendix C.3):

$$(5-15) \quad \text{Volume Effects} = SA \times DRGWT \times N^{Pre} [\vartheta(\lambda - \theta) + (1 - \lambda)(\vartheta - \alpha)].$$

The bracketed term in eq. (5-15) captures the negative volume offset which stems from two interrelated treatment decisions:

(1) $\vartheta(\lambda - \theta)$ reflects the post-period change in the short-stay postacute care transfer length of stay relative to the geometric mean, weighted by the pre-period ‘expected’ share of postacute care transfer cases likely to be paid on a per diem basis;

(2) $(1 - \lambda)(\vartheta - \alpha)$ reflects the change in the post-period frequency of per diem postacute care cases $(\vartheta - \alpha)$ weighted by the pre-period discount factor. If hospitals respond to the policy change by reducing the rate of postacute care transfers, $(\vartheta - \alpha)$ will be negative and Medicare savings will

be reduced. Similarly, if hospitals respond by increasing the inpatient length of stay of cases paid on a per diem basis, $(\lambda - \theta)$ will be negative and Medicare savings will also be lower.

Total Price and Volume Effects of Blended Payment. Seven of the ten DRGs HCFA selected for the initial postacute care transfer policy are being paid on the standard graduated per diem methodology used for acute-to-acute transfers. It can be shown that for the three DRGs on blended payment (i.e., DRGs 209-211), all three effects are halved relative to the standard payment algorithm. (See Appendix C.4). In other words, for the same postacute care transfer rates and change in short-stay postacute care LOS, blended payment will generate half the Medicare savings of the standard rate -- again holding total discharges constant. Price and volume effects are also split in half.

Thus, the price and volume components of total program savings accruing from the postacute care transfer payment policy are fully captured by estimating just two parameters, (1) the rate of postacute care transfers, and (2) the per diem discount factor, calculated in both the pre and post-policy change periods. The simplicity of the empirical model is based in part on the fact that hospital standardized amounts, DRG weights, and total discharges are assumed to be constant. This is a necessary assumption to isolate the effects of the policy change.

5.3.2 Empirical Results

The results of the decomposition analysis are presented in Table 5-3. Unlike the figures presented in the previous tables of this chapter, positive values in Table 5-3 indicate savings, while negative values signify greater expenditures. Because capital and outlier payments are additive and not amenable to the payment calculation methods employed here, they are omitted from the analysis.

Table 5-3

**Decomposition of Change in Medicare Expenditures following Implementation of PAC Transfer Policy
Pre versus Post Policy Change Periods**

DRG	Pre-Policy Change Period		Pre-Policy Change Period		Post-Policy Change Period		Per Case Decomposition			Total Decomposition		
	Standard Amount	Share of Total Discharges	Short-Stay		Short-Stay		Price Effect	Volume Effect	Total Effect	Price Effect	Volume Effect	Total Effect
			PAC Transfer Share of Total Discharges (%)	Per Diem Discount Factor (1- λ)	PAC Transfer Share of Total Discharges (%)	Per Diem Discount Factor (1- θ)						
14	\$4,843	34%	17%	17%	9%	25%	\$139	-\$27	\$112	\$26	-\$5	\$21
113	11,264	4%	29%	34%	27%	34%	1,123	-82	1,041	26	-2	24
209	9,084	33%	39%	8%	19%	10%	293	-116	177	53	-21	32
210	7,500	13%	37%	11%	35%	8%	295	-94	200	21	-7	14
211	5,146	3%	17%	11%	16%	9%	99	-26	73	1	0	1
236	2,968	4%	24%	13%	22%	9%	93	-34	59	2	-1	1
263	8,862	2%	23%	35%	21%	34%	712	-75	636	9	-1	8
264	4,787	0%	17%	25%	16%	26%	212	-17	195	0	0	0
429	3,718	3%	22%	25%	19%	22%	202	-44	158	3	-1	2
483	73,799	4%	22%	35%	23%	35%	5,785	7	5,792	135	0	135
Total	\$9,794	100%	28%	15%	18%	18%	\$505	-\$68	\$437	\$276	-\$37	\$239

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.

Standardized payments consist of hospital base rate times DRG weight or per diem. Payments include adjustments for IME and DSH, but do not include adjustments for capital and outliers.

Per diem discount factors are average LOS of short-stay PAC transfers +1 divided by geometric mean LOS for DRG.

Decomposition effects assume standardized amounts and number of total PPS discharges remain constant over the study period.

Totals are weighted averages of DRG-specific means, weighted by DRGs share of total cases.

SOURCE: MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

Adjustments for IME and DSH are assumed to fall by the same percentage as the decline in the standardized amount. The decomposition results are presented on both a per capita and overall basis. In the pre-policy period, the share of short-stay postacute care transfers of all discharges averaged 28 percent on a frequency-weighted basis, ranging from a low of 17 percent to a high of 39 percent. The post-period rate of short-stay postacute care codes falls ten percentage points to 18 percent. Had the BBA per diem policy been in effect in the pre-policy period, the discount on short-stay postacute care cases would have averaged 15 percent, ranging from a low of 8 percent for DRG 209 to 35 percent for DRGs 263 and 483. Higher discount factors (measured as $1-\lambda$) imply a greater discrepancy between the LOS for postacute care cases and the DRG's overall GLOS.

According to the figures presented in Table 5-3, the lower per diem payments alone (i.e., the price effect) resulted in an expected per case PPS savings of \$505. This figure is calculated as a pre-policy discharge-weighted average of the individual DRG price effects.¹ DRG 483 exhibited by far the greatest price effect (\$5,785) due to an exceptionally high discount factor (35%) and a very high standardized amount (\$73,799). Multiplying average payments by the number of postacute care transfers during the six-month pre-policy change period results in expected total program savings, holding PPS hospital treatment discharge decisions constant, of \$276 million. The total price effect of the policy change ranged from a savings of \$135 million for DRG 483 to a savings of less than \$1 million for DRG 264. When doubled to get an annualized estimate, anticipated savings before taking into account any PPS hospital behavioral responses are \$552 million.

However, the reduction in the overall short-stay postacute care referral rate (from 28 percent in the 1998 period to 18 percent in the 1999 period) served to offset a minor portion of the gross savings. The offsetting volume effects (\$68 on a per case basis and \$37 million overall) reduced

¹ Because the overall transfer rates and discount factors shown at the bottom of the table are both weighted, they cannot be multiplied to derive an overall average price effect.

Medicare savings per PPS discharge from \$505 to \$437 and overall program expenditures from \$276 million to \$239 million, or 13 percent. Annualized estimated savings taking into account changes in hospital treatment and discharge patterns, as well as a declining GLOS, is \$478 million. Annualized net savings thus appear to be significantly higher than the \$100 million forecasted by the Congressional Budget Office, but less than the \$653 million projected by HCIA. Assuming total PPS outlays of \$80 billion, our analysis reveals a 0.6 percent (\$478 million/\$80 billion) decline in aggregate payments and a 4.5 percent reduction in total payments to the 10 pilot DRGs.

However, as pointed out in Chapter 4, only a small part of the offsetting volume effect evidenced above can be attributed to a behavioral response on the part of PPS hospitals to the policy change. Most of the \$37 million total volume offset stems from the lower GLOS threshold in 1999 for DRGs 14 and 209. To obtain a more accurate estimate of the behavioral volume response holding GLOS constant, we applied the 1998 GLOS to the 1999 data and recalculated total savings. Holding GLOS constant causes the postacute care transfer rate to also remain constant at 28 percent (see Table 5-3A). The per diem discount falls, however, from 18 percent in Table 5-3 to 14 percent in Table 5-3A. This implies an increase in the ratio of the postacute care per diem LOS relative to the 1998 versus 1999 GLOS. The constant GLOS effect is found only for DRGs 14 and 209, whose discount factors fell 8 and 2 percentage points, respectively. Their factors fall because their higher 1998 GLOS rates result in many more “longer” stays considered “short-stay” case eligible for per diem payment. The total effect on Medicare savings per case is an increase of \$41, due to a reduction in the estimated BBA volume offset, a decline from \$68 to \$26 per case. Across all cases in the 10 DRGs, the true offsetting behavioral response declines from \$37 million to \$14 million and total program savings increase from \$239 to \$262. Greater Medicare savings, holding GLOS constant, is driven by the greater number of qualifying postacute care transfers when using the higher 1998 GLOS. The lower DRG-per diem payment discount, owing to the greater number of longer LOS, yet still qualifying as short-stay cases, has the opposite effect on savings.

Table 5-3A

**Decomposition of Change in Medicare Expenditures following Implementation of PAC Transfer Policy Holding GLOS Constant
By Applying 1998 GLOS to Both Periods**

DRG	Pre-Policy Change Period			Pre-Policy Change Period		Post-Policy Change Period		Per Case Decomposition			Total Decomposition (millions)		
	Standard Amount	Number of Total Discharges	Share of Total Factor	Short-Stay PAC Transfer Share of Total Discharges (α)	Per Diem Discount Factor ($1-\lambda$)	Short-Stay PAC Transfer Share of Total Discharges (δ)	Per Diem Discount Factor ($1-\theta$)	Price Effect	Volume Effect	Total Effect	Price Effect	Volume Effect	Total Effect
14	\$4,843	184,650	34%	17%	17%	16%	17%	\$139	-\$6	\$133	\$26	-\$1	\$25
113	11,264	23,103	4%	29%	34%	27%	34%	1,123	-82	1,041	26	-2	24
209	9,084	181,934	33%	39%	8%	39%	8%	293	-12	281	53	-2	51
210	7,500	69,684	13%	37%	11%	35%	8%	295	-94	200	21	-7	14
211	5,146	14,415	3%	17%	11%	16%	9%	99	-26	73	1	0	1
236	2,968	20,467	4%	24%	13%	22%	9%	93	-34	59	2	-1	1
263	8,862	13,080	2%	23%	35%	21%	34%	712	-75	636	9	-1	8
264	4,787	1,904	0%	17%	25%	16%	26%	212	-17	195	0	0	0
429	3,718	15,435	3%	22%	25%	19%	22%	202	-44	158	3	-1	2
483	73,799	23,296	4%	22%	35%	23%	35%	5,785	7	5,792	135	0	135
Total	\$9,794	547,968	100%	28%	15%	28%	14%	\$505	-\$26	\$478	\$276	-\$14	\$262

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.

PPS payments include hospital base rate times DRG weight (or per diem amount) plus adjustments for IME and DSH. Because adjustments for capital and cost outliers are additive, they have been omitted from PPS payments.

Per diem discount factors are average LOS of short-stay PAC transfers +1 divided by geometric mean LOS for DRG.

Short-stay cases and financial measures in post-period are based on 1998 GLOS.

Decomposition effects assume standardized amounts, DRG weights and number of total PPS discharges remain constant over the study period.

Totals are weighted averages of DRG-specific means, weighted by DRG's share of total cases.

SOURCE: MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

Annualized, the best estimate of BBA Medicare savings, unrelated to secular declines in GLOS, is \$524 million, or only \$28 million less than expected holding standardized amounts, DRG weights, and GLOS constant. In other words, during the first six months after the postacute care transfer policy went into effect, Medicare captured 95 percent of its expected savings, ignoring the inevitable savings “leakage” due to the decline in GLOS in DRGs 14 and 209. Whether this savings rate will continue over a longer period depends on how acute hospitals change their postacute care discharge rates and inpatient lengths of stay, if at all.

5.4 Impact of Policy Change on Episode-Level Expenditures

The next issue to be explored in this chapter is the impact of the policy change on episode-level Medicare payments. Episodes are defined as the initial acute care hospitalization together with the first immediate postacute care readmission or visit. Episode-level payments are presented for each of the postacute care provider groups separately. The postacute care transfer payment change did not affect postacute care reimbursement directly. However, as stated in Chapter 3, changes in acute care hospital treatment and discharge patterns in response to the policy change should have an indirect effect on the level and intensity of services provided in the postacute care setting. Since, until very recently, postacute providers were reimbursed on a cost basis, changes in the types of services provided by these providers should impact episode-level payments. A shift of postacute care services back into the acute care environment should reduce the amount of services provided by postacute care providers and, hence, lower their payments. On the other hand, a delay in postacute care admissions (or leaving the arrangement of such admissions up to the individual) might increase the average severity of these patients, thus leading to more services and higher reimbursement.

Table 5-4 presents per case payments to PPS-exempt facilities for all patients transferred on the same day from an acute care provider. Adding average postacute care payments with average PPS payments for the same set of patients and multiplying by the number of short-stay transfers provides a measure of total episode-level expenditures. The table shows that average postacute care payments were \$10,239 during the first half of fiscal 1998 and \$10,605 during the same six-month period in fiscal year 1999. Average payments to PPS-exempt providers for acute care transfers thus rose \$366, or 3.6 percent, after adjusting for inflation. However, per case payments to PPS-exempt facilities for same-day transfers increased for only two of the 10 DRGs. The largest increase was for DRG 211 at 3.7 percent. The increase in per case payments for these DRGs suggests that PPS-exempt referral cases may have been entering the facilities more severely ill than before. However, for the majority of DRGs, these findings suggest that lower PPS payments did not result in a compensating increase in postacute payments to PPS-exempt facilities. Total episode-level payments for patients referred to PPS-exempt facilities declined from \$990 million in 1998 to \$636 million in 1999, representing a reduction of 35.7 percent.

A similar analysis for postacute care transfers to skilled nursing facilities is presented in Table 5-5. Medicare payments to skilled nursing facilities for acute care transfer patients fell in constant dollars from \$5,706 in 1998 to \$5,365 between the two study periods, representing a 6.0 percent decline. The significantly lower per case postacute care payments suggest that, on average, transfer cases to skilled nursing facilities before the policy change required fewer services than transfer cases after the policy change. The decline in per case payments for postacute referrals holds true for all 10 pilot DRGs. During the same period, total episode-level payments for PPS patients discharged to skilled nursing facilities fell nearly 50 percent, from \$1,311 million to \$668 million.

Postacute care payments for patients utilizing the services of a home health agency up to three days following an acute care hospitalization are provided in Table 5-6. The figures show that

Table 5-4

**Average and Total Episode-Level Payments for Short-Stay Postacute Care Transfers to PPS Exempt Facilities
Pre versus Post Policy Change Periods**

<u>DRG</u>	<u>Pre-Policy Change Period</u>				<u>Post-Policy Change Period</u>				<u>Percent Change in PAC Payments</u>	<u>Percent Change in Total Payments</u>
	<u>Per Case PPS Payments</u>	<u>Per Case PAC Payments</u>	<u>Number of Transfers</u>	<u>Total Payments (millions)</u>	<u>Per Case PPS Payments</u>	<u>Per Case PAC Payments</u>	<u>Number of Transfers</u>	<u>Total Payments (millions)</u>		
14	\$4,979	\$12,601	9,308	\$164	\$3,621	\$11,843	4,868	\$75	-6.0%	-54.0%
113	12,115	11,629	1,620	38	8,800	11,743	1,477	30	1.0	-21.1
209	9,877	6,869	23,110	387	8,358	6,523	13,345	199	-5.0	-48.7
210	7,891	10,875	4,604	86	7,097	10,538	4,407	78	-3.1	-10.0
211	5,298	9,159	548	8	4,781	9,497	595	8	3.7	7.2
236	2,982	10,431	672	9	2,247	9,838	642	8	-5.7	-13.9
263	9,864	22,984	134	4	6,491	21,256	125	3	-7.5	-21.2
264	4,929	21,295	13	0	3,276	18,790	18	0	-11.8	16.5
429	3,443	7,909	566	6	2,386	7,727	540	5	-2.3	-15.0
483	79,851	29,595	2,618	287	57,429	28,806	2,653	229	-2.7	-20.2
Total	\$12,683	\$10,239	43,193	\$990	\$11,589	\$10,605	28,670	\$636	3.6%	-35.7%

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.

Payments include hospital base rate times DRG weight (or per diem amount) plus IME, DSH, capital and outliers adjustments.

Payments are in current 1999 dollars, having been inflated by HCFA's PPS market basket update of 2.4%.

Totals are weighted averages of DRG-specific means, weighted by DRG's share of total cases.

SOURCE: MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

Table 5-5

**Average and Total Episode-Level Payments for Short-Stay Postacute Care Transfers to Skilled Nursing Facilities
Pre versus Post Policy Change Periods**

<u>DRG</u>	<u>Pre-Policy Change Period</u>				<u>Post-Policy Change Period</u>				<u>Percent Change in PAC Payments</u>	<u>Percent Change in Total Payments</u>
	<u>Per Case PPS Payments</u>	<u>Per Case PAC Payments</u>	<u>Number of Transfers</u>	<u>Total Payments (millions)</u>	<u>Per Case PPS Payments</u>	<u>Per Case PAC Payments</u>	<u>Number of Transfers</u>	<u>Total Payments (millions)</u>		
14	\$4,769	\$6,078	14,843	\$161	\$3,831	\$5,492	6,163	\$57	-9.6%	-64.3%
113	11,879	6,388	4,298	79	8,494	5,660	3,454	49	-11.4	-37.7
209	9,459	4,211	35,220	481	8,446	3,484	13,460	161	-17.2	-66.6
210	7,697	7,156	19,895	295	7,065	6,369	16,226	218	-11.0	-26.2
211	5,082	6,297	1,607	18	4,664	5,755	1,501	16	-8.6	-14.5
236	2,776	6,147	3,509	31	2,544	5,679	2,832	23	-7.6	-25.6
263	9,126	7,958	2,016	34	6,338	6,512	1,607	21	-18.2	-40.0
264	4,864	7,269	211	3	3,841	6,865	153	2	-5.6	-36.0
429	3,477	6,326	2,086	20	2,892	5,658	1,534	13	-10.6	-35.9
483	78,569	8,839	2,150	188	58,997	7,319	1,646	109	-17.2	-41.9
Total	\$9,572	\$5,706	85,835	\$1,311	\$8,395	\$5,365	48,576	\$668	-6.0%	-49.0%

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.

Payments include hospital base rate times DRG weight (or per diem amount) plus IME, DSH, capital and outliers adjustments.

Payments are in current 1999 dollars, having been inflated by HCFA's PPS market basket update of 2.4%.

Totals are weighted averages of DRG-specific means, weighted by DRG's share of total cases.

SOURCE: MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

Table 5-6

**Average and Total Episode-Level Payments for Short-Stay Postacute Care Transfers to Home Health Agencies
Pre versus Post Policy Change Periods**

<u>DRG</u>	<u>Pre-Policy Change Period</u>				<u>Post-Policy Change Period</u>				<u>Percent Change in PAC Payments</u>	<u>Percent Change in Total Payments</u>
	<u>Per Case PPS Payments</u>	<u>Per Case PAC Payments</u>	<u>Number of Transfers</u>	<u>Total Payments (millions)</u>	<u>Per Case PPS Payments</u>	<u>Per Case PAC Payments</u>	<u>Number of Transfers</u>	<u>Total Payments (millions)</u>		
14	\$4,917	\$856	7,439	\$43	\$3,926	\$737	3,921	\$18	-13.9%	-57.4%
113	11,801	1,113	868	11	9,544	931	712	7	-16.4	-33.5
209	9,828	759	13,717	145	8,577	690	4,221	39	-9.1	-73.1
210	7,732	880	1,337	12	7,051	804	1,133	9	-8.7	-22.7
211	5,122	704	275	2	4,787	604	250	1	-14.3	-15.9
236	2,721	837	649	2	2,212	721	585	2	-13.8	-25.7
263	9,313	1,254	889	9	7,048	1,188	744	6	-5.3	-34.8
264	4,743	1,227	107	1	3,820	1,197	124	1	-2.5	-2.6
429	3,670	886	732	3	2,979	722	471	2	-18.5	-47.7
483	77,504	847	399	31	55,927	765	369	21	-9.7	-33.1
Total	\$8,994	\$829	26,412	\$259	\$7,712	\$766	12,530	\$106	-7.5%	-59.1%

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.
 Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.
 Payments include hospital base rate times DRG weight (or per diem amount) plus IME, DSH, capital and outliers adjustments.
 Payments are in current 1999 dollars, having been inflated by HCFA's PPS market basket update of 2.4%.
 Totals are weighted averages of DRG-specific means, weighted by DRG's share of total cases.

SOURCE: MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

payments to home health agencies for acute care referral cases fell 7.5 percent between the pre and post-study periods, from \$829 to \$766. Per case payments declined for each of the 10 pilot transfer DRGs. Episode-level payments for the same set of patients fell from \$259 million in 1998 to \$106 million in 1999, or 59.1 percent.

Thus, these preliminary results do not support the view that the policy reform would result in an offsetting increase in payments to postacute care providers. The declining rate of short-stay transfers from PPS hospitals resulted in a substantial reduction in total payments to postacute care providers. Total postacute care payments fell \$138 million for PPS-exempt referrals, \$229 million for skilled nursing facility referrals, and \$12 million for home health referrals. However, most per case postacute care payments for these same patients fell as well. The decline in average postacute care payments for most DRGs offers evidence against one of the main hypotheses posed in Chapter 4, namely, that delays in referrals (or leaving their management up to the individual patient) would cause an increase in the severity of illness, and thus high expenditures, for postacute care users.

5.5 Impact of Policy Change on PPS Expenditures by Type of Postacute Care Transfer

A similar breakdown of per case PPS payments based on the type of postacute care services used is presented in the following two tables. Table 5-7 presents average PPS payments by type of a transfer for short-stay patients. Payments include adjustments for IME, DSH, capital and outliers. In the pre and post-policy change periods, average PPS payments for short-stay transfers to PPS-exempt facilities were the highest at \$12,386 and \$11,589 per discharge, respectively. Average PPS payments for short-stay transfers to SNFs were \$9,348 in the pre-policy change period and \$8,395 post-policy change period. Average PPS payments per discharge declined 6.4 percent for transfers to PPS-exempt facilities and units, 10.2 percent for transfers to SNFs, and 12.2 percent for transfers to HHAs following the introduction of the payment reform.

Table 5-7

**Average PPS Payments for Short-Stay PAC Transfers by Provider Type
Pre versus Post Policy Change Periods**

	Pre-Policy Change Period	Post-Policy Change Period	Change in Per Case Payments	Percent Change in Per Case Payments
<u>Provider</u>	<u>Per Case Payments</u>	<u>Per Case Payments</u>	<u>Per Case Payments</u>	<u>Per Case Payments</u>
PPS-Exempt Facilities	\$12,386	\$11,589	-\$798	-6.4%
Skilled Nursing Facilities	9,348	8,395	-953	-10.2
Home Health Agencies	8,783	7,712	-1,071	-12.2
Total	\$10,072	\$9,237	-\$835	-8.3%

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.

Payments include hospital base rate times DRG weight or per diem amount) plus IME, DSH, capital and outliers adjustments.

Payments are in current 1999 dollars, having been inflated by HCFA's PPS market basket update of 2.4%.

Totals are weighted averages of DRG-specific means, weighted by DRG's share of total cases.

SOURCE: MedPAR, 1997-199; MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

Table 5-8 presents average PPS payments for all postacute care transfers by type of postacute care provider. Again, transfers to PPS-exempt facilities generated the highest PPS per case payment (\$12,345) in the pre-policy change period, followed by transfers to SNFs (\$9,840) and HHAs (\$8,865). After the implementation of the payment reform, per case PPS payments decreased 5.9 percent for PPS-exempt transfers, 4.9 percent for SNF transfers and 5.2 percent for HHA transfers. The results show that PPS payments for patients transferred to rehabilitation, psychiatric, children's and specialty facilities and units were affected most by the policy reform, but that the differential impact was muted somewhat by differences in the share of cases qualifying for the lower per diems.

5.6 Impact of Policy Change on PPS Expenditures by Type of PPS Hospital

Table 5-9 presents payments for short-stay transfer cases by hospital bed size. The per case payment rate, both pre- and post-policy change period, is directly correlated to hospital bed size. Short stay cases at hospitals with less than 100 beds had a pre-policy change per case payment rate of \$7,277. Payment rates increase with hospital bed size with a maximum payment rate of \$13,609 for hospitals with 500 or more beds. In the post-policy change period, per case payments decreased for all hospital size groups, ranging from 2 to 12 percent. Hospitals with less than 100 beds experienced the greatest loss in per case payments following the implementation of the postacute care transfer policy.

Table 5-10 categorizes average payments for short-stay transfer cases by hospital ownership. The three hospital ownership types include governmental non-profit, proprietary for-profit and voluntary non-profit. Per case payments are fairly evenly distributed, ranging from \$9,757 for proprietary for-profit hospitals to \$10,339 for government non-profit hospitals. All hospitals, regardless of ownership type, experienced a decline in per case payments for short-stay transfers between the pre and post-policy change periods. Proprietary for-profit hospitals experienced the

Table 5-8

**Average and Total PPS Payments for All PAC Transfers by Provider Type
Pre versus Post Policy Change Periods**

	Pre-Policy Change Period	Post-Policy Change Period	Change in Per Case Payments	Percent Change in Per Case Payments
<u>Provider</u>	<u>Per Case Payments</u>	<u>Per Case Payments</u>	<u>Per Case Payments</u>	<u>Per Case Payments</u>
PPS-Exempt Facilities	\$12,345	\$11,615	-\$731	-5.9%
Skilled Nursing Facilities	9,840	9,362	-478	-4.9
Home Health Agencies	8,865	8,408	-457	-5.2
Total	\$10,300	\$9,724	-\$577	-5.6%

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.

Payments include hospital base rate times DRG weight or per diem amount) plus IME, DSH, capital and outliers adjustments.

Payments are in current 1999 dollars, having been inflated by HCFA's PPS market basket update of 2.4%.

Totals are weighted averages of DRG-specific means, weighted by DRG's share of total cases.

SOURCE: MedPAR, 1997-1998; MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

Table 5-9

**Average and Total Payments for Short-Stay Cases by Hospital Bed Size
Pre versus Post Policy Change Periods**

<u>Bed Size</u>	<u>Pre-Policy Change Period</u>			<u>Post-Policy Change Period</u>			<u>Percent Change in Per Case Payments</u>	<u>Percent Change in Total Payments</u>
	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>		
< 100 Beds	\$7,277	17,941	\$131	\$6,416	10,247	\$66	-12%	-50%
100-199 Beds	\$9,090	42,311	\$385	\$8,115	24,388	\$198	-11%	-49%
200-299 Beds	\$9,947	39,155	\$389	\$9,141	22,538	\$206	-8%	-47%
300-399 Beds	\$10,892	24,504	\$267	\$9,796	14,001	\$137	-10%	-49%
400-499 Beds	\$11,686	13,849	\$162	\$11,382	7,949	\$90	-3%	-44%
> 500 Beds	\$13,609	16,701	\$227	\$13,383	10,027	\$134	-2%	-41%

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.

Payments include hospital base rate times DRG weight or per diem amount) plus IME, DSH, capital and outliers adjustments.

Payments are in current 1999 dollars, having been inflated by HCFA's PPS market basket update of 2.4%.

SOURCE: MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

Table 5-10

**Average and Total PPS Payments for Short-Stay Cases by Hospital Ownership
Pre versus Post Policy Change Periods**

<u>Ownership Status</u>	<u>Pre-Policy Change Period</u>			<u>Post-Policy Change Period</u>			<u>Percent Change in Per Case Payments</u>	<u>Percent Change in Total Payments</u>
	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>		
Government Non-Profit	\$10,339	18,395	\$190	\$9,840	11,714	\$115	-4.8%	-39.4%
Proprietary For-Profit	\$9,757	18,034	\$176	\$8,622	10,482	\$90	-11.6%	-48.6%
Voluntary Non-Profit	\$10,117	118,202	\$1,196	\$9,347	67,243	\$629	-7.6%	-47.4%

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.

Payments include hospital base rate times DRG weight or per diem amount) plus IME, DSH, capital and outliers adjustments.

Payments are in current 1999 dollars, having been inflated by HCFA's PPS market basket update of 2.4%.

SOURCE: MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

greatest percent change in per case payments at 11.6 percent, while government non-profit hospitals had the lowest decline at 4.8 percent.

Table 5-11 illustrates the pattern of PPS payments for short-stay transfer cases by hospital teaching status. Not surprisingly, teaching hospitals receive higher pre case payments (\$12,021) than non-teaching hospitals (\$8,673). The distribution pattern remains the same following the postacute care transfer policy implementation. However, for both teaching and non-teaching hospitals per case payments dropped 5.3 and 9.7 percent, respectively, after the introduction of the policy reform.

Table 5-12 categorizes payments for short-stay postacute care transfer cases by geographic region. Per case payments range from \$4,845 in Puerto Rico to \$11,310 in the New England Region. The implementation of the postacute care transfer policy resulted in decreases in per case payments for all regions, with the exception of Puerto Rico. Per case payments rose 37 percent in Puerto Rico after the adoption of the payment reform. The remainder of geographic regions experienced a decline in per case payments, ranging from 1.9 percent in the Middle Atlantic Region to 12.2 percent in the New England Region.

Table 5-13 examines average PPS payment for short-stay cases by hospital location. Urban hospitals have greater per case payments. Per case payments range from \$11,735 among urban hospitals to \$7,121 for rural hospitals. Urban hospitals were the least affected by the implementation of the postacute care transfer policy. Per case payments dropped 5.5 percent among urban hospitals, compared to 9.4 percent among other urban hospitals and 10.0 percent for rural hospitals.

5.7 Impact of Policy Change on PPS Expenditures by Type of Medicare Beneficiary

Table 5-14 presents the financial impact of the postacute care transfer policy on short-stay cases by sex of the beneficiary. Average per case payment for male patients is higher than average

Table 5-11

**Average and Total PPS Payments for Short-Stay Cases by Hospital Teaching Status
Pre versus Post Policy Change Periods**

<u>Teaching Status</u>	<u>Pre-Policy Change Period</u>			<u>Post-Policy Change Period</u>			<u>Percent Change in Per Case Payments</u>	<u>Percent Change in Total Payments</u>
	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>		
Non-Teaching	\$8,673	88,440	\$767	\$7,833	51,627	\$404	-9.7%	-47.3%
Teaching	\$12,021	66,021	\$794	\$11,382	37,523	\$427	-5.3%	-46.2%

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.

Payments include hospital base rate times DRG weight or per diem amount) plus IME, DSH, capital and outliers adjustments.

Payments are in current 1999 dollars, having been inflated by HCFA's PPS market basket update of 2.4%.

SOURCE: MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

Table 5-12

**Average and Total PPS Payments for Short-Stay Cases by Geographic Region
Pre versus Post Policy Change Periods**

<u>Region</u>	<u>Pre-Policy Change Period</u>			<u>Post-Policy Change Period</u>			<u>Percent Change in Per Case Payments</u>	<u>Percent Change in Total Payments</u>
	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>		
New England	11,310	9,048	102.3	9,933	5,584	55.5	-12.2%	-45.8%
Middle Atlantic	11,251	16,338	183.8	11,037	9,646	106.5	-1.9%	-42.1%
South Atlantic	9,487	30,050	285.1	8,677	18,480	160.3	-8.5%	-43.8%
East North Central	10,476	29,256	306.5	9,509	17,248	164.0	-9.2%	-46.5%
East South Central	9,233	9,942	91.8	8,696	6,000	52.2	-5.8%	-43.2%
West North Central	8,668	13,164	114.1	7,851	6,673	52.4	-9.4%	-54.1%
West South Central	10,004	17,218	\$172	9,280	9,930	\$92	-7%	-46%
Mountain	9,189	9,809	\$90	8,310	5,414	\$45	-10%	-50%
Pacific	11,106	19,092	\$212	10,271	9,895	\$102	-8%	-52%
Puerto Rico	4,845	544	\$3	6,626	280	\$2	37%	-30%

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.

Payments include hospital base rate times DRG weight or per diem amount) plus IME, DSH, capital and outliers adjustments.

Payments are in current 1999 dollars, having been inflated by HCFA's PPS market basket update of 2.4%.

SOURCE: MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

Table 5-13

**Average and Total PPS Payments for Short-Stay Cases by Rural/Urban Location
Pre versus Post Policy Change Periods**

<u>Location</u>	<u>Pre-Policy Change Period</u>			<u>Post-Policy Change Period</u>			<u>Percent Change in Per Case Payments</u>	<u>Percent Change in Total Payments</u>
	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>		
Urban	\$11,735	72,419	\$850	\$11,087	40,889	\$453	-5.5%	-46.7%
Other Urban	\$9,304	57,991	\$540	\$8,430	34,044	\$287	-9.4%	-46.8%
Rural	\$7,121	24,051	\$171	\$6,411	14,217	\$91	-10.0%	-46.8%

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.

Payments include hospital base rate times DRG weight or per diem amount) plus IME, DSH, capital and outliers adjustments.

Payments are in current 1999 dollars, having been inflated by HCFA's PPS market basket update of 2.4%.

SOURCE: MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

Table 5-14

**Average and Total PPS Payments for Short-Stay Cases by Sex of Beneficiary
Pre versus Post Policy Change Periods**

<u>Sex</u>	<u>Pre-Policy Change Period</u>			<u>Post-Policy Change Period</u>			<u>Percent Change in Per Case Payments</u>	<u>Percent Change in Total Payments</u>
	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>		
Male	\$11,341	49,961	\$567	\$10,864	28,636	\$311	-4.2%	-45.1%
Female	\$9,510	104,670	\$995	\$8,602	60,803	\$523	-9.6%	-47.5%

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.

Payments include hospital base rate times DRG weight (or per diem amount) plus IME, DSH, capital and outliers adjustments.

Payments are in current 1999 dollars, having been inflated by HCFA's PPS market basket update of 2.4%.

SOURCE: MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

payment for females, \$11,341 for males compared with \$9,510 for females. The reimbursement payment differential between males and females was even wider following the implementation of the postacute care transfer policy. Per case payments for male short-stay cases declined 4.2 percent, compared with a decline of 9.6 percent for female beneficiaries.

Table 5-15 presents average payments for short-stay cases by age of the beneficiary. Per case payment rates are strongly and negatively correlated with age. The younger the patient, the higher the per case payment, ranging from \$15,859 for the 65 and under age group to \$7,877 for the 85 and over age category. Per case payments dropped between the pre and post-policy change periods in relation to age. The older the age group, the greater the percentage decline in per case payments. After the policy reform, per case payments to those less than 65 fell by 7.9 percent, while per case payments to those over 84 fell 10.2 percent.

Table 5-16 shows per case payments for short-stay cases by the Medicare status of the beneficiary. Patients qualifying for Medicare benefits under disability generated had significantly higher per case payments compared to those qualifying for Medicare benefits as based on age (\$9,764 and \$15,784 without ESRD, respectively). The difference between the two widened slightly in the post-policy period when per case payments drop 7.9 percent among the aged without ESRD to \$8,991 and 6.9 percent among the disabled to \$14,696.

Table 5-15

**Average and Total PPS Payments for Short-Stay Cases by Age of Beneficiary
Pre versus Post Policy Change Periods**

<u>Age</u>	<u>Pre-Policy Change Period</u>			<u>Post-Policy Change Period</u>			<u>Percent Change in Per Case Payments</u>	<u>Percent Change in Total Payments</u>
	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>		
Age < 65 Years	\$15,859	7,953	\$126	\$14,600	5,333	\$78	-7.9%	-38.3%
Age 65-74 Years	\$11,260	47,610	\$536	\$10,702	25,972	\$278	-5.0%	-48.2%
Age 75-84 Years	\$9,789	62,481	\$612	\$8,952	35,712	\$320	-8.5%	-47.7%
Age 85+ Years	\$7,877	36,587	\$288	\$7,074	22,422	\$159	-10.2%	-45.0%

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.

Payments include hospital base rate times DRG weight or per diem amount) plus IME, DSH, capital and outliers adjustments.

Payments are in current 1999 dollars, having been inflated by HCFA's PPS market basket update of 2.4%.

SOURCE: MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.

Table 5-16

**Average and Total PPS Payments for Short-Stay Cases by Medicare Status of Beneficiary
Pre versus Post Policy Change Periods**

<u>Medicare Status</u>	<u>Pre-Policy Change Period</u>			<u>Post-Policy Change Period</u>			<u>Percent Change in Per Case Payments</u>	<u>Percent Change in Total Payments</u>
	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>	<u>Per Case Payment</u>	<u>Number of Cases</u>	<u>Total Payments (millions)</u>		
Aged w/o ESRD	\$9,764	145,611	\$1,422	\$8,991	83,623	\$752	-7.9%	-47.1%
Aged w/ ESRD	\$13,003	728	\$9	\$9,566	497	\$5	-26.4%	-49.8%
Disabled w/o ESRD	\$15,784	7,672	\$121	\$14,696	4,815	\$71	-6.9%	-41.6%
Disabled w/ ESRD	\$15,481	367	\$6	\$12,044	315	\$4	-22.2%	-33.2%
ESRD Only	\$15,996	253	\$4	\$15,744	189	\$3	-1.6%	-26.5%

NOTES:

Pre-policy change period defined as 10/1/97-3/31/98. Post-policy change period defined as 10/1/98-3/31/99.

Short-stay cases defined as discharges with acute care LOS at least one day below national geometric mean for DRG.

Payments include hospital base rate times DRG weight or per diem amount) plus IME, DSH, capital and outliers adjustments.

Payments are in current 1999 dollars, having been inflated by HCFA's PPS market basket update of 2.4%.

SOURCE: MedPAR, 1997-1998; Home Health SAF, 1997-1999; and Inpatient SAF, 1999.