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## Introduction

### 1.1 Purpose and Policy Background of Report

The primary purpose of this report is to evaluate the impact of the postacute care transfer payment policy under the inpatient prospective payment system (PPS) on hospital treatment decisions and Medicare expenditures. The US Congress required HCFA through the Balanced Budget Act of 1997 to begin applying the payment methodology historically used to reimburse sending PPS hospitals for acute-to-acute care transfers to ten pilot DRGs for acute-to-postacute care transfers. The transfer payment methodology entails calculating a hospital-specific per diem for each DRG and paying hospitals twice the per diem on the first day plus the per diem for each additional day of inpatient care not to exceed the full DRG amount. For three DRGs for which this payment methodology failed to cover average costs, HCFA reimburses hospitals the per diem plus half the full DRG amount on the first day and half the per diem for each additional day up to the full DRG amount. Given the way in which the per diem payment amount is calculated, DRG payment amounts are reached at lengths of stay one day less than the national geometric mean length of stay for each DRG. Section 4407 of Public Law 105-33 mandated that HCFA include in the proposed rule published for fiscal year 2001 a description of the effect of the postacute care transfer payment policy on hospital treatment patterns and Medicare expenditures. This report was prepared and submitted in fulfillment of that congressional mandate.

## **1.2 Evaluation Issues**

The postacute care transfer payment policy, which went into effect on October 1, 1998, creates two independent incentives under inpatient PPS. First, to avoid the lower per diem payment amounts, hospitals have an incentive to reduce the number of postacute care transfers whose length of stay falls below the geometric mean length of stay. As made clear in the body of the report, hospitals can do this by: (1) reassuming the provision of postacute care services in an inpatient setting; (2) holding patients until they reach at least one day less than the geometric mean length of stay; or (3) delaying the postacute care admission or visit until after the appropriate transfer interval has lapsed. Second, hospitals can increase the per diem payment amounts by increasing lengths of stay without changing the postacute care transfer rate.

The type and magnitude of PPS hospital behavioral response to the payment incentives of the postacute care reimbursement change constitute the major focus of this report. Empirical evidence on treatment and discharge patterns before and after the policy change is used to quantify the impact of the payment reform on the allocation of hospital resources. Evidence is also provided on the expected versus actual savings to the Medicare program. Actual and expected savings are further decomposed into their volume and financial impacts on providers.

## **1.3 Data Sources**

At the time of this evaluation, only one year of post-policy reform claims data were available. However, the inpatient and home health claims files during the later months of fiscal year 1999 were only partially complete. Because non-submission of patient bills was

more of a problem for postacute care providers than it was for acute care providers, including data from the second half of fiscal year 1999 would have biased the postacute care transfer rates downward. As a result, incomplete billing records limited the analysis to only the first six months of the post-policy period in order to stay within the reporting timeframe mandated by Congress. Because of the extremely short post-policy change period, the results presented in this report should be interpreted as preliminary findings only, particularly given the historical lag in hospital response to changes in financial incentives.

#### **1.4 Summary of Findings**

- Total discharges in the 10 postacute care transfer DRGs fell 10.9 percent between the first half of FY1998 and the first half of FY1999. (See Table 1-1.) The number of postacute care transfers fell slightly more, or 13.4 percent. The overall postacute care transfer rate fell from 63.4 to 61.6 percent, or 2.8 percent. Statistically significant at the 99 percent confidence level, this reduction suggests that hospitals may have reassumed care for some patients, thereby avoiding a discharge to postacute care.
- The volume of postacute care transfers qualifying for the lower per diem payment fell from 154,631 during the first half of FY1998 to 89,439 during the first six months of FY1999, representing a volume decline of 42.2 percent. The share of total discharges of qualifying postacute care transfers fell from 28.2 percent to 18.3 percent, a 35.1 percent reduction. However, most of this reduction stems from the decline in the geometric mean length of stays from one discrete integer to another for the two largest postacute care DRGs, effectively reducing the number of cases qualifying for the lower per diem payment. The actual hospital response is closer to the 2.3 percent reduction in the qualifying postacute care transfer rate, obtained by holding the geometric mean length of stay constant. (*Tables 4-2 and 4-2A.*) Therefore, hospitals appear to have responded very modestly to the lower payment incentives of the per diem payment methodology by lowering the number and share of short-stay postacute care transfers.
- At the same time, there was an increase in the volume and share of postacute care transfers that did not qualify for the lower payment per diem. The number of long-stay Postacute care transfers paid the full DRG amount (e.g., those with a LOS at least one day less than the geometric mean length of stay) rose from 192,624 before the policy

**Table 1-1**

**Comparison of Volumes for 10 Postacute Care DRGs  
Pre Versus Post Policy Change Periods**

<b><u>Volume Measure</u></b>	<b><u>Pre-Policy</u></b>	<b><u>Post-Policy</u></b>		<b><u>Percent Change (%)</u></b>	
	<b><u>Chang Period</u></b>	<b><u>Change Period</u></b>		<b><u>Using</u></b>	<b><u>Using</u></b>
	<b><u>Using</u></b>	<b><u>Using</u></b>	<b><u>Using</u></b>	<b><u>Using</u></b>	<b><u>Using</u></b>
	<b><u>(1998 GLOS)</u></b>	<b><u>(1999 GLOS)</u></b>	<b><u>(1998 GLOS)</u></b>	<b><u>1999 GLOS</u></b>	<b><u>1998 GLOS</u></b>
1. Number of Total Discharges	547,721	488,099	488,099	-10.9	-10.9
2. Number of PAC Discharges	347,255	300,669	300,669	-13.4	-13.4
3. Number of Short-Stay PACs	154,631	89,439	134,518	-42.2	-13.0
4. Number of Long-Stay PACs	192,624	211,230	166,151	9.7	-13.7
5. PAC Share of Total Discharges (%)	63.4	61.6	61.6	-2.8	-2.8
6. Short-Stay PAC Share of Total Discharges (%)	28.2	18.3	27.6	-35.1	-2.3
7. Short-Stay PAC Share of Total PACs (%)	44.4	29.7	44.7	-33.1	0.7
8. Long-Stay PAC Share of Total PACs (%)	35.2	43.3	34.1	23.2	-3.1
9. Average LOS of PACs (days)	7.54	7.35	7.35	-2.5	-2.5
10. Average LOS of Short-Stay PACs (days)	4.16	4.33	4.22	4.1	1.5
11. Average LOS of Long-Stay PACs (days)	10.25	8.63	9.88	-15.9	-3.6
12. Total PPS Inpatient Days of Short-Stay PACs	643,265	387,271	567,666	-39.8	-11.8

**NOTES:**

1) Pre-policy change period from 10/1/97 to 3/31/98. Post-policy change period from 10/1/98 to 3/31/99.

2) Short-stay PACs defined as cases with LOS at least one day less than GLOS - 1 day. Long-stay PACs defined as cases with LOS equal to or greater than GLOS - 1 day.

3) All short-stay measures calculated either using the 1998 or 1999 geometric mean length of stay (GLOS).

change to 211,230 afterwards. The share of non-qualifying long-stay postacute care transfers increased from 35.2 percent during the first half of FY1998 to 43.3 percent during the first six months of FY1999. Again, most of this increase can be attributed to declining geometric mean length of stays in 1999. Holding the geometric mean length of stay constant, the non-qualifying postacute care rate actually fell by 3.1 percent. (Tables 4-3 and 4-3A)

- Total postacute care days eligible for per diem payment dropped almost 40 percent between 1998 and 1999. All but 11.8 percent of this decline, however, is attributable to the secular decline in GLOS unaffected by the implementation of BBA.
- The average LOS of short-stay postacute care transfers rose 4.1 percent between the two payment periods. Even after holding the geometric mean length of stay constant, the average LOS of qualifying postacute care transfers increased 1.5 percent after the policy change. The increase in average LOS for short-stay transfers *relative to short-stay non-transfers* for the same DRGs (4.1 percent versus 0.7 percent) suggests that hospitals may also have responded to the policy change by lengthening stays before transferring to postacute care. (Tables 4-4 and 4-4A)
- Overall annualized savings to the Medicare program is estimated to range between \$478 and \$524 million in the first year. (See Table 1-2.) Savings amounted to between 0.6 and 0.7 percent of all Medicare inpatient PPS outlays and between 4.5 and 4.9 percent of spending on the 10 pilot DRGs. The range is based on two calculations using the 1998 versus 1999 geometric mean lengths of stay (GLOS). Applying the current FY1999 GLOS to the post-BBA data produces a dramatic reduction in the observed decline in the short-stay PAC rate. As noted above, essentially all of the observed decline is attributable to the automatic drop in GLOS at the beginning of FY1999, rather than to any provider response to the payment reform. (Tables 5-3, 5-3A.)
- Short-stay PAC transfers in the FY1998 base period would have been paid 15.1 percent less on average on a per diem basis relative to payment on a DRG basis. (See Table 1-2.) Using the current FY1999 GLOS, the per diem discount factor rises to 17.8 percent. This rise is attributable to the coincidental decline in the GLOS of two DRGs from just above to just below 5.0 days. The net effect is to shift a large number of qualifying PAC transfers to long-stay status, thereby qualifying for the full DRG payment rate. Applying a constant 1998 GLOS to discharges for the first two quarters post-BBA actually produces a slight decline in the per diem discount rate.
- Static simulators of the expected savings prior to any changes in provider treatment patterns indicated a potential savings to Medicare of \$505 per case. (See Price Effect in Table 1-2.)

**Table 1-2**

**Decomposition of Medicare Savings from BBA  
Postacute Care Transfer Policy**

	<u>Pre-Policy Change Period</u>	<u>Post-Policy Change Period</u>	
		Using	Using
		<u>1999 GLOS</u>	<u>1998 GLOS</u>
<b>Short-stay PAC Transfer Rate (%)</b>	28.8	18.3	27.6
<b>Per Diem Discount Rate (%)</b>	15.1	17.8	14.2
<b>Average Per Case Savings (\$)</b>			
Total Savings	--	437	478
Price Effect	--	505	505
Volume Offset	--	-68	-26
<b>Total Savings</b>			
Annualized Total Savings (\$ million)		478	524
Savings as Percent of Spending Over 10 PAC DRGs		4.5	4.9
Savings as Percent of Spending Over All DRGs		0.6	0.7

**NOTES:**

- 1) Annualized savings double savings based on two quarters.
- 2) Pre-policy change period from 10/1/97 to 3/31/98. Post-policy change period from 10/1/98 to 3/31/99.
- 3) Short-stay PACs defined as cases with LOS at least one day less than GLOS - 1 day.  
Long-stay PACs defined as cases with LOS equal to or greater than GLOS - 1 day.
- 4) All short-stay measures calculated either using the 1998 or 1999 geometric mean length of stay (GLOS).
- 5) The per diem discount factor measures the percent reduction in per case payments under the BBA relative to DRG payments.

**SOURCE:** Based on HER analysis of MedPAR 1997-98; Home Health SAF, 1997-98; Inpatient SAF, 1999.

- The rate at which patients were transferred to a postacute care provider beyond the 1 or 3 day qualifying time period remained unchanged. At least during the first two quarters post-BBA, there is little evidence that hospitals are responding to the policy change by increasing the time interval between PPS discharge and postacute care admission or visit. *(Table 4-6)*
- Average LOS and number of visits in postacute care providers following PPS discharge actually fell between the two payment periods. Hence, there is no evidence that changes in PPS hospital treatment and discharge behavior are resulting in increased lengths of stay or numbers of visits during the subsequent postacute care episode. *(Table 4-7)*
- Average acute inpatient costs of short stay postacute care transfers rose after the policy change in real terms by 2.4 percent. Together with longer lengths of inpatient stay, higher incurred costs suggest that hospitals are keeping short stay postacute care transfer patients longer (and incurring more expense). *(Table 4-8)*
- Average profit margins for short-stay qualifying postacute care transfers fell 36 percent in real terms following the implementation of the payment reform. On average, real PPS profits fell by \$1,241 per short stay postacute care transfer after the introduction of the payment reform. *(Table 4-9)*
- In sum, although a marked decrease occurred in the post-BBA period in short-stay postacute care transfer, the change cannot be attributed to intentional responses on the part of providers. Slightly longer average stays among short-stay postacute care patients after the BBA postacute care policy was implemented suggests that providers are reassuming care for some patients that would previously have been shifted to non-acute providers.

## **1.5 Organization of Report**

The remainder of the report is organized as follows. Chapter 2 discusses the changes in the provision of health care services over the past decade that led to concern that HCFA was overpaying PPS hospitals for services that were increasingly being provided in postacute care facilities and units. Chapter 2 also provides a brief review of the main features of the new postacute care payment policy. The construction of the acute-to-postacute care episode level file used to conduct the analysis is described in Chapter 3. Included in this chapter is an assessment of the

accuracy of the discharge destination codes on the PPS hospital claims that are now being used to determine the payment methodology. The main analytic results of the study are presented in Chapters 4 and 5. Chapter 4 examines the impact of the policy reform on treatment and discharge policy. It explores pre-post differences in transfer rates, PPS lengths of stay and costs, postacute care lengths of stay and number of visits, and the time interval prior to the initiation of postacute follow-up care. Chapter 5 examines the impact of the payment reform on Medicare expenditures. The change in total expenditures is decomposed into a ‘price’ effect (e.g., the change in per case payment holding treatment decisions constant) and a ‘volume’ or behavioral effect (e.g., the change in the volume of postacute care transfers and the intensity of services provided to such cases). Chapter 6 provides a discussion of the pros and cons of extending the postacute care transfer policy to other DRGs, and offers several suggestions for how such an extension might be implemented. Summary analytic tables are presented in each chapter. The full analytic results are provided separately in the appendices.