NC Rural Health Research & Policy Analysis Center

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Profitability of Rural Hospitals Paid Under Prospective Payment Compared to Rural Hospitals with Special Medicare Payment Provisions

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OVERVIEW

The Medicare Prospective Payment System (PPS) was introduced by the federal government in October, 1983. Under PPS, hospitals are paid a pre-determined rate for each Medicare admission. Each patient is classified into a Diagnosis Related Group (DRG) on the basis of clinical information. Except for certain patients with exceptionally high costs (called outliers), a hospital is paid a flat rate for the DRG, regardless of the actual services provided.

Concerns about the use of PPS for rural hospitals arose in the 1990s. Rural and small hospitals face factors, such as diseconomies of scale, which could hinder financial performance in comparison to urban and larger hospitals. For these reasons, Federal law makers created and modified special payment classification under the Medicare program to address the challenges faced by different types of rural hospitals, recognizing that many rural hospitals are the only health facility in their community and their survival is vital to ensure access to health care. There are currently four classifications of rural hospitals that can qualify for special payment provisions under Medicare: Critical Access Hospitals (CAHs), Medicare Dependent Hospitals (MDHs), Sole Community Hospitals (SCHs), and Rural Referral Centers (RRCs). Some hospitals may have more than one designation.

Recently, stakeholders have reported continued financial difficulties for many rural hospitals (both those that qualify for special Medicare payment provisions and those that are reimbursed under PPS). Several parties, in and outside of Congress, have proposed expanding the cost-based reimbursement that is available to CAHs to other rural hospitals. In the Medicare Modernization Act (2007), Congress instituted a demonstration project of cost-based reimbursement for a few hospitals with 25-50 beds. An evaluation of the RCH Demonstration Program is not complete, but there continue to be proposals to expand cost-based reimbursement to rural hospitals other than CAHs.

This study compares the profitability of urban and rural hospitals paid under PPS (U-PPS and R-PPS, respectively) to rural hospitals with special Medicare payment provisions between 2007 and 2009. R-PPS hospitals are subdivided by bed size (<26, 26-50 and >50) to assess differences within the group. Financial ratios are used to compare the profitability of hospital groups, and percentages of hospitals with negative total margins are used as a sign of financial distress.

KEY FINDINGS

- Rural referral centers had consistently the highest profitability in comparison to hospitals with other payment classifications.
- Rural hospitals less than 26 beds and between 26-50 beds paid under PPS generally had the lowest profitability in comparison to hospitals with other payment classifications.
- Across all hospital payment classifications, profitability fell between 2007 and 2009.

PROFITABILITY

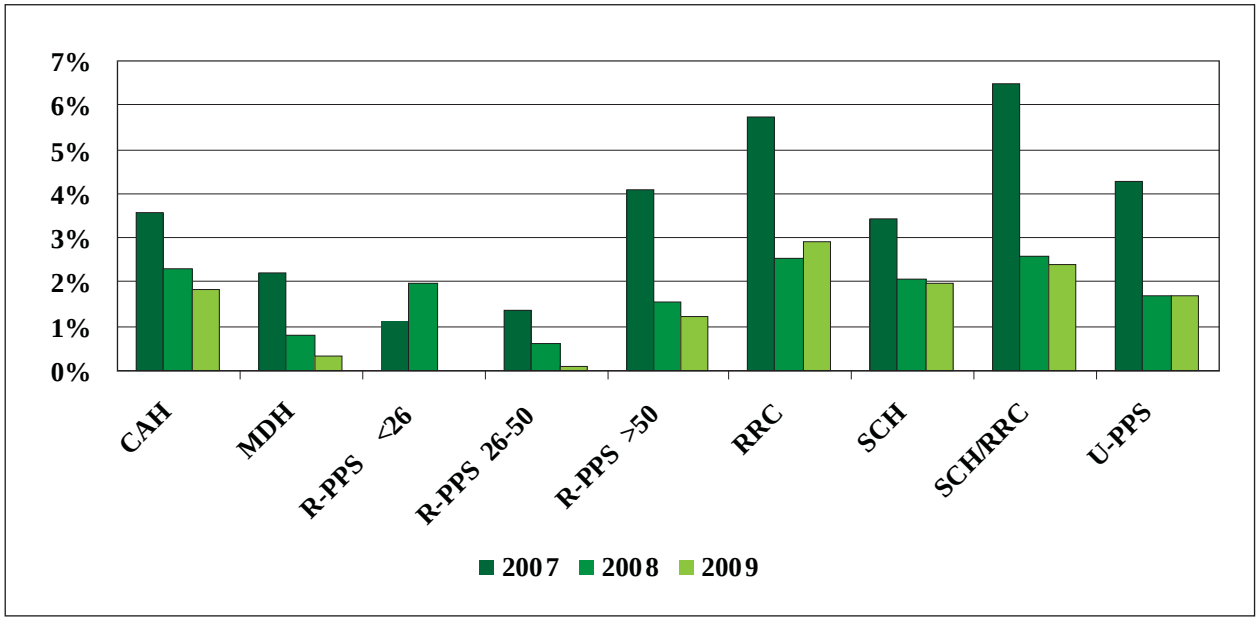
Table 1 shows two common measures of profitability: total margin and cash flow margin. Total margin (net income / total revenue) measures the control of expenses relative to revenues, and expresses the profit a hospital makes as a proportion of revenue brought in. For example, a 5% margin means the hospital makes 5 cents of profit on every dollar of total revenue. Because the margin is a proportion, two hospitals with the same margin can have vastly different absolute dollars of profit. For example, a hospital with a 5% margin and 50 million in total revenues will have $2,500,000 in profits, whereas a hospital with the same margin but only 5 million in revenue will have only $250,000.

Table 1: Profitability

	Total Margin			Cash Flow Margin		
	2007	2008	2009	2007	2008	2009
CAH	3.5%	2.3%	1.8%	5.9%	5.5%	5.4%
MDH	2.2%	0.8%	0.3%	5.7%	4.4%	4.8%
R-PPS <26	1.1%	1.9%	0.0%	4.8%	5.4%	-3.4%
R-PPS 26-50	1.3%	0.6%	0.1%	5.8%	4.6%	4.5%
R-PPS >50	4.1%	1.5%	1.2%	8.0%	6.4%	5.6%
RRC	5.7%	2.5%	2.9%	9.7%	8.0%	8.9%
SCH	3.4%	2.0%	2.0%	7.7%	6.1%	7.0%
SCH/RRC	6.5%	2.6%	2.4%	9.4%	7.7%	7.9%
U-PPS	4.3%	1.7%	1.7%	7.8%	5.9%	6.0%

Over all three years. RRCs as a group had the highest median total margins, whether those classified as a RRC only (median total margin of 2.9% in 2009) or those that were classified as both a RRC and a SCH (median of 2.4% in 2009). The classification with the poorest performance was R-PPS hospitals with less than 26 beds, which had the lowest median total margin in 2009 (0.0%) and in 2007 (1.1%). R-PPS hospitals with 26-50 beds had the poorest performance in 2008 (0.6%). Across all payment classifications, median total margins declined between 2007 and 2009. Figure 1 graphically depicts the differences in total margin among hospital classifications.

Figure 1: Total Margin by Medicare Payment Classification, 2007-2009 Medians

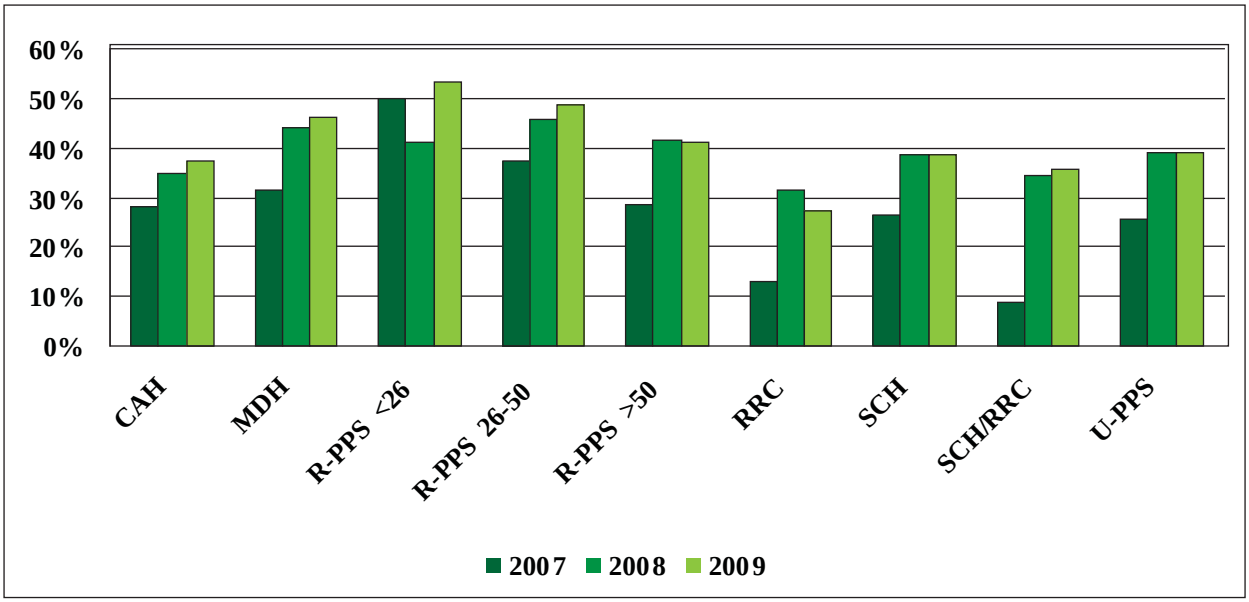


Cash flow margin[1] measures the ability to generate cash flow from providing patient care services. Over all three years, RRCs as a group had the highest median cash flow margins, whether those classified as a RRC only (median cash flow margin of 8.9% in 2009) or those that were classified as both a RRC and a SCH (median of 7.9% in 2009). The classification with the poorest performance was R-PPS hospitals with less than 26 beds, which had the lowest median total margin in 2009 (-3.4%) and in 2007 (4.8%). MDHs had the poorest performance in 2008 (4.4%). Across all payment classifications, median cash flow margins declined between 2007 and 2009.

FINANCIAL DISTRESS

Although there are no empirically tested thresholds for detecting financial distress, most financial analysts would agree that for most hospitals over the long run, a large negative total margin is likely indicative of financial distress. Figure 2 shows the percentage of all hospitals within each payment classification that had negative total margins. Over all three years. RRCs as a group had the lowest percent of hospitals with a negative total margin, whether those classified as a RRC only (27% in 2009) or those that were classified as both a RRC and a SCH (36% in 2009). The classification with the poorest performance was R-PPS hospitals with less than 26 beds, which had the highest percent of hospitals with a negative total margin in 2009 (53%) and in 2007 (50%). R-PPS hospitals with 26-50 beds had the poorest performance in 2008 (46%). Across all payment classifications, the percentage of hospitals with negative total margins increased between 2007 and 2009.

Figure 2: Percent of Hospitals with Negative Total Margin by Medicare Payment Classification, 2007-2009



DISCUSSION

This study compares the profitability of urban and rural hospitals paid under PPS respectively to rural hospitals with special Medicare payment provisions over a recent three-year period. There are three principal findings:

Rural referral centers had consistently the highest profitability in comparison to hospitals with other payment classifications. In all three years, the group with the highest total margin and cash flow was always

1.[(net income - (contributions, investments and appropriations) + depreciation + interest)] / (net patient revenue + other income -(contributions, investments, and appropriations))

RRC or RRC/SCH. RRCs and RRC/SCHs also had the lowest percentage of hospitals with a negative total margin and negative cash flow margin. RRCs and RRC/SCHs were the best at controlling expenses relative to revenues, generating cash flow from providing patient care services, and avoiding financial distress from negative margins. These findings are likely influenced by the fact that RRCs and RRC/SCHs are the largest type of rural hospital. Relatively more patient activity generates higher revenue and spreads fixed costs over more patients. RRCs and RRC/SCHs may also be better able to maintain an effective mix of medical, nursing, and other staff to meet local patient demand.

Rural hospitals less than 26 beds and between 26-50 beds paid under PPS generally had the lowest profitability in comparison to hospitals with other payment classifications. In all three years, the group with the lowest total margin and cash flow margin was (except for 2008 cash flow margin) R-PPS <26 beds or R-PPS 26-50 beds. R-PPS <26 beds and R-PPS 26-50 beds also had the highest percentage of hospitals with a negative total margin and negative cash flow margin. R-PPS <26 and R-PPS 26-50 were the worst at controlling expenses relative to revenues, generating cash flow from providing patient care services, and avoiding financial distress from negative margins. It is particularly interesting that R-PPS <26 beds had consistently lower profitability over time in comparison to CAHs because the hospitals in both groups have less than 26 beds. Although similar in size, the group paid under PPS had lower profitability. Based on the findings, the typical R-PPS hospital less than 50 beds was under a substantial amount of financial pressure. These findings are likely influenced by the fact that R-PPS hospitals less than 50 beds are among the smallest rural hospitals. Relatively less patient activity generates less revenue and spreads fixed costs over fewer patients in comparison with larger hospitals. R-PPS hospitals less than 50 beds may also have more difficulty maintaining an effective mix of medical, nursing, and other staff to meet local patient demand.

Across all hospital payment classifications, profitability fell between 2007 and 2009. Total margin, cash flow margin, and the percent of hospitals with negative total margins worsened between 2007 than 2009. These trends, which likely reflect the worsening economy, raise concern for the hospital industry as a whole. It will be important to monitor future rural hospital financial performance to gauge the effects of both the economy and health reform legislation.

The hospitals under the greatest financial pressure have greater risk of closing and warrant the greatest concern by policy makers and those concerned with access to hospital care by rural residents. This study found that rural hospitals less than 26 beds and between 26-50 beds paid under PPS were the least profitable hospitals and probably under the greatest financial pressure over a recent three year period. The study did not investigate the reasons for the poor profitability, but they may include patient volume, payer mix, geographic location or the PPS payment mechanism itself.

STUDY METHOD

The research design is based on standard financial statement analysis. Project data came from the CMS Hospital Cost Report Information System (HCRIS). Longitudinal files were created that included all of the Medicare cost report worksheets required for provider identification and calculation of financial indicators. The financial indicator definitions and Medicare cost report account codes for them were verified with a technical adviser and compared to other sources of financial ratios. An analytical file with the Medicare cost report data was created for each hospital with at least 360 days in a cost report period. There were missing data for some indicators and for some hospitals; therefore, the number of hospital cost reports used to calculate an indicator median was sometimes less than the total number of hospital cost reports.

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