Communities Served by Rural Medicare Dependent Hospitals

Kristin L. Reiter, PhD, George M. Holmes, PhD, Saleema A. Karim. MHA, George H. Pink, PhD

OVERVIEW

The Medicare Dependent Hospital (MDH) program provides enhanced reimbursement to support rural health infrastructure and to support small rural hospitals for which Medicare patients make up a significant percentage of inpatient days or discharges. This greater dependence on Medicare may make these hospitals more financially vulnerable to prospective payment, and the MDH designation is designed to reduce this risk.

A hospital qualifies for the MDH program if it is located in a rural area, has no more than 100 beds, is not classified as a Sole Community Hospital, and has at least 60 percent of inpatient days or discharges covered by Medicare. Hospitals meeting these criteria may benefit from two provisions. First, they are eligible to receive half or 75% (depending on the year) of the amount by which the highest of hospital-specific base year costs per discharge for Medicare patients (updated to the current year) exceeds the PPS rate in addition to the PPS payment rate. Second, an MDH with a caseload that falls by more than 5 percent (due to circumstances beyond its control) may receive payments necessary to fully compensate it for fixed costs. These provisions aim to reduce the risk of financial distress to the hospital, and improve financial health and sustainability of the facility.

As an element in the Affordable Care Act, the MDH program will be terminated on October 1, 2012. When this happens, MDHs will revert to being reimbursed under the prospective payment system, which has potentially important implications for the communities served by MDHs. This findings brief explores the potential consequences of termination of the MDH program by comparing MDHs to rural prospective payment system hospitals (R-PPS) in terms of utilization and the characteristics of the communities they serve.

KEY FINDINGS

In comparison to R-PPS hospitals:

- **MDHs are more dependent on Medicare, and serve relatively smaller, more isolated, market areas.**

    - The mean total population is smaller in markets served by MDHs than in markets served by R-PPS hospitals.

    - The average percentage of the population age 65 and over is higher in markets served by MDHs than in markets served by R-PPS hospitals.

    - The mean percentage of inpatient days attributable to Medicare is higher for MDHs than for R-PPS hospitals.

- **MDHs are smaller facilities and have lower patient volumes, but have greater average market share in rural areas.**

    - At the mean, MDHs have fewer total beds, discharges, and inpatient days than R-PPS hospitals.

    - Average market share for MDHs is greater than R-PPS hospitals.

- **Driving distances to the next closest hospital with more than 100 beds are, on average, greater for rural residents living in markets served by MDHs versus R-PPS hospitals.**

RESULTS

Descriptive statistics for market and hospital characteristics are reported in Table 1, stratified by hospital type.

Market Characteristics
In comparison to the markets served by R-PPS hospitals, markets served by MDHs had a higher percentage of population age 65 and over and a smaller total population. Markets served by the two types of hospitals were similar in terms of socio-economic measures including unemployment rate, per capita income and percentage of the population living in poverty. Figure 1 shows that a patient residing in a MDH market area lives an average of 13.3 miles from the hospital while a resident of an R-PPS market area lives an average of 15.1 miles from the hospital. The average distance from the MDH or R-PPS hospital to the next closest hospital is similar in both MDH and R-PPS markets (21.8 versus 20.3 miles, respectively). However, the average distance from the MDH or R-PPS hospital to the next closest hospital with greater than 100 beds (which include specialty services not usually found in smaller hospitals) is slightly greater for residents of MDH markets as compared to residents of R-PPS markets (30.4 miles versus 25.9 miles, respectively).

Hospital Characteristics
In comparison to R-PPS hospitals, MDHs on average had fewer total beds, discharges, and inpatient days; a lower acute average daily census, and a smaller percentage of total inpatient days attributable to Medicaid patients. Figure 2 shows that, on average, MDHs had a larger percentage of total inpatient days attributable to Medicare (62.9% versus 48.8% for R-PPS hospitals).

Table 1. Descriptive Statistics (Means) For Rural MDHs and R-PPS in 2008 (N=418)

Characteristic	MDH	R-PPS	P Value for Difference*
Number of hospitals	140	278	
Market Characteristics			
Population age 65 and over in market area	16.4%	14.8%	0.000
Average unemployment rate in market area	6.0%	6.2%	0.177
Average per capita income in market area	19,000	20,200	0.063
Average rate of families or person in poverty in market area	25.3%	24.9%	0.656
Total population in market area	54,800	96,000	0.001
Market population density (persons per square mile)	50	80	0.000
Hospital discharges / total discharges in market area	25.9%	23.2%	0.015
Average distance from place of residence to hospital	13.3 miles	15.1 miles	0.094
Average distance to next closest larger hospital with > 100 beds	30.4 miles	25.9 miles	0.004
Average distance to next closest larger hospital (miles)	21.8 miles	20.3 miles	0.213
Hospital Characteristics			
Total beds	51.6	67.6	0.000
Total discharges	1,951	2,725	0.000
Medicare inpatient days	4,890	5,383	0.245
Medicaid inpatient days	1,032	1,636	0.000
Total inpatient days	8,047	10,962	0.000
Acute average daily census	19.4	27.9	0.000
Medicare / total hospital inpatient days (%)	62.9%	48.8%	0.000
Medicaid / total hospital inpatient days (%)	11.3%	14.6%	0.002

*P values are from t-tests and chi-square tests measuring the difference in means between two groups.

2

Figure 1. Average Distances Between Place of Residence and Hospital and Hospital to Next Larger Hospital
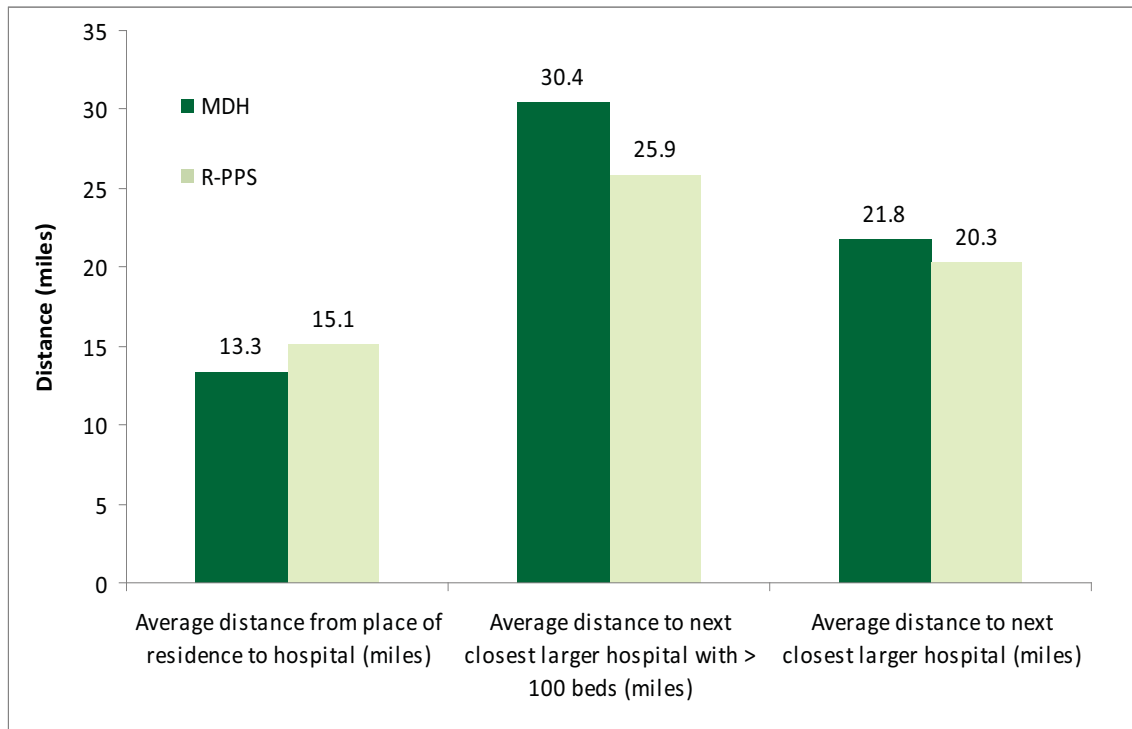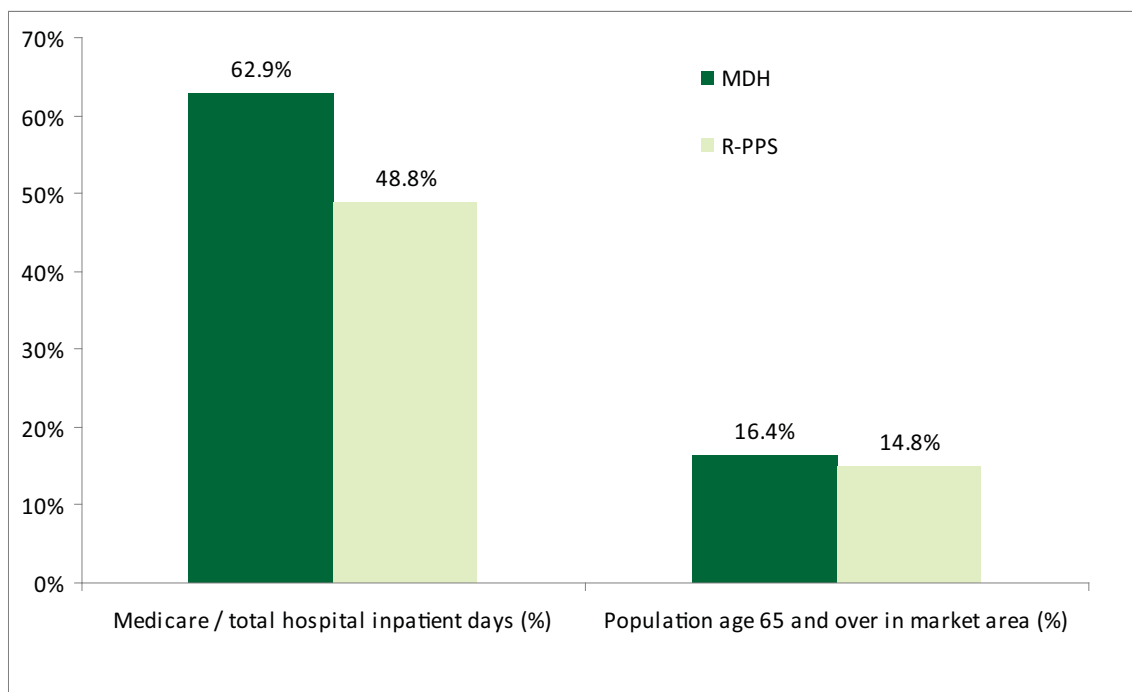

Figure 2. Percentage of Medicare Inpatient Days and Percentage of Population ≥ 65 Years for MDH & R-PPS

CONLUSIONS

The results of this analysis show that MDHs, on average, serve higher proportions of Medicare patients than R-PPS hospitals, and are located in markets with higher percentages of seniors among the population. Because MDHs have fewer beds, lower utilization, and are located in markets with smaller total populations as compared to R-PPS hospitals, MDHs may have fewer opportunities to offset financial shortfalls with increased patient volume if the MDH program is terminated. If current MDHs are not financially viable under R-PPS and are forced to close, the decrease in access will affect markets with disproportionately higher Medicare populations.

DATA & METHODS

Utilization data for MDHs and R-PPS hospitals were drawn from hospital cost reports for 2008 from the Healthcare Cost Reporting Information System (HCRIS), produced by the Centers for Medicare and Medicaid Services. Market data were drawn from the Area Resource File produced by the Health Resources and Services Administration and from census data. Rural PPS hospitals were defined as hospitals located in micropolitan and non-core based statistical area counties. The hospital's market area was defined by creating the number of Medicare discharges for each residence ZIP - hospital dyad from the Market Service Area files for 2000-2009 (for example, 113 Medicare beneficiaries residing in a particular ZIP admitted to a particular hospital in 2000.) For each hospital, dyads with a distance of more than 150 miles between the residence and the hospital were eliminated, under the assumption that distances of this amount are not reflective of "typical" care-seeking patterns (e.g. the patient was travelling). After this exclusion, residence ZIPs were aggregated in descending order of number of discharges to the hospital until 75% of the hospital discharges was achieved. These ZIPs were used to define the market for the hospital in that year. Means were calculated for market and hospital utilization characteristics for MDHs and R-PPS hospitals. T-tests and chi-square tests were used to test for differences in means between the two types of hospitals ($p<0.05$).