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Policy Brief #15
March 2010

Critical Access Hospital Year 5 Hospital Compare Participation and Quality Measure Results

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Introduction

This report examines the fifth year participation and quality measure results for Critical Access Hospitals (CAHs) in the Centers for Medicare and Medicaid Services (CMS) Hospital Compare public reporting database. Although CAHs do not face the same financial incentives as hospitals paid under the Medicare Prospective Payment System (PPS) to participate, the Hospital Compare initiative provides an important opportunity for CAHs to assess and improve their performance on national standards of care. This report updates previous national reports on Hospital Compare results for CAHs.[1-4] The Flex Monitoring Team has also prepared state-level reports on 2006-2008 data.

Approach

The current Hospital Compare quality measures include inpatient process of care measures that reflect recommended treatments for acute myocardial infarction (AMI), heart failure, pneumonia, surgical care improvement, and children's asthma care; outpatient AMI/chest pain and surgical process of care measures; Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) patients' assessment of care survey results; and hospital 30 day risk-adjusted mortality and readmission rates for AMI, heart failure, and pneumonia calculated by CMS using Medicare claims data.

Data on the inpatient process of care measures and HCAHPS survey results for January through December 2008 were downloaded from the CMS Hospital Compare website when they became available in September 2009. These data were linked with previously downloaded process of care data for 2005, 2006, and 2007; data on the 3 year (July 2005 to June 2008) mortality and readmission rates calculated by CMS; data on all CAHs maintained by the Flex Monitoring Team; and data on hospital characteristics from the Fiscal Year 2008 American Hospital Association Annual Survey.

The percentages of patients that received recommended care for the inpatient process of care quality measures were calculated by dividing the total number of patients who received the recommended care by the

Key Findings

•70% of CAHs reported data for at least one patient on one inpatient process of care measure for 2008. The percent of CAH patients receiving recommended care has increased for nearly all measures. At the same time, the percent of PPS patients receiving recommended care has also increased, so CAHs continue to have lower scores relative to rural and urban PPS hospitals on several measures.

•34% of CAHs reported HCAHPS patient assessment of care survey data in 2008. On average, CAHs have significantly higher ratings on HCAHPS measures than all US hospitals.

•The vast majority of CAHs either did not have enough cases in 3 years for CMS to reliably calculate 30-day risk adjusted mortality and readmission rates for pneumonia, heart failure and AMI, or did not have rates that were significantly different than the US rates for all hospitals. Thus, these measures are of limited usefulness for assessing quality at the individual hospital level for CAHs.

• Health care providers will increasingly be required to demonstrate the quality of the care they are providing to qualify for reimbursement incentives and avoid penalties for poor care. In this environment, CAHs that are unwilling to participate in quality reporting and benchmarking activities may be challenged.

This study was conducted by the Flex Monitoring Team with funding from the federal Office of Rural Health Policy (PHS Grant No. U27RH01080)

total number of eligible patients in all CAHs nationally. The percentages of patients reporting the highest response (e.g., always) on each HCAHPS measure were summed and averaged across all reporting CAHs nationally and for all reporting hospitals in the U.S.

CMS calculates hospital-level 30-day risk-standardized mortality and readmission rates for pneumonia, heart failure, heart attack using Medicare fee-for-service claims and enrollment data and statistical modeling techniques. Rates are not calculated for hospitals that are not in the Hospital Compare database or for hospitals with less than 25 qualifying cases over the three-year period. For this report, the number and percent of CAHs for which CMS did not calculate risk-adjusted mortality rates and readmission rates were determined. The number and percent of CAHs whose rates for each condition were not different than, better than or worse than the national rates, as determined by CMS, were then summed nationally.

Reporting of Inpatient Process of Care Measures

Nationally, participation in Hospital Compare (defined as publicly reporting data on at least one inpatient process of care measure) increased from 41% of CAHs in 2004 to 70% of CAHs in 2008. By state, the percent of CAHs reporting inpatient process of care measures for 2008 ranged from 11% to 100%. Of the 45 states in the Flex Program, eight states had 100% of their CAHs publicly reporting in 2008, while seven states had less than half of their CAHs reporting.

CAHs certified in 2007 and 2008 had the lowest Hospital Compare participation rates, while those certified in 2005 had the highest rate. Accredited CAHs and private non-profit CAHs are more likely than non-accredited CAHs to participate as are those with government/public or for-profit ownership.

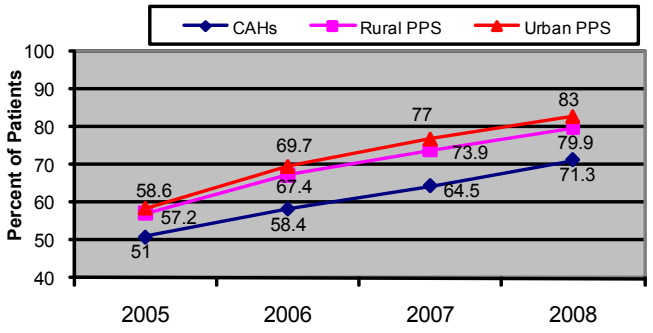
CAHs were more likely to report data on the pneumonia and heart failure measures than on the AMI and surgical care improvement measures. Over one-third (38%) of participating CAHs did not report data on any of the eight AMI measures, while 53% reported data on three or more measures. In contrast, 65% reported data on all four heart failure measures, while only 7% did not report data on any heart failure measures. Similarly, 82% of participating CAHs reported data on all seven pneumonia measures and an additional 12% reported data on six measures; only 1% did not report data on any pneumonia measures. For the surgical care measures, 53% of participating CAHs did not report data on any measures, while 41% reported data on six measures.

Inpatient Process of Care Results[i]

For 2008 discharges, CAHs did not perform as well as did rural and urban PPS hospitals on many of the inpatient process of care measures. From 2005-2008, the percent of CAH patients receiving recommended care increased annually for nearly all measures. However, the percent of rural and urban PPS hospital patients receiving recommended care also increased during this time period. Thus, while showing improvement, CAHs continued to have lower scores relative to rural and urban PPS hospitals on most measures.

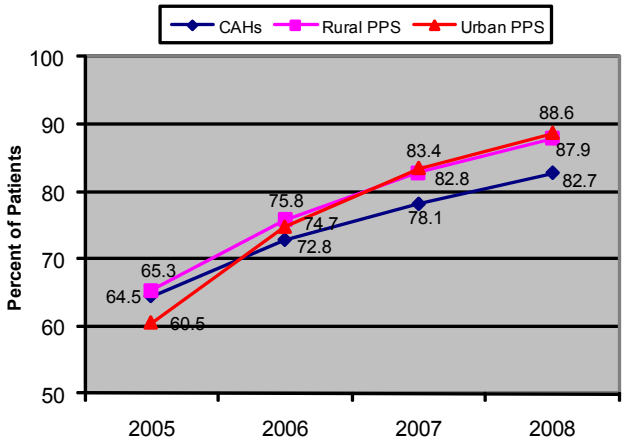
For example, the percent of CAH heart failure patients that received recommended discharge instructions increased from 51% in 2005 to 71.3% in 2008 (Figure 1). At the same time, however, the percent of rural PPS patients receiving the recommended discharge instructions increased from 57.2% to 79.9% and the percent of urban PPS patients receiving the recommended discharge instructions increased from 58.6% to 83%. Similar patterns hold true for several AMI, heart failure, and pneumonia measures.

Figure 1. Percent of Heart Failure Patients Receiving Discharge Instructions 2005-2008



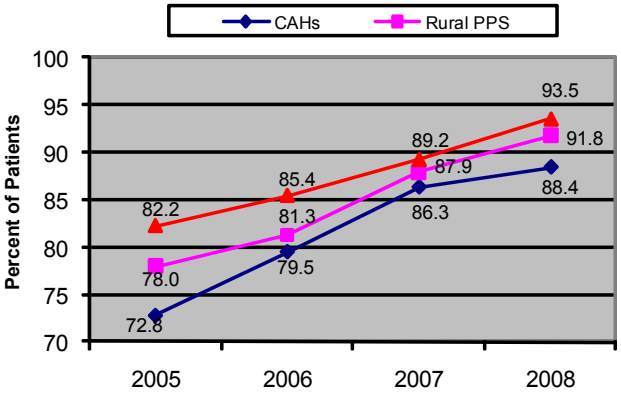
In 2005, 64.5% of CAH pneumonia patients received a pneumococcal vaccination (vs. 65.3% for rural PPS and 60.5% for urban PPS hospitals) (Figure 2). While CAH performance improved to 82.7% in 2008, rural PPS and urban PPS hospitals also improved to 87.9% and 88.6%.

Figure 2. Percent of Pneumonia Patients Receiving Pneumoccocal Vaccination 2005-2008



Similarly, in 2005, 72.8% of CAH surgical patients received an initial preventative antibiotic one hour before their incision (vs. 78% for rural PPS and 82.2% for urban PPS hospitals.) CAH performance improved to 88.4% in 2008, while rural PPS and urban PPS hospitals also improved to 91.8% and 93.5%.

Figure 3. Percent of Surgical Patients Receiving Preventative Initial Antibiotic 1 Hour Before Incision 2005-2008



HCAHPS Survey Reporting and Results

One-third (34%) of CAHs publicly reported HCAHPS patient assessment of care survey data to Hospital Compare in 2008. By state, the percent of CAHs publicly reporting HCAHPS data ranged from 0% to 100% of CAHs in 2008. Three states had 100% of their CAHs reporting HCAHPS data.

Table 1 displays the mean (average) percentages of patients that gave the highest level of response (e.g., "always") for each of the HCAHPS survey measures in two groups of hospitals that publicly reported HCAHPS data for 2008: CAHs nationally, and all US hospitals. For all HCAHPS measures, CAHs had higher average scores than all US hospitals.

Table 1. HCAHPS Results for CAHs Nationally for 2008

	Mean (average) for:	
Percent of patients who reported that:	**CAHs Nationally (n = 442)**	**All US hospitals (n = 3,765)**
Nurses always communicated well	79%	74%
Doctors always communicated well	83%	80%
Patient always received help as soon as wanted	71%	62%
Pain was always well controlled	71%	68%
Staff always explained about medications before giving them to patient	63%	59%
Yes, staff gave patient information about what to do during recovery at home	82%	80%
Area around patient room was always quiet at night	61%	56%
Patient room and bathroom were always clean	78%	69%
They gave an overall hospital rating of 9 or 10 (high) on 1-10 scale	70%	64%

Mortality and Readmission Results

Only 13% of CAHs had an AMI mortality rate calculated by CMS, and none had a rate that was different from the US rate for all hospitals. More CAHs had the minimum number of patients to reliably calculate mortality rates for heart failure (58%) and pneumonia (70%), but very few CAHs had mortality rates that are either better than or worse than the US rates for all hospitals (fewer than 1% of CAHs for heart failure and 3% of CAHs for pneumonia).

Only 5% of CAHs had an AMI readmission rate calculated by CMS, and none had a rate that was different from the US rate for all hospitals. More CAHs had the minimum number of patients to reliably calculate readmission rates for heart failure (61%) and pneumonia (69%), but few CAHs had readmission rates that are either better than or worse than the US rates for all hospitals (0.2% of CAHs for heart failure and 0.7% of CAHs for pneumonia).

Conclusions

Over the past five years, CAHs have improved their performance on nearly all Hospital Compare inpatient process of care measures. During this time, however, rural PPS and urban PPS hospitals also improved their performance. Thus, CAHs continue to have lower scores relative to rural and urban PPS hospitals on several measures, especially measures related to AMI and heart failure. The persistence over time of significant differences between CAHs and PPS hospitals, as well as within the group of CAHs, presents an ongoing quality improvement challenge for CAHs.

On average, CAHs have significantly higher ratings on HCAHPS measures than all US hospitals. However, only one-third of CAHs are reporting HCAHPS results to Hospital Compare.

The vast majority of CAHs did not have enough cases for CMS to reliably calculate 30-day risk adjusted mortality and readmission rates for pneumonia, heart failure and AMI, or did not have rates that were significantly different than the US rates for all hospitals.

Although many CAHs are participating in Hospital Compare and/or in state or regional quality reporting and benchmarking initiatives, others are not. To date, public reporting of quality measures has been voluntary for CAHs, in part due to concerns about the rural relevance of quality measures and the difficulty of reliably measuring quality for low volume providers. Although some quality measures are not relevant for CAHs because they involve procedures that are rarely performed in small rural hospitals (e.g., PCI), many of the current Hospital Compare measures, including the inpatient pneumonia and heart failure measures, the AMI/chest pain outpatient measures, and the HCAHPS survey measures, are relevant for CAHs.

While small volume remains a challenge, several options exist for improving the reliability and usefulness of quality measures for low volume providers (e.g., calculating composite measures; aggregating data across groups of similar hospitals; using longer time periods to calculate measures; using statistical methods such as Bayesian models; and reporting confidence intervals for measures).

The health reform legislation passed by Congress will move the US toward a health care system that rewards the provision of high-quality care. Health care providers will increasingly be required to demonstrate the quality of the care they are providing to qualify for reimbursement incentives and avoid penalties for poor care. In this environment, CAHs that are unwilling to participate in quality reporting and benchmarking activities will be challenged.

References

1. Casey, M, Moscovice, I. *CAH Participation in Hospital Compare and Initial Results.* (Briefing Paper No. 9). Minneapolis, MN: Flex Monitoring Team; February 2006.. http://www.flexmonitoring.org/documents/ BriefingPaper9_HospitalCompare.pdf

2. Casey, M, Burlew, M, and Moscovice, I. *Critical Access Hospital Year 2 Hospital Compare Participation and Quality Measure Results*. (Briefing Paper No. 16). Minneapolis, MN: Flex Monitoring Team; April 2007. http://www.flexmonitoring.org/documents/ BriefingPaper16_HospitalCompare.pdf

3. Casey, M, Burlew, M, and Moscovice, I. *Critical Access Hospital Year 3 Hospital Compare Participation and Quality Measure Results*. (Briefing Paper No. 20). Minneapolis, MN: Flex Monitoring Team; August 2008. http://www.flexmonitoring.org/documents/ BriefingPaper20_HospitalCompare3.pdf

4. Casey, M, Burlew, M, and Moscovice, I. *Critical Access Hospital Year 4 Hospital Compare Participation and Quality Measure Results.* (Briefing Paper No. 22). Minneapolis, MN: Flex Monitoring Team; September 2009. http://flexmonitoring.org/documents/ BriefingPaper22_HospitalCompare4.pdf

[i]As with our previous analyses of Hospital Compare data, several caveats are necessary in evaluating these results. Although the percent of CAHs participating in Hospital Compare has increased, participating and non-participating CAHs still differ significantly on several organizational characteristics. Thus, the quality measure results for CAHs that voluntarily participate in Hospital Compare may not be representative of all CAHs. Some of the differences in scores between groups of hospitals are only a few percentage points, but are statistically significant because of the large sample sizes involved. However, these differences may not be of practical significance because the scores are high for all groups.

This policy brief is based on Flex Monitoring Team Briefing Paper No.26 by Michelle Casey, Michele Burlew and Ira Moscovice, available at www.flexmonitoring.org.

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