

## Critical Access Hospital Year 3 Hospital Compare Participation and Quality Measure Results

*Michelle Casey, MS<sup>1</sup>, Michele Burlew, MS<sup>2</sup>, Ira Moscovice, PhD<sup>1</sup>*

### Introduction

This report examines the third 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 the results of previous reports on Year 1 and Year 2 Hospital Compare results for CAHs. The Flex Monitoring Team has also prepared state-level reports on the Year 3 data.

### Approach

This project used data on hospital participation and quality measure results from the Hospital Compare website <http://www.hospitalcompare.hhs.gov/>. The measures are based on data abstracted from patient records for hospital discharges in January through December 2006. Due to the reporting schedule, data for a full calendar year is not available from CMS until the following September.

In September 2007, data from the website were downloaded and linked with data on all CAHs maintained by Flex Monitoring Team and data from other secondary sources, including the American Hospital Association Fiscal Year 2006 Annual Survey.

The Hospital Compare measure set for 2006 discharges included 22 measures that reflect recommended treatments for acute myocardial infarction (AMI), heart failure, pneumonia and surgical infection prevention. Although the number of CAH patients for whom measures were reported had increased since the previous year's analysis, many CAHs still had a very small number of patients for several measures, especially AMI measures. Therefore, aggregate scores were calculated

### Key Findings

- 63% of CAHs participated in Hospital Compare for 2006 discharges by submitting data for at least one patient on one measure. CAH participation rates vary by state.
- CAHs were more likely to report data on pneumonia and heart failure measures than on AMI and surgical infection prevention measures.
- From 2004-2006, the percent of CAH patients receiving recommended care increased for nearly all measures. The percent of rural and urban PPS hospital patients receiving recommended care also increased.
- CAHs still have room for improvement, especially with regard to recommended care for AMI and heart failure patients.
- Variation in quality measure results within the group of CAHs is further evidence of the potential for lower performing CAHs to improve the quality of care they provide.

<sup>1</sup>University of Minnesota Rural Health Research Center

<sup>2</sup>Episystems, Inc., under contract with the University of Minnesota

across groups of CAHs and other hospitals. In addition, individual CAH scores were compared for CAHs with at least 25 patients per measure in 2006, and trends from 2004 to 2006 were analyzed for hospitals with data for all three years.

### **CAH Participation in Hospital Compare**

Overall, 63% of CAHs participated in Hospital Compare by submitting data on at least one measure for 2006 discharges. (This total does not include 289 CAHs that submitted quality measure data for 2006 discharges to Q-Net Exchange, the national Quality Improvement Organization data warehouse, but did not allow the data to be publicly reported to Hospital Compare.)

The overall CAH participation rate of 63% for 2006 discharges compares to 41% for 2004 discharges and 53% for 2005 discharges.

By state, the percent of participating CAHs ranged from 7.7% to 100%. Seven states had 100% of their CAHs participating. CAHs were more likely to report data on the pneumonia and heart failure measures than on the acute myocardial infarction (AMI) and surgical infection prevention measures. CAHs certified in 1999 or earlier had the lowest Hospital Compare participation rate (47%), while those certified in 2005 had the highest rate (85%). Accredited CAHs and private non-profit CAHs are more likely than non-accredited CAHs and those with government/public or for-profit ownership to participate.

### **Reporting of Measures by Condition**

CAHs were more likely to report data on the pneumonia and heart failure measures than on the AMI and surgical infection prevention measures. Over one-third (34%) of the 812 CAHs that participated in Hospital Compare for 2006 discharges did not report data on any of the eight AMI measures, while 57% reported data on four or more measures.

In contrast, 70% of the 812 participating CAHs reported data on all four heart failure measures, while only 7% did not report data on any heart failure measures. Similarly, 77% of participating CAHs reported data on all seven pneumonia measures and an additional 16%

reported data on six measures; only 1.4% did not report data on any pneumonia measures. For the surgical infection prevention measures, 59% of participating CAHs did not report data on any measures, while 39% of reported data on all three measures.

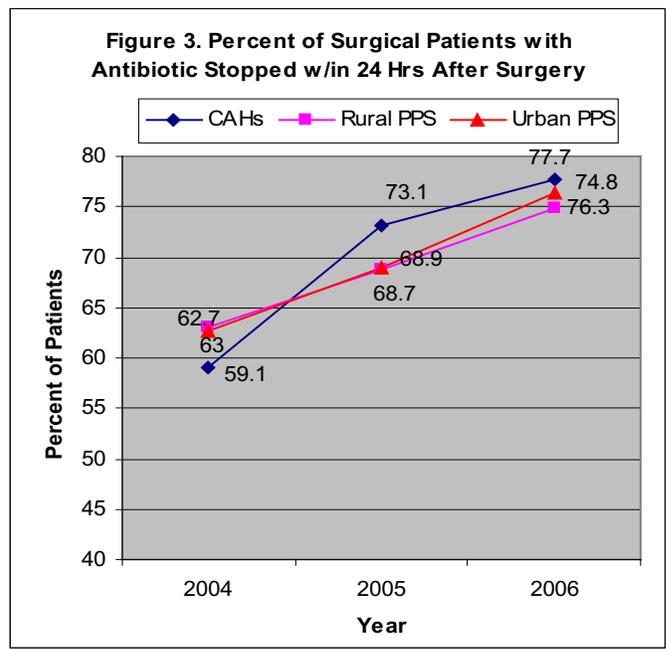
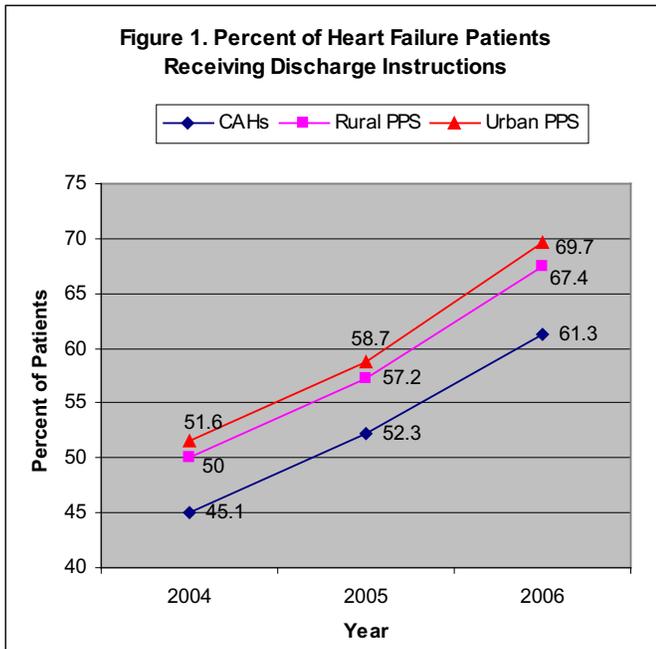
### **Quality Measure Results**

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.

Similar to the first and second year results, for 2006 discharges, CAHs did not do as well on the AMI and heart failure measures as rural and urban PPS hospitals. For pneumonia and surgical infection prevention, CAHs scored as well or better than other hospitals on some measures, and not as well on other measures.

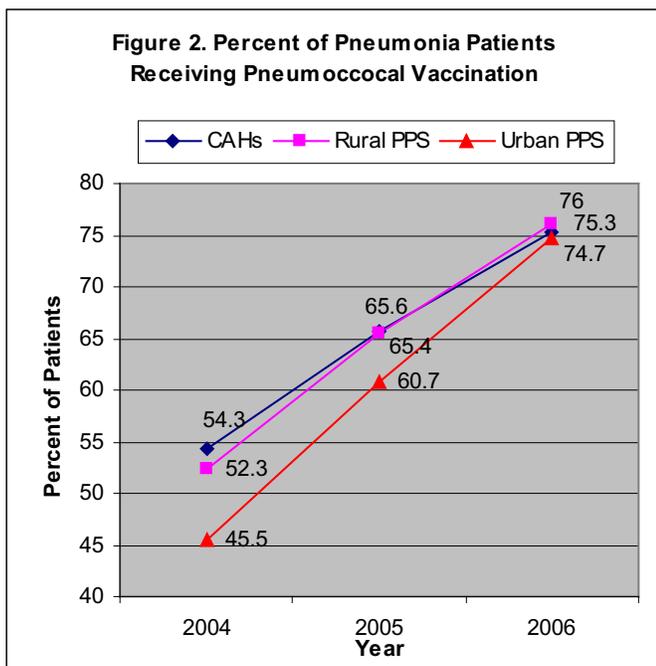
CAHs that reported Hospital Compare data for 2004, 2005 and 2006 improved their performance from 2004 to 2006 on all measures except one. However, rural PPS and urban PPS hospitals also improved their performance. Thus, CAHs continue to have lower scores relative to rural and urban PPS hospitals on many measures.

For example, among the CAHs with data for all three years, the percent of heart failure patients that received recommended discharge instructions increased from 45.1% in 2004 to 61.3% in 2006 (Figure 1). At the same time, however, the percent of rural PPS patients receiving the recommended discharge instructions increased from 50% to 67.4% and the percent of urban PPS patients receiving the recommended discharge instructions increased from 51.6% to 69.7%. Similar patterns hold true for several AMI, heart failure and pneumonia measures.



In 2004, among the three groups of hospitals, CAHs had the highest percent of pneumonia patients who received a pneumococcal vaccination (54.3% vs. 52.3% for rural PPS and 45.5% for urban PPS hospitals) (Figure 2). While CAH performance improved to 75.3% in 2006, rural PPS and urban PPS hospitals also improved to 76% and 74.7% respectively.

On a few pneumonia and surgical infection prevention measures, CAHs' improvement was sufficient to equal or surpass PPS hospitals. For example, in 2005 and 2006, CAHs surpassed PPS hospitals on the percent of surgical patients whose preventative antibiotics were stopped within 24 hours after surgery (Figure 3).



**Conclusions**

Over the past three years, the percent of CAHs participating in Hospital Compare has continued to increase, indicating that many CAHs see the value of taking part in a national effort to collect and publicly report on quality of care measures. However, participation rates continue to vary widely across states.

CAHs that have participated in Hospital Compare for three years have significantly improved their performance on nearly all measures. At the same time, however, rural PPS and urban PPS hospitals also improved their performance. Therefore, CAHs continued to have lower scores relative to rural and urban PPS hospitals on many measures.

While some differences between CAHs and PPS hospitals may not be of practical significance, other differences are larger and indicate that CAHs still have room for improvement, especially with regard to recommended care for AMI and heart failure patients.

In comparing the results for CAHs with rural and urban PPS hospitals, it is important to recognize that hospital characteristics such as patient volume, the size and composition of medical and nursing staff, financial resources, and the availability of technology may influence the measurement of quality as well as the provision of care in the hospital environment. For measures that are rural relevant, comparisons of results across groups of hospitals can be a useful means of exploring the extent to which differences may be occurring due to factors related to patient volume or other aspects of the rural or urban environment.

At the same time, it is also very important to remember that the aggregate scores for groups of CAHs, and PPS rural and urban hospitals include a wide range of scores for individual hospitals. Some individual hospitals in each group are performing much better than the average, and others are performing worse. While small numbers continue to complicate evaluation of quality performance at the individual CAH level, identification of individual high performing CAHs is useful so that their successful strategies and best practices can be replicated in other hospitals that need to improve the quality of care they provide.

CMS is continuing to add inpatient measures to the quality reporting program for PPS hospitals and Hospital Compare. Some of the new and proposed measures address conditions that are commonly treated in CAHs (e.g., nursing sensitive measures, AMI Emergency Department/outpatient measures) while others address procedures not usually performed in CAHs (e.g., cardiac surgery).

Low volume remains a problem for calculating a number of measures, especially AMI measures, at the individual hospital level, and also limits the usefulness of some new measures that have been added to Hospital Compare, such as 30-day mortality rates for AMI and heart failure. Additional research is needed to evaluate alternative methods of assessing and comparing quality performance at the individual hospital level for small rural hospitals.

## References

Casey, M, Moscovice, I. *CAH participation in Hospital Compare and initial results*. (Briefing Paper No. 9). Minneapolis, MN: Flex Monitoring Team; 2006. [http://flexmonitoring.org/documents/BriefingPaper9\\_HospitalCompare.pdf](http://flexmonitoring.org/documents/BriefingPaper9_HospitalCompare.pdf)

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; 2007. [http://www.flexmonitoring.org/documents/BriefingPaper16\\_HospitalCompare2.pdf](http://www.flexmonitoring.org/documents/BriefingPaper16_HospitalCompare2.pdf)

*This policy brief is based on Flex Monitoring Team Briefing Paper No.20 by Michelle Casey, Michele Burlew and Ira Moscovice, available at [http://flexmonitoring.org/documents/BriefingPaper20\\_HospitalCompare3.pdf](http://flexmonitoring.org/documents/BriefingPaper20_HospitalCompare3.pdf)*

*For more information, please contact Michelle Casey at [mcasey@umn.edu](mailto:mcasey@umn.edu).*