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Critical Access Hospital Quality Improvement Activities and Reporting on Quality Measures: Results of the 2007 National CAH Survey

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Flex Monitoring Team
University of Minnesota
University of North Carolina at Chapel Hill
University of Southern Maine

The Flex Monitoring Team is a consortium of the Rural Health Research Centers located at the Universities of Minnesota, North Carolina at Chapel Hill, and Southern Maine. Under contract with the Federal Office of Rural Health Policy (PHS Grant No. U27RH01080), the Flex Monitoring Team is cooperatively conducting a performance monitoring project for the Medicare Rural Hospital Flexibility Program (Flex Program). The monitoring project is assessing the impact of the Flex Program on rural hospitals and communities and the role of states in achieving overall program objectives, including improving access to and the quality of health care services; improving the financial performance of Critical Access Hospitals; and engaging rural communities in health care system development.

This report was prepared by Michelle Casey, MS of the University of Minnesota Rural Health Research Center.

Questions regarding the report should be addressed to: Michelle Casey 612-623-8316, mcasey@umn.edu.

Flex Monitoring Team
http://www.flexmonitoring.org

University of Minnesota
Division of Health Services Research & Policy
420 Delaware Street, SE, Mayo Mail Code 729
Minneapolis, MN 55455-0392
612.624.8618

University of North Carolina at Chapel Hill
Cecil B. Sheps Center for Health Services Research
725 Martin Luther King Jr. Boulevard, CB #7590
Chapel Hill, NC 27599-7590
919.966.5541

University of Southern Maine
Muskie School of Public Service
PO Box 9300
Portland, ME 04104-9300
207.780.4435

The Medicare Rural Hospital Flexibility Program

The Medicare Rural Hospital Flexibility Program (Flex Program), created by Congress in 1997, allows small hospitals to be licensed as Critical Access Hospitals (CAHs) and offers grants to States to help implement initiatives to strengthen the rural health care infrastructure. To participate in the Flex Grant Program, States are required to develop a rural health care plan that provides for the creation of one or more rural health networks; promotes regionalization of rural health services in the State; and improves the quality of and access to hospital and other health services for rural residents of the State. Consistent with their rural health care plans, states may designate eligible rural hospitals as CAHs.

CAHs must be located in a rural area or an area treated as rural; be more than 35 miles (or 15 miles in areas with mountainous terrain or only secondary roads available) from another hospital or be certified before January 1, 2006 by the State as being a necessary provider of health care services. CAHs are required to make available 24-hour emergency care services that a State determines are necessary. CAHs may have a maximum of 25 acute care and swing beds, and must maintain an annual average length of stay of 96 hours or less for their acute care patients. CAHs are reimbursed by Medicare on a cost basis (i.e., for the reasonable costs of providing inpatient, outpatient and swing bed services).

The legislative authority for the Flex Program and cost-based reimbursement for CAHs are described in the Social Security Act, Title XVIII, Sections 1814 and 1820, available at http://www.ssa.gov/OP_Home/ssact/title18/1800.htm

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EXECUTIVE SUMMARY

Introduction

Improving the quality of care provided by Critical Access Hospitals (CAHs) is an important goal of the Medicare Rural Hospital Flexibility Program. This report describes current CAH quality improvement initiatives and participation in quality reporting and benchmarking initiatives.

Methods

Data for this report were collected through a national telephone survey of CAH administrators conducted between January and May 2007. A total of 381 CAHs responded to the survey, yielding a response rate of 85%. Survey respondents were asked about their most important quality improvement activities and their participation in quality reporting and benchmarking initiatives.

Results

CAHs continue to be actively involved in a wide range of quality improvement initiatives, with patient safety and medication safety in particular as major areas of focus.

Among CAHs that do not report to Hospital Compare, the most important reasons for not reporting are an insufficient volume of patients; the fact that the hospital is not required by CMS to report; and insufficient staff time for chart review/data extraction. Among non-reporting CAHs, 30% plan to submit data in the next year.

Two-thirds of CAHs participate in a national, state or local quality reporting or benchmarking initiative other than Hospital Compare.

Conclusions

Over half of non-participant CAHs cite an insufficient volume of patients as a reason for not participating in Hospital Compare. This finding indicates the importance of continuing to explore alternative ways of presenting and analyzing quality data for low volume hospitals, e.g., using composite measures and/or summarizing data over longer time periods.

The high rate of CAH participation in national, state and local reporting initiatives other than Hospital Compare suggests that these efforts can help support expanded national reporting of quality measures among CAHs.

INTRODUCTION

Improving the quality of care provided by Critical Access Hospitals (CAHs) is an important goal of the Medicare Rural Hospital Flexibility (Flex) Program). The Flex Program supports Quality Improvement activities in CAHs in several ways. Using state Flex grant funds from the federal Office of Rural Health Policy (ORHP), states have implemented a wide range of quality initiatives targeted to CAHs, including the development of relationships with state Quality Improvement Organizations (QIOs) and networks supporting quality and performance improvement, hospital staff training in quality improvement techniques, and use of the balanced scorecard approach.[1] CAHs are also using additional financial resources they receive through cost-based Medicare reimbursement for quality-related activities. In Flex Monitoring Team surveys and site visits, CAHs have reported that cost-based Medicare reimbursement has contributed to their ability to fund additional staff, staff training, and equipment to improve patient care and to enhance their quality improvement activities.[2-4]

Medicare's overall strategy for improving the quality of hospital care includes public reporting of quality measure data and the provision of rewards for superior performance on certain measures of quality, along with ongoing regulation conducted by State survey agencies and the Centers for Medicare and Medicaid Services (CMS) and the provision of quality improvement resources through QIOs.[5] The Flex Monitoring Team has surveyed CAHs about their quality measure data collection and reporting[6] and analyzed CAH participation and quality measure results in the CMS Hospital Compare public reporting database for hospital quality measures. [7-8]

Based on the results of a national survey of CAHs conducted in 2007, this report updates previous Flex Monitoring Team work documenting CAH quality improvement and quality measure reporting activities and explores reasons why some CAHs are not participating in Hospital Compare.

METHODS

Data for this report were collected through a national telephone survey of CAH administrators conducted between January and May 2007. In addition to CAH quality improvement and measurement activities, survey questions also addressed community impact and benefit activities and access to capital. Flex Monitoring Team members from the Universities of Minnesota and Southern Maine designed the structured telephone interview survey. The survey was fielded by the University of Southern Maine's Survey Research Center.

A random sample of 450 CAHs was chosen for the survey. The 450 CAHs in the sample represented approximately 35% of all CAHs that were certified as of December, 2005. All of the hospitals in the sample had at least one year of CAH operational experience before they were surveyed. A total of 381 CAHs responded to the survey, yielding a response rate of 85%. Survey respondents were located in 45 states. The distribution of respondent hospitals reflects the national distribution of CAHs during the time periods used for identifying the sample.

SURVEY RESULTS

Most Important Quality Improvement Initiatives

Survey respondents were asked to briefly describe the most important quality improvement initiative underway at their hospital. A total of 377 CAHs described at least one initiative, and some respondents described multiple initiatives (Table 1). Responses to this open-ended question were categorized by type of initiative. Medication safety initiatives were mentioned most frequently; 84 CAHs (22.3%) cited efforts to reduce medication errors through activities such as improving their medication reconciliation processes and implementing automated dispensing systems. Fifty-seven CAHs (15.1%) described overall Quality Improvement/Performance Improvement initiatives, including working with CAH networks and Quality Improvement Organizations (QIOs), implementing Balanced Scorecards and working to meet Joint Commission on Accreditation of Healthcare Organizations (JCAHO) standards.

Twelve percent of CAHs reported activities related to implementing National Patient Safety Goals or general patient safety initiatives. Eleven percent described working on the Centers for Medicare and Medicaid Services/JCAHO core measures, which are used for Hospital Compare reporting and JCAHO accreditation; these efforts included collecting and reporting data, benchmarking and activities to improve scores on the measures. Eight percent of CAHs described facility replacement/renovation or purchase of new equipment (e.g., for digitally transmitting radiology images) as their most important QI initiative.

Table 1

Most Important Quality Improvement Initiatives Currently Underway In Critical Access Hospitals (CAHs) (n = 377)[1]

Type of Initiative	Number of CAHs	Percent of CAHs
Medication safety (e.g., reduce medication errors, improve medication reconciliation, automated dispensing)	84	22.3%
Overall Quality Improvement/Performance Improvement initiatives (e.g., working with CAH networks, QIOs; implementing Balanced Scorecard, JCAHO standards)	57	15.1%
National Patient Safety Goals/general patient safety activities	44	11.7%
CMS/JCAHO core measures (e.g., collecting and reporting data, benchmarking, activities to improve scores)	41	10.9%
Facility and equipment improvements (e.g., renovations, new equipment to digitally transmit radiology images)	30	8.0%
Initiatives to improve care for a specific condition (e.g., pneumonia, heart failure, diabetes, pressure sores)	26	6.9%
Implement electronic medical/health records	26	6.9%
Fall prevention programs (e.g., identify patients at risk of falls, use alarms, frequent checks to prevent falls)	24	6.4%
Patient satisfaction (e.g., conduct surveys, implement activities to improve patient satisfaction)	18	4.8%
Emergency care and patient transfers	17	4.5%
“100,000 Lives” and “5 Million Lives” programs	17	4.5%
Implement protocols/guidelines	15	4.0%
Staffing and training initiatives	14	3.7%
Infection control and surgical infection prevention	12	3.2%
New/enhanced services (e.g., surgery, rehab, therapy)	9	2.4%
Developing rapid response teams	7	1.9%
Other	28	7.4%

[1]Some respondents described multiple initiatives.

Other frequently mentioned activities included initiatives to improve care for patients with a specific condition (e.g., pneumonia, heart failure, diabetes, pressure sores); implementation of electronic medical/health records; fall prevention programs; patient satisfaction surveys and efforts to improve patient satisfaction; activities to improve emergency care and patient transfers; participation in the Institute for Healthcare Improvement’s “100,000 Lives” and “5 Million Lives” programs; implementation of protocols and guidelines; staffing and training initiatives; infection control and surgical

infection prevention programs; implementation of new or enhanced services (e.g., surgery, rehabilitation and therapy); and developing rapid response teams.

Collection and Reporting of Data on CMS/JCAHO Core Measures

Respondents were asked if they collected data on the CMS/JCAHO core measures for acute myocardial infarction (AMI), heart failure and pneumonia. Eighty-four percent of the CAHs reported collecting data for all three conditions, while an additional ten percent collect data for one or two of the three conditions (Table 2). It is important to distinguish here between collecting and reporting data; some CAHs that collect data on these measures do not publicly report it to Hospital Compare.

Sixty-one surveyed CAHs reported that they did not collect data for all three conditions. They were given a list of possible reasons and asked to indicate whether or not each was a reason why their hospital did not collect the data. Of these CAHs, 51% indicated that the hospital had an insufficient volume of patients for collecting data on the measures, while 44% said that the measures were not relevant to their hospital. Other common reasons included the hospital is not JCAHO accredited (30%) and the hospital is not required by CMS to collect data (20%). Nine CAHs (15%) reported having insufficient staff time for chart review/data extraction. Of the CAHs not currently collecting data on all three conditions, 54% reported that they do not plan to collect data on these measures in the next year, while one fourth plan to collect data and 21% are undecided.

Table 2
CAHs' collection of data on the CMS/JCAHO core measures for acute myocardial infarction, heart failure and pneumonia
(n = 381)

	Number of CAHs	Percent of CAHs
Hospital collects data for:		
All three conditions	320	84.0%
Heart failure and pneumonia only	3	0.8%
AMI and pneumonia only	4	1.0%
AMI and heart failure only	20	5.2%
Pneumonia only	1	0.3%
Heart failure only	10	2.6%
None of the three conditions	15	3.9%
Missing response/don't know	8	2.1%
Reasons for not collecting data on measures (n = 61)		
Insufficient volume of patients for measures	31	50.8%
Measures are not relevant to hospital	27	44.3%
Hospital is not JCAHO accredited	18	29.5%
Hospital is not required by CMS to collect data	12	19.7%
Insufficient staff time for chart review/data extraction	9	14.8%
Another reason	12	19.7%
Hospital plans to collect data on these measures in the next year (n = 61)		
Yes	15	24.6%
No	33	54.1%
Missing/don't know	13	21.3%

Reasons for Not Submitting Data to Hospital Compare

Sixty-six CAHs reported that they did not submit data to Hospital Compare. These CAHs were given a list of possible reasons and asked to indicate whether or not each was a reason why their hospital did not submit data, as well as their most important reason for not submitting data (Table 3). Over half of the non-participating CAHs cited an insufficient volume of patients (59%) and the fact that the hospital is not required by

CMS to report (55%) as reasons for not submitting data. These two reasons were the most important reasons for not submitting data for 35% and 23% of CAHs, respectively.

Insufficient staff time for chart review/data extraction was cited by 35% of the non-reporting CAHs as a reason for not submitting data; this was the most important reason for 20% of the non-participating CAHs. Thirty percent of the CAHs cited lack of relevancy of the measures as a reason for not submitting data, but only two CAHs cited it as the most important reason. Relatively few non-reporters identified problems with CMS' CART tool or data submissions as a reason for not submitting data. Among the 66 non-reporting CAHs, 58% do not plan to submit data to Hospital Compare in the next year, while 30% do and the rest are undecided.

Table 3
CAHs' reasons for not participating in Hospital Compare and future plans for reporting
(n = 66)

	Number of CAHs	Percent of CAHs
Reasons for not submitting data		
Insufficient volume of patients for measures	39	59.1%
Hospital is not required to participate by CMS	36	54.5%
Insufficient staff time for chart review/data extraction	23	34.8%
Measures are not relevant to our hospital	20	30.3%
Problems with CART/data submission	8	12.1%
Another reason	13	19.7%
Most important reason for not submitting data		
Insufficient volume of patients for measures	23	34.8%
Hospital is not required to participate by CMS	15	22.7%
Insufficient staff time for chart review/data extraction	13	19.7%
Problems with CART/data submission	2	3.0%
Measures are not relevant to our hospital	2	3.0%
Another reason	9	13.6%
Hospital plans to submit data to Hospital Compare in the next year		
Yes	20	30.3%
No	38	57.6%
Don't know	8	12.1%

Participation in Other Quality Reporting/ Benchmarking Initiatives

All CAHs were asked if they submit quality measure data to any quality measure reporting or benchmarking initiatives other than Hospital Compare, and if so, what type of initiative, and for which conditions (Table 4). Two-thirds of the CAHs participate in some other quality reporting or benchmarking initiative; some CAHs reported participating in multiple initiatives.

The most frequently mentioned other quality reporting initiatives were sponsored by state hospital associations or state rural health associations (a total of 20% of CAHs) and those involving QIOs (14% of CAHs). Thirty-five CAHs (9%) reported participating in reporting initiatives sponsored by a coalition or consortium of hospitals, including 14 CAHs that specifically cited the Rural Wisconsin Health Cooperative's Quality Indicators Program. Eight percent of CAHs reported participating in initiatives sponsored by a hospital or health care system of which the CAH was a member; seven percent cited various types of state reporting and six percent described participating in reporting efforts implemented by statewide CAH networks, including those in Illinois, Michigan, and Washington. Five percent of CAHs described reporting for the Institute for Healthcare Improvement 100,000 Lives and 5 Million Lives programs, and about three percent each mentioned reporting to the Joint Commission/ORYX, patient safety/adverse event systems, Rural Performance Management and Balanced Scorecard reporting through Stroudwater Associates, a private consulting group, and Leapfrog, a national coalition of health care purchasers.

Table 4

CAH Participation in Other Quality Measure Reporting and Benchmarking Initiatives

(n = 381)

	Number of CAHs	Percent of CAHs
Hospital submits data to a reporting or benchmarking initiative other than Hospital Compare		
Yes	256	67.2%
No	104	27.3%
Don't know	21	5.5%
Type of reporting or benchmarking initiative[1]		
State hospital/rural health association	75	19.7%
Quality Improvement Organization	55	14.4%
Hospital consortia (Including Rural Wisconsin Health Cooperative)	35	9.2%
Hospital system/health care system	29	7.6%
State	26	6.85
CAH network	22	5.8%
Institute for Healthcare Improvement (IHI)	21	5.5%
Joint Commission/ORYX	13	3.4%
Patient safety/adverse event reporting	13	3.4%
Stroudwater Associates (RPM/Balanced Scorecard)	13	3.4%
Leapfrog	11	2.9%
Other/unspecified	29	7.6%
Conditions for which the hospital submits data to other initiatives		
Pneumonia	206	54.1%
Heart failure	196	51.4%
Acute myocardial infarction	191	50.1%
Medication errors	184	48.3%
Patient falls	181	47.5%
Surgical infection prevention	147	38.6%
Some other condition (e.g., nosocomial infections, decubitus ulcers, obstetrics, diabetes)	92	24.2%

[1]Some hospitals reported participating in multiple initiatives.

Over half of CAHs submit data on pneumonia, heart failure and acute myocardial infarction measures to other quality reporting/benchmarking initiatives. Almost half of CAHs submit data on medication errors and patient falls, while 39% submit data on surgical infection prevention measures. One-fourth of CAHs report quality measure data for a range of other conditions, including nosocomial infections, decubitus ulcers, obstetrics, and diabetes.

CONCLUSIONS

The survey results indicate that CAHs continue to be actively involved in a wide range of quality improvement initiatives, with patient safety and medication safety in particular as major areas of focus.

Over half of non-participant CAHs cite an insufficient volume of patients as a reason for not participating in Hospital Compare. This finding indicates the importance of continuing to explore alternative ways of presenting and analyzing quality data for low volume hospitals, e.g., using composite measures and/or summarizing data over longer time periods.

The high rate of CAH participation in other national, state and local reporting initiatives, both among Hospital Compare participants and non-participants, suggests that these efforts can help support expanded national reporting of quality measures among CAHs.

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Appendix: ACRONYMS USED IN THIS REPORT

Critical Access Hospital (CAH) A CAH is a facility that is designated as a CAH by the State in which it is located and meets the following criteria:
• Is a rural public, non-profit or for-profit hospital; or is a hospital that was closed within the previous ten years; or is a rural health clinic that was downsized from a hospital;
• Is located in a State that has established a State plan with CMS for the Medicare Rural Hospital Flexibility Program;
• Is located more than a 35-mile drive from any other hospital or CAH (in mountainous terrain or in areas with only secondary roads available, the mileage criterion is 15 miles); or is certified by the State in the State plan as being a necessary provider of health care services to residents in the area;
• Makes available 24-hour emergency care services 7 days per week;
• Provides not more than 15 beds for acute (hospital level) inpatient care. An exception to the 15-bed requirement is made for swing-bed facilities, which are allowed to have up to 25 inpatient beds that can be used interchangeably for acute or SNF-level care, provided that not more than 15 beds are used at any one time for acute care; and
• Provides an annual average length of stay of less than 96 hours per patient for acute care patients.

Federal Office of Rural Health Policy (ORHP)
The Office of Rural Health Policy (ORHP) promotes better health care service in rural America. Established in August 1987 by the Administration, the Office was subsequently authorized by Congress in December 1987 and located in the Health Resources and Services Administration. Congress charged the Office with informing and advising the Department of Health and Human Services on matters affecting rural hospitals, and health care, co-coordinating activities within the department that relate to rural health care, and maintaining a national information clearinghouse. Additional information is available at http://www.ruralhealth.hrsa.gov/

Joint Commission on Accreditation of Healthcare Organizations (JCAHO) JCAHO evaluates and accredits more than 15,000 health care organizations and programs in the United States. JCAHO's comprehensive accreditation process evaluates an organization's compliance with state-of-the-art standards that focus on improving the quality and safety of care provided by health care organizations and other accreditation requirements. Additional information is available at http://www.jcaho.org/index.htm

Medicare Rural Hospital Flexibility Program (Flex Program)
The Medicare Rural Hospital Flexibility Program (Flex Program) was authorized by section 4201 of the Balanced Budget Act of 1997 (BBA), Public Law 105-33. The Flex Program provides funding to States for the designation of critical access hospitals (CAHs) in rural communities and the development of networks to improve access to care in these communities. Under the program, hospitals certified as CAHs can receive cost-based reimbursement from Medicare.

Quality Improvement Organizations (QIOs)
Under the direction of CMS, the Quality Improvement Organization (QIO) Program consists of a national network of 53 QIOs, responsible for each U.S. state, territory, and the District of Columbia. QIOs work with consumers and physicians, hospitals, and other caregivers to refine care delivery systems to make sure patients get the right care at the right time, particularly patients from underserved populations. The Program also safeguards the integrity of the Medicare Trust Fund by ensuring that payment is made only for medically necessary services, and investigates beneficiary complaints about quality of care. Additional information is available at:
http://www.cms.hhs.gov/QualityImprovemen-rgs/