

# Minnesota Flex Program

August 2007

## A Look at Quality Improvement Activities, Outcomes, and Needs

Over the past eight years, the Minnesota Office of Rural Health and Primary Care, as part of its Medicare Rural Hospital Flexibility (Flex) Program, has been working on rural health quality improvement initiatives. Quality improvement initiatives have included projects such as: Coordination of Care Workshops, grants to Critical Access Hospitals (CAHs) for quality improvement projects, Comprehensive Advanced Life Support (CALs) training for CAH staff, and CAH Quality Improvement Collaboratives. At least 73 CAHs and 1,139 participants have been involved in these quality improvement activities.<sup>1</sup>

This evaluation report, completed by Rural Health Solutions, Saint Paul, Minnesota, examines the quality improvement related work of the Minnesota Flex Program, documents activities completed, and when available, reports outcomes achieved. Data for the report were obtained from all Flex Program partners that have implemented quality improvement activities over the past eight years, including: Office of Rural Health and Primary Care, Stratis Health, Minnesota Hospital Association, Comprehensive Advanced Life Support program as well as interviews with CAH and other rural health program staff.

### Medicare Rural Hospital Flexibility Program

The Medicare Rural Hospital Flexibility Program (Flex Program) was established through the Balanced Budget Act of 1997. It is a national program that includes Minnesota and 44 other states. The Flex Program comprises two components—grants to assist states in implementing state specific program activities and an operating program, which provides cost-based Medicare reimbursement to hospitals that convert to Critical Access Hospital (CAH) status. The federal Office of Rural Health Policy, Health Resources and Services Administration, U.S. Department of Health and Human Services (DHHS) administers the grant program. The operating component of the program is administered by the Centers for Medicare and Medicaid Services (CMS), also located in DHHS.

Six priority areas have been established for states implementing the Flex Program:

- Creating and implementing a state Rural Health Plan
- Converting hospitals to CAH status and supporting CAHs
- Fostering and developing rural health networks
- Enhancing and integrating rural Emergency Medical Services (EMS)
- Improving the quality of rural health care
- Evaluating Flex Program activities and related outcomes

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<sup>1</sup> This does not include participation by the two CAHs that closed.

As of 2007, all states participating in the Flex Program are required, at a minimum, to support activities addressing: rural health quality improvement, CAH support, EMS integration and enhancement, and Flex Program evaluation.

There are 79 CAHs in Minnesota, 3rd highest of all states (the national average is 28.6 per state).<sup>2</sup> Minnesota's Flex Program has averaged \$685,642 in funding per year by the federal Office of Rural Health Policy to support its program. This is the 2nd highest average annual level of funding of all states.

## Methods

Data for this report were obtained from the Minnesota Department of Health, Office of Rural Health and Primary Care, Flex Program; Minnesota Hospital Association; Stratis Health; and the CALS. Data were derived from: grant funding worksheets and reporting reports, participation surveys, attendance records, accounting forms, and interviews with project and CAH staff. All data were collected from March through June 2006.

## Partner Organizations Supporting Quality Improvement Initiatives

### Office of Rural Health and Primary Care (ORHPC)

The Office of Rural Health and Primary Care is located within the Minnesota Department of Health and serves to promote access to quality healthcare for rural and underserved urban Minnesotans. The ORHPC has many roles, including administering the Flex Program in Minnesota.

<http://www.health.state.mn.us/divs/orhpc/>

### Stratis Health

Stratis Health is a non-profit independent quality improvement organization (QIO) that collaborates with providers and consumers to improve healthcare. <http://www.stratishealth.org/>. Flex Program quality improvement activities completed by Stratis Health have included: workshops, conferences, collaboratives, and health information technology planning, technical assistance, tools, and support. Staff from 66 CAHs (83.5 percent of all CAHs) and 10 Federally Qualified Rural Health Centers (FQHCs) participated in the project activities.

### Minnesota Hospital Association

The Minnesota Hospital Association (MHA) is a trade association representing hospitals and health systems in Minnesota. <http://www.mnhospitals.org/>. Flex Program quality improvement activities completed by MHA have included: identifying and defining performance improvement measures and working to expand Leapfrog patient safety measures so they apply to small rural hospitals. Six CAHs have participated in the performance measurement activities.<sup>3</sup>

### CALS (Comprehensive Advanced Life Support)

CALS is a rural health provider training program. It is designed for rural physicians, physician assistants, nurse practitioners, nurses, and other allied health professionals (e.g. paramedics, nurse anesthetists) who work in settings (primarily the emergency room) where they are exposed to undifferentiated medical emergencies but often do not have the luxury of on-site subspecialty

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<sup>2</sup> Flex Program Monitoring Team, <http://www.flexmonitoring.org> reporting October 5, 2006 figures, [obtained April 2007].

<sup>3</sup> A seventh CAHs is being added in 2007.

assistance. The CALS' training manual, interactive classroom segment (CALS Provider Course), and hands-on laboratory experience (CALS Benchmark Skills Lab) provide an organized team approach to advanced life support training for front-line comprehensive care providers who must confront the broadest range of medical emergencies. The primary focus of the CALS training is to teach the knowledge and skills necessary to effectively treat organ-threatening or life-threatening emergencies before serious organ injury or cardiac arrest occurs. <http://www.calsprogram.org/>. A total of 444 providers working in 48 CAHs and as part of local EMS have received Flex Program supported CALS trainings in the past two years (2005 -2007).

## **Flex Program Quality Improvement Initiatives**

Eight quality improvement initiatives have been implemented over the past eight years as a part of Minnesota's Flex Program. These initiatives have included quality improvement collaboratives, health care provider training, workshops and conferences, training tools, and grants to CAHs and other rural health stakeholders. The initiatives have been funded using approximately 16 percent of the State's Flex Program grant.<sup>4</sup> Each quality improvement initiative, project partners, activities, and outcomes (when available) are described below:

### **COLLABORATIVES**

Four rural health quality improvement collaboratives have been funded as part of the Flex Program, including those supported by Stratis Health and the Minnesota Hospital Association. Each collaborative is described below.

#### ***Heart Failure and Atrial Fibrillation Collaborative, 2001<sup>5</sup>***

Participants: 10 CAHs  
Partners: Flex Program, Stratis Health, CAHs  
Focus: Heart Failure and Atrial Fibrillation  
Duration: Ten months  
Status: Completed

This collaborative project included Stratis Health, the Flex Program, and Heart Teams from the first ten hospitals that converted to CAH status in Minnesota: Lake View Memorial Hospital, Two Harbors; Lakewood Health Center, Baudette; Mahnomon Health Center,

Mahnomon; Pine Medical Center, Sandstone; Renville County Hospital, Olivia; Riverwood Health Care Center, Aitken; Tracy Hospital, Tracy; Westbrook Health Center, Westbrook; Wheaton Community Hospital, Wheaton; and Zumbrota Hospital, Zumbrota. Approximately 22 CAH staff participated in the project on a regular basis. The project was funded through Stratis Health's Medicare contract and the State's Flex Program grant. These resources were used to support CAH participants' (\$5,000 per CAH) time and costs associated with participating in the collaborative as well as Stratis Health and Flex Program staff time, meeting costs, and administrative costs.

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<sup>4</sup> Additional Flex Program funding has also been used to address quality improvement needs; however, the primary purpose of the funding was not quality improvement but instead to address other Flex Program goals, such as network development.

<sup>5</sup> Information as stated in the *Heart Failure and Atrial Fibrillation Collaborative for Critical Access Hospitals*. Stratis Health. Final Report 2002.

## **Project Objectives**

The objectives of this collaborative were to:

- Leverage public resources to support CAH's quality improvement work
- Provide a forum for CAHs to learn, network, and achieve improvement in a collaborative environment
- Improve quality of care for patients with heart failure and atrial fibrillation
- Increase capacity and capability of CAHs to implement other quality improvement initiatives.

## **Project Activities**

The collaborative was based on an IHI (Institute for Healthcare Improvement) design, with aims (goals) defined, indicators/measures in place, improvements made and then spread (transferring the model for improvement, model components/strategies, processes or system changes) to other areas of the healthcare system.

The ten Heart Teams selected measures from the following:

### *Heart Failure (HF)*

- Increase assessment of HF patients (five teams)
- Increase use of ACEI or ARBs in appropriate patients (one team)
- Improve discharge plans for HF patients (6 teams)

### *Atrial Fibrillation (AF)*

- Increase number of AF patients discharged on warfarin or have a plan for warfarin after discharge (four teams)
- Increase the number of patients that have a plan for follow-up visit after discharge (four teams)

To accomplish this, the CAHs worked on:

### *Heart Failure (HF)*

- To better document ejection fraction on patients admitted with HF
- To have appropriate discharge instructions in all categories
- To document acute care HF patients left ventricular function assessment on each encounter, or have documentation of a plan to obtain assessment after discharge (if no plan, a reason why assessment is not obtainable at this time)
- Discharged patients will be placed on an ACE Inhibitor or will have documentation of contraindications for ACE Inhibitor treatment
- HF patients will receive education at discharge
- Eligible HF patients will be discharged on an ACE or ARB
- HF patients receive appropriate education on medications, diet, weight monitoring, activity, follow-up appointment and instructions on what to do if symptoms worsen
- Patients admitted with HF will have documented left ventricular function (LVF) assessment on every encounter

### *Atrial Fibrillation (AF)*

- AF patients discharged will have documentation of planned follow-up Prothrombin Time (PT) /International Normalized Ratio (INR)
- AF patients who have no contraindications to receiving warfarin will be discharged from acute care on warfarin

- New AF patients will have a follow up protime within a week, long term AF patients will go back to their protime protocol after being discharged from hospital
- Patients admitted with AF will be discharged on warfarin or have physician documentation of plan to prescribe warfarin following discharge
- Patients discharged will receive education regarding their diagnosis, medication, and when to seek medical intervention

In order to make improvements, some of the CAHs implemented the following changes:

- Patient education - pocket checklist
- Sticker affixed to chart with previous echocardiogram results and date or reminder that patient needs echocardiogram
- Revised discharge order form (added monitoring to discharge orders)
- Added Master summary sheet to chart (shows all hospital and surgical visits)
- Revised discharge order and instruction sheet
- Home Care Plan to patients
- All guidelines (American College of Cardiology and American Heart Association) were distributed via discharge instructions
- Chart stickers (as indicators for particular needs/activities that should occur)
- Patient cards
- Discharge planning nurse coordinate with clinic and home health

### **Project Outcomes**

Initial Outcomes: Stratis Health examined initial project outcomes but found they were limited due to small numbers and a short timeframe; however, there appeared to be improvements in each of the indicators. Readiness assessments were used at two points in the collaborative. The readiness tool gathered information on current processes in place for each of the hospitals. Although improvement was indicated, the tool was not structured as an evaluation mechanism. Feedback from participants was very positive, including that related to: the learning workshops, tools, discussion groups, networking, strategy development, site visits, and general sharing. More specifically, participants found that by joining the learning sessions they were rejuvenated by being with their peers and talking about the positive effects of the collaborative. Although it was necessary to take off a day of work, people felt they learned more and were given resources that actually saved them time when they got back to the office (e.g., looking on the internet for information). One hospital indicated that the information Stratis Health provided could save three days of work back at the hospital/office.

### ***Critical Access Hospital Collaborative, 2002<sup>6</sup>***

Participants: 22 CAHs  
Partners: Flex Program, Stratis Health, CAHs  
Focus: Heart failure, smoking cessation, and inpatient influenza and pneumococcal immunizations

This collaborative project included Stratis Health, the Flex Program, and multi-disciplinary teams from 22 CAHs in Minnesota. Approximately 35 CAH staff participated in the project on a regular basis. The project was funded through Stratis

Health's Medicare contract and the State's Flex Program grant. These resources were used to support

<sup>6</sup> Information as stated in the 2003-2004 *Critical Access Hospital Collaborative Final Report*.. Stratis Health. June 2004.

grants to CAH participants (\$2,000 per CAH for staff time and travel costs), staff, and administrative costs.

### **Project Objectives**

- Leverage joint public resources to support work of CAHs' quality improvement work and therefore improve patient care
- Provide a forum for CAHs to network and learn from each other's successes and challenges in a collaborative environment
- Provide evidence-based strategies for treating patients with heart failure and improving inpatient influenza, and pneumococcal immunizations, and increasing smoking cessation counseling
- Increase capacity and capability of CAHs to utilize quality improvement tools and measurement methodologies to implement additional quality improvement initiatives.

### **Project Activities**

This project focused on measuring quality, redesigning systems to improve care for patients, and building capacity to initiate and sustain quality improvement initiatives. Participating CAHs used quality measures aligned with the Centers for Medicare & Medicaid Services (CMS) measures. CAHs selected one or more measure from a list of CMS measures as their quality improvement initiative. Data was collected using the inpatient medical record. CAHs were trained by Stratis Health staff to abstract data using the CMS Abstracting and Reporting Tool (CART) and they collected two cycles of baseline data (cycle timelines are reported in Table 1). The first three records they abstracted were copied and sent to Stratis Health for inter-rater reliability. The same tool was used by the CAHs to collect two additional cycles of data.

After data collection, the hospitals worked towards redesigning systems to improve quality of care for patients with heart failure (HF), assuring influenza/pneumococcal assessment and immunization, and smoking cessation counseling, while building capacity to initiate and sustain this and other quality improvement initiatives. The collaborative used a modified version of the Institute for Healthcare Improvement (IHI) Breakthrough Series Model. This included four learning workshops with continuous support, contact, and action between each workshop. Stratis Health provided clinical education by expert speakers on heart failure, smoking cessation and inpatient immunizations. These were done through presentations at Learning Workshops and conference calls scheduled to accommodate physician's busy schedules.

### **Project Outcomes**

Initial Outcomes: The project identified several outcomes, such as those related to improvements in outcome measures, improvements in quality processes/readiness, and overall systems changes.

Highlights are included here:

The hospitals admitted a total of 508 patients with a diagnosis of heart failure. Table 1 demonstrates the improvements accomplished by participating CAHs.

**Table 1: Changes in Quality Measures**

	Cycle 1	Cycle 2	Cycle 3	Cycle 4
	10.01.2002	02.01.2003	06.01.2003	10.01.2003
	–	-	–	–
<b>Cycle Dates</b>	01.21.2003	05.31.2003	09.30.2003	01.31.2004
<b>Clinical Topic</b>				
<b>Heart Failure</b>				
LVEF Assessment	51.01%	53.73%	50.55%	59.70%
	76/149	72/134	46/91	80/134
Discharge Medication	68.75%	55.26%	89.66%	76.00%
	33/48	21/38	26/29	38/50
Discharge Education	8.05%	13.33%	17.58%	32.84%
	12/149	18/35	16/91	44/134
<b>Pneumococcal Vaccinations</b>				
	12.08%	7.46%	26.37%	48.51%
	18/149	10/134	24/91	65/134
<b>Influenza Vaccinations</b>				
	15.44%	11.90%	10.71%	55.97%
	23/149	5/42	3/28	75/134
<b>Smoking Cessation</b>				
	87.25%	75.37%	84.62%	91.04%
	130/149	101/134	77/91	122/134

Prior to the collaborative and at the conclusion, each hospital was asked to fill out a Readiness Assessment Tool. The readiness assessment tool gathered qualitative information on processes currently used in the hospital. Hospital teams were encouraged to complete this assessment at a team meeting. Some of the results are listed in Table 2.

**Table 2: Changes in Quality Processes Used in CAHs**

<b>Hospital Processes</b>	<b>Baseline</b>	<b>Final</b>
Physicians consistently using LVEF assessment most of the time	33.30%	68.40%
Systematic way of obtaining LVEF assessment on admission	18.20%	58%
Relying solely on physician recognition to obtain assessment	82%	42%
Process in place to obtain LVEF assessment used most of the time	25%	64%
Systematic way patients with decreased EF are evaluated for and discharged on ACEI if appropriate	9%	44%
Using process most of time when prescribing ACEI	33%	75%
Standard process for discharge education for HF patients	50%	100%
Standard process for assessment and documentation of tobacco use/counseling for all patients	50%	84%
Facilities offered pneumococcal and influenza immunization to patients	77%	89.50%

**Three-Year Outcomes for the 2001 and 2002 Collaboratives:** Three years after both projects were completed CAH staff that participated in the projects reported the following longer-term impact of the collaboratives:

- “We had everything in place [data collection, tools, knowledge] by the time CMS set its requirements.”
- “We’ve definitely improved care and compliance with best practices.”
- “The heart failure discharge patient care plan that was developed has all the information that patients need to know: medications, weight, signs and symptoms, who to call. This helps us show our discharge planning is working.”
- “We now have 100% patient follow-up compliance to assure patients are following their care plan.”
- “It was easy to convert to the CMS requirements because it is what we did in the collaborative.”
- “Physicians are doing things too such as using echo cardiograms as a diagnostic tool to know the heart status of patients when they are admitted.”

### *Quality Improvement Data Collection Pilot<sup>7</sup>*

Participants: 6 CAHs  
Partners: Flex Program, Minnesota Hospital Association, CAHs  
Focus: Performance improvement measures  
Duration: Multi-year  
Status: On-going

This Flex Program, Minnesota Hospital Association, and CAH pilot project was developed and initiated by the Minnesota Hospital Association and CAHs to create a uniform, quality

indicators, measurement, and tracking tool for small rural hospitals. The pilot project began in 2003 and includes six CAHs: Riverview Hospital, Crookston; Queen of Peace Hospital, New Prague; Cook Hospital, Cook; Mercy Hospital, Moose Lake; Albany Area Hospital, Albany; and Swift County-Benson Hospital, Benson.<sup>8</sup> The project has been funded by the Flex Program for the past two years.

### **Project Objectives**

The goal of this project was to give hospitals a performance and quality monitoring tool that is easy to manage and use. The need for current data was prioritized as a value. It was agreed by participants that having current data give leadership the flexibility to prepare for and react expeditiously to abnormal trends within their facilities.

### **Project Activities**

The Minnesota Hospital Association was approached by a group of six CAHs to discuss, design, and development a tool to assist the hospitals with decision support of their operations. Initial discussions generated ideas around measuring staffing levels and quality. After a process of identifying priorities and desired outcomes, it was decided a balanced scorecard approach was needed. The components of the scorecard were identified as: finance, customer service, internal process/operational, human resources and market position.

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<sup>7</sup> As submitted by the Minnesota Hospital Association, December 21, 2006 and as reported by Minnesota Hospital Association and CAH staff May 2007.

<sup>8</sup> Paynesville Area Healthcare System, Paynesville, Minnesota is joining the project as of summer 2007.

As the CAHs discussed possible performance measures, it became apparent that each CAH measures components of its operations slightly differently. While the financial indicators were relatively straightforward, breaking out hospital-only data, such as department staffing hours where staffs interchange with the emergency department or other facilities such as a nursing home, were challenges. As a result, financial measures were identified and defined first and data collection began early on while the other measures were identified and defined and data collection began later. Data are being submitted by the six CAHs to the Minnesota Hospital Association. To accommodate the differences in data collection needs between the financial and other measures, the Minnesota Hospital Association collects and reports on the six hospitals' monthly financial data 30-50 days after the end of each reported month while measures for customer service, internal process/operational, human resources are collected and reported on a quarterly basis.

### Project Outcomes

- All pilot hospitals have made a commitment to develop a comparison tool to address their performance improvement needs.
- All pilot hospitals have expressed that this project has helped them understand better their organization's operational status on a more current basis.
- Participants have been able to network with each other to better understand their operational differences.
- The hospitals' project administrators have been able to discuss how their institutions have been able to establish certain operating levels and to share specific program details and ideas.
- Participants have discussed and defined quality improvement measures, learned about other initiatives occurring nationally and in other states, and are exploring other joint opportunities such as the Kansas Rural Health Options Project's Quality Health Initiative.
- One additional CAH has joined the pilot project while other CAHs have inquired about joining the project.
- Project participants report that they are looking at ways to make the project available statewide.
- Participants report that the project has:
  - Generated conversation and information sharing between participant hospitals
  - "This project has allowed us to set and strive for standards."
  - "The data gives us something to shoot for."
  - "I can call one of the other hospitals and ask them what they are doing in order to get such good numbers and they are very willing to share and we are very eager to learn."

"I want our hospital to have the same level of energy about quality as it does about finances."  
CAH Administrator

### *HIT Preparedness Collaborative*

Participants: 10 FQHCs  
Partners: Flex Program, Stratis Health, FQHCs  
Focus: Health information technology  
Duration: Multi-year  
Status: In-process

In coordination with Stratis Health, the Flex Program is funding electronic health record preparedness activities for a network of 10 Federally Qualified Rural Health Clinics (FQHCs) in northwestern Minnesota. This initiative includes an assessment of HIT preparedness,

designing flow charts to map the conversion process, planning for project activities, developing technology requirements, technical assistance to assure that the HIT supports patient safety and quality improvement, and selecting vendors for HIT implementation. The project began in 2006 and

is underway. Given that the project is still in the development and implementation stages, no assessment of results has been completed.

## HEALTH CARE PROVIDER TRAINING

Using the State’s CALS program, health care provider training is made available to CAH health care providers and pre-hospital providers throughout the state.

### *Comprehensive Advanced Life Support Training (CALS)*

Since 2002, the Minnesota Flex Program has supported CAH and pre-hospital (paramedics) providers’ training in CALS by subsidizing the costs for both the CALS Provider Course as well as the CALS Benchmark Skills Lab. The CALS Provider Course is a three-day course that is held on-site at small rural hospitals throughout Minnesota. The CALS Benchmark Skills Lab is a two-day course held at the University of Minnesota and Hennepin County Medical Center, both in Minneapolis, Minnesota. The Flex Program reimburses providers for a percentage of their CALS training costs based on health care provider type, as indicated in Table 4. Using this approach, 444 providers working in 48 CAHs and as part of local EMS have received Flex Program supported CALS trainings during the past two years (2005 -2007). This includes: 317 registered nurses, 77 physicians, 27 paramedics, 10 nurse practitioners, 6 physician assistants, 5 licensed practical nurses, and 2 unspecified.

Table 3: Flex Program Subsidy for CALS training by Provider Type<sup>9</sup>

Provider Type	CALS Provider Course	CALS Benchmark Skills Lab
Physician	\$200.00	\$215.00
Nurse Practitioner/Physician Assistant	\$150.00	\$215.00
Nurse (RN/LPN)	\$122.50	\$100.00
Paramedic	\$122.50	\$100.00

Hospital staff trained in CALS report:

- “I have never witnessed RSI in an emergency room (even with my 25 years of experience) and I was always a bit apprehensive about doing it. Now I'm more confident.”
- “I feel I will be a better trauma team member after this class.”
- “This is the best course I have been to. It was fun and relaxed and an environment [conducive] to learning. All the instructors had great and interesting knowledge.”
- “I am so happy I decided to come to CALS - now I see why the others were so excited!”

## CONFERENCES AND WORKSHOPS

### **Rural Health Care Series**

This three year series of conferences: Inspiring Innovation and Excellence, Quality through Collaboration, and Journey to a Culture of Quality was presented by Stratis Health in Coordination with the Office of Rural Health and Primary Care. Each conference was designed for administrative, medical, and quality improvement staff from rural Minnesota hospitals. The intent of the conferences were to inform and educate participants about ongoing and emerging challenges in rural health as well

<sup>9</sup> Subsidies are based on 2007 data. Subsidies for each provider type increased from 2006 to 2007. Some variation in subsidies by provider type existed each year that data is available.

as to increase their knowledge of successful quality improvement strategies for rural hospitals. There were a total of 181 participants, including 120 CAH staff representing 43 CAHs.

### ***Rural Health Care: Inspiring Innovation and Excellence, November 2004***

The conference included presentations entitled: “Committing to Quality: Facing Old Challenges, Setting New Standards”, “When there’s No Depth on the Bench”, “Update on the Office of Rural Health and Primary Care”, “Rural Allies”, and “Human Factors: the Science Behind Designing Systems for Use by Humans” as well as a panel on rural health strategies. Sixty-seven rural health stakeholders attended this quality improvement conference, including 47 CAH staff representing 25 CAHs.

### **Outcomes**

Conference participants were surveyed to determine whether conference objectives were met. Survey findings indicated that as a result of the conference:

- 64% of participants strongly agreed and 32% somewhat agreed that they could discuss the challenges faced in providing quality health care
- 77% of participants strongly agreed and 23% somewhat agreed that they can describe how to identify and utilize the skills of existing staff to build a winning management team
- 58% of participants strongly agreed and 40% agreed that they can identify successful strategies applied in local rural hospitals
- 64% of participants strongly agreed and 42% somewhat agreed that they could discuss the challenges faced in proving quality health care
- 77% of participants strongly agreed and 23% somewhat agreed that they could describe how to identify and utilize the skills of existing staff to build a winning management team
- 58% of participants strongly agreed and 40% somewhat agreed that they could identify successful strategies applied in local hospitals
- 69% of participants strongly agreed and 31% somewhat agreed that they could provide examples of how hospital staff can improve working relationships with physicians
- 75% of participants strongly agreed and 25% somewhat agreed that they could describe how human factors can influence the design of health care systems

Examples of the reported, “most valuable take-home lessons” from the conference, included:

- It’s important to make work fun and to use the talents of all employees
- Understanding of the difference in operational thinking between hospital management and physicians
- Value of relationships and teamwork to improve quality and patient safety
- Practical ideas to engage physicians, management and other staff in the quality improvement process

Example of suggestions for conference improvements included:

- Conference brochures did not adequately reflect the value of the conference
- Providing additional grant writing and grant searching support and/or training
- More concrete example of changes to hospital policies and procedures that have improved quality of care and patient safety

### ***Rural Health Care: Quality through Collaboration, November 3, 2005***

The conference included presentations entitled: “Quality through Collaboration”, and “Finding My Way Back Home (to safety and quality)”, with additional discussion about health information technology and quality improvement. There were 44 attendees at the quality improvement conference, including 34 CAH staff representing 23 CAHs.

#### **Outcomes**

Conference participants were surveyed to determine whether conference objectives were met. Survey findings indicated that as a result of the conference:

- 82% of participants strongly agreed and 18% somewhat agreed that they can describe how community collaborations improve quality of care
- 80% of participants strongly agreed and 20% somewhat agreed that they can identify two strategies used to improve the hospital work environment
- 73% of participants strongly agreed and 27% agreed that they can discuss how health information technology can enhance hospital quality improvement efforts
- 88% of participants strongly agreed and 12% somewhat agreed that they can describe how leadership affects the culture of an organization
- 83% of participants strongly agreed and 17% somewhat agreed that they can identify two quality improvement strategies to improve outcomes and patient safety
- 79% of participants strongly agreed and 17% somewhat agreed that they can explain the unique role that hospitals play in communities

Examples of the reported, “most valuable take-home lessons” from the conference, included:

- Collaboration related ideas presented by other hospitals
- Information on pay-for-performance
- Information on Minnesota’s EHealth initiatives
- Importance of involving the patient/community in the quality improvement process
- Need for hospitals to move beyond finances
- Importance of communication

Examples of suggestions for conference improvements included:

- Opportunities for continuing education credits for nursing home administrators

### ***Rural Health Care: Journey to a Culture of Quality, December 8, 2006***

The conference included presentations entitled: “Rural Health: Why Shouldn’t We Lead Quality Innovation”, “Nursing Leadership in Times of Change: Focus on Workforce Retention”, “Developing a Culture of Quality in a CAH: Lessons Learned from the Save 100,000 Lives Campaign”, “On the Edge of Culture Change”, “Leading Transformational Change for Healthcare Quality”, and “Where Do We Go From Here”. Fifty-three rural health stakeholders attended this quality improvement conference, including 39 CAH staff representing 22 CAHs.

#### **Outcomes**

Conference participants were surveyed to determine whether conference objectives were met. Survey findings indicated that as a result of the conference:

- 82% of participants strongly agreed and 18% somewhat agreed that they could identify innovative ways that rural hospitals can develop, implement, and sustain a culture of safety in their own organization

- 80% of participants strongly agreed and 20% somewhat agreed that they can understand how Minnesota compares to the rest of the nation in health care quality
- 55% of participants strongly agreed and 44% agreed that they can describe “stretch” vision for rural health innovation
- 76% of participants strongly agreed and 24% somewhat agreed that they understand the impact leadership has on an organization with regard to staff turnover
- 80% of participants strongly agreed and 20% somewhat agreed that they can identify strategies to improve nurse retention
- 70% of participants strongly agreed and 30% somewhat agreed that they can identify steps to develop, implement, and sustain a culture of patient safety
- 63% of participants strongly agreed and 37% somewhat agreed that they can explain the adaptation of the Institute of Health’s 100,000 Lives Campaign for CAHs
- 31% of participants strongly agreed and 51% somewhat agreed that they can describe a framework for fostering strong leadership for hospital quality and patient safety
- 80% of participants strongly agreed and 20% somewhat agreed that they can articulate the importance of Appropriate Care Measures (ACM)
- 74% of participants strongly agreed and 26% somewhat agreed that they can describe the impact of the ACM on healthcare providers and consumers
- 38% of participants strongly agreed and 51% somewhat agreed that they can propose one action, to be completed one week after the conference, that would make a difference in culture of quality in their hospital

Examples of the reported, “most valuable take-home lessons” from the conference, included:

- Ideas for engaging and empowering front-line staff
- Tool kits and resources
- Importance of medical staff involvement
- Blueprint for engaging in the 100,000 Lives Campaign

Examples of suggestions for conference improvements included:

- Shifting from a nursing focus to a hospital-wide focus for quality and patient safety activities
- Video taping to increase access to the information

### **Coordination of Care – Regional Series 2004 and 2005**

#### ***A Patient’s Journey, 2004 and 2005***

This workshop series was held at five regional Minnesota sites: Thief River Falls, Mankato, St. Cloud, Rochester, and Duluth. Two regions, Thief River Falls and Mankato participated in the workshops in 2004 while the remaining regions participated in 2005. The series included an initial and follow-up workshop at each site (total of 10 sessions). The workshops were designed to educate participants on: the role of case management across the continuum of care, discharge planning models and the integration of utilization review and case management, case management strategies to support patient transitions, and the application of case management techniques using patient scenarios. There were 446 participants at all of the sessions, including: 163 representing 46 CAHs and 283 representing Area Agencies on Aging, local public health, skilled nursing facilities, home health agencies and others. Although satisfaction surveys administered at the conclusion of each workshop indicated that participants were satisfied with the workshops and the workshops met stated objectives, the number of participants at the follow-up sessions was less than half of the number of participants at each of the initial sessions with the exception of Rochester (slightly higher than half). Examples of workshop outcomes and needs, as stated on the surveys, include:

**Outcomes:**

- Increased knowledge of the roles and activities of other service providers
- Increased understanding of discharge models and tools
- Obtained tools to assist with the discharge planning process
- Networking with other participants and local services
- Understanding of need to change to hospital processes
- Increased understanding of the importance of communication across continuum of care but also internally and with patients
- Increased knowledge/insight into the impact of generational and cultural differences for patients and health service providers

**Needs:**

- More advanced case management/care coordination training
- Small group interactions/training with experts
- Discharge planning best practices
- Access to videos (e.g., “Look at Me”) and other tools presented/discussed

***Conference Calls: The Patient’s Journey Back into the Community, 2004 and 2005***

These conference calls were held in 2004 and 2005 and were interspersed between each of the face-to-face workshops noted above (A Patient’s Journey). A total of six teleconferences were conducted. The conference calls were designed to educate participants on: the services provided by home care, skilled nursing care, and assisted living, the selection of candidates for each setting, the process to make referral and information available, the role of Stratis Health in service utilization, common Medicare coverage issues that affect patient discharge, opportunities to integrate utilization review into coordination across settings, understanding HIPAA implementation, and the implications of, barriers, strategies to address health literacy issues, and an update on what is happening nationally in transitioning patients between healthcare settings. There were a total of 263 participants, including: 104 representing 41 CAHs and 159 representing Area Agencies on Aging, local public health, skilled nursing facilities, home health agencies as well as others. Satisfaction surveys administered at the conclusion of each teleconference indicated that participants were satisfied with the workshops and the workshops met stated objectives. The number of participants declined with each subsequent workshop during 2004 while participation declined from sessions one to two and then increased in 2005. Examples of reported outcomes and needs, as stated on the surveys, include:

**Outcomes:**

- Recognition and understanding of health literacy
- Better understanding of the discharge planning process
- Better understanding of the importance of good communications
- Increased knowledge on how and when to use an observation bed
- Increased knowledge on the use of a transitional coach and including caregivers in discharge planning
- Participants better understand the role of Stratis Health

**Needs:**

- Follow-up for those who had questions on the calls
- Forms/access to forms to be adapted for facility use
- Information for health services with a discharge program in place

- Avoiding the use of acronyms and abbreviations
- Web-X training

## **TRAINING TOOLS**

As stated above, a variety of quality improvement tools have been developed and distributed to CAH staff as a part of the quality improvement collaboratives, workshops, and conferences; however, one tool – Quality Management Methodologies – was developed in 2005 as a means to educate CAH staff on ISO-9001, Malcolm Baldrige National Quality Assurance Award, Balanced Scorecard, and Six Sigma. The Quality Management Methodologies tool was developed by the Office of Rural Health and Primary Care and Stratis Health, was presented in CD format, and distributed to all CAHs in the state. The CD included an overview of some highly used methodologies that can be implemented to address safety, quality, and efficiency needs as the hospitals work to meet their mission, engage hospital staff, build accountability, and monitor progress.

## **GRANTS**

The Minnesota Flex Program has used grant making as a primary activity to advance federal Flex Program goals. Between 2000 and 2007, the Minnesota Flex Program dedicated an average of \$350,750 per year to fund grants. These grants were made to CAHs, EMS organizations, local public health, and others. Grants were made as part of CAH conversion related grants, Flex Grants, Performance Improvement Grants, and QI Collaborative Grants. Until 2002, most grant funding was directed to CAHs for CAH conversion related activities. In 2002, the Flex Program started making QI grants to CAHs and other local health stakeholders as part of the CAH Quality Improvement Collaborative and Flex Grants and then in 2006 the Performance Improvement Grants (a description of each grant is included on page 16).

All Flex Program funded grants made over the past 7 years were reviewed. This review determined that 57 grants were made to CAHs, networks, regional and/or local EMS, local public health, and other local rural health stakeholders in the state where the primary goal of the grantee was to improve quality of care (e.g., CAH staff clinical training, QI planning, QI Collaborative Grants). These grants totaled \$410,845. This review also determined that 27 additional QI related grants were made where QI was a secondary goal of the grantee (e.g., Balanced Scorecard development and health care provider recruitment and retention activities).<sup>10</sup> These grants totaled \$443,472. Considering both primary and secondary QI related grants made, 15.6 percent of Minnesota's Flex Program funding has been directed to local rural health stakeholders in the form of QI related grants.

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<sup>10</sup> Quality improvement was considered the secondary activity if the intended outcomes of the proposed project were directly linked to other Flex Program areas (e.g., network development) and were not intended to specifically improve quality of care but will either foster quality of care or had the potential to lead to improved quality of care. Examples of secondary activities include: adding health services (e.g., mammography or tele-radiology services) and health promotion/disease prevention programs.

**Flex Grants:** This on-going grant program supports rural health care providers and rural communities with responding to the major changes affecting the rural health care system and rural communities. Applicants included: CAHs and other small rural hospitals, local and regional EMS, networks, local public health, and community and regional health collaboratives. Forty-six Flex Grants totaling \$729,479 have been made to support QI related activities.

**Performance Improvement Grants:** This 2006, one-time, grant program supported CAHs to understand, plan and implement operational, financial and quality performance improvements. Grants ranging from \$3,000 to \$5,000 were made to eight CAHs totaling \$34,838.

**Quality Improvement Collaborative Grants:** These grants supported CAHs' participation in the Quality Improvement Collaboratives conducted by Stratis Health (See Collaboratives above). Ten \$5,000 grants were made to CAHs in 2002 and twenty \$2,000 grants were made to CAHs in 2003.

## Summary of Findings

- 1) Between 2000 and 2007, 26 quality improvement activities have been supported by the Flex Program, including: three grants programs, three quality improvement conferences, a Coordination of Care regional series of 16 sessions around the state or via conference call, three quality improvement collaboratives, and funding for CAH provider training in CALS.
- 2) Quality improvement activities supported by the Flex Program have included over 1,139 participants.
- 3) Data indicate that at a minimum, 74 CAHs (92.4 percent) have participated in Flex Program supported quality improvement initiatives, including 14 CAHs that have participated in one or two Flex Program quality improvement activities, 21 CAHs that have participated in at least 7 quality improvement activities, and 3 CAHs that have participated in at least 9 quality improvement activities.
- 4) Riverwood Healthcare Center, Aitkin (34); Granite Falls Municipal Hospital and Manor, Granite Falls (46); Long Prairie Memorial Hospital and Home, Long Prairie (39); Monticello Big Lake Community Hospital, Monticello (37); and Pine Medical Center, Sandstone (36) had the most participants in the quality improvement activities. The hospitals' level of participation can largely be attributed to health care provider CALS training.
- 5) Slightly more than half (54 percent) of all CAHs had staff participate in one of the three quality improvement conferences.
- 6) While participant satisfaction with the three quality improvement conferences was high and conference goals reportedly were achieved, the number of conference attendees declined after year one and rose slightly after year two.

## Recommendations for Program Improvement

Considering the information and findings identified as part of this Flex Program evaluation of quality improvement, activities, outcomes, and needs, it is recommended that the Minnesota Flex Program take the following steps to further advance the goals of the Flex Program:

- 1) Track program participation to assure that quality improvement initiatives are meeting all CAHs' needs and to measure the possible impact of initiatives on patient outcomes (e.g., if hospitals participating in Flex Program initiatives report higher quality of care, this may be one indicator of the impact of the State's Flex Program).
- 2) Contact CAHs' that have not participated in/have had limited participation in quality improvement activities to better understand their needs (if any) and to make program improvements/adjustments to better meet their needs.
- 3) Include CAH staff, in particular quality improvement coordinators, in State and regional quality improvement program planning activities.
- 4) Report the State's Flex Program plans and activities to all program stakeholders, in particular CAHs, state stakeholders (e.g., Minnesota Hospital Association, Stratis Health, Emergency Medical Services Regulatory Board), regional EMS, and networks to improve program coordination, planning, and communications. Flex Program status reports could be included as part of the State's monthly and quarterly reports to rural health stakeholders.
- 5) Using a consistent and electronic reporting format, the Flex Program should require contractors working on the State's Flex Program to report, at a minimum, those served, project activities, project costs, and project outcomes. Contractual arrangements should account for these reporting costs to assure reporting activities are completed.
- 6) At a minimum, contractual reporting should be completed on a quarterly basis. Not only will this allow the program to better track and report program activities, outcomes, and progress but it will foster stakeholder relations and allow for timely program adjustments.
- 7) Future Flex Program sponsored workshops, conferences, and events should be developed to reflect past evaluation findings derived from participation satisfaction surveys.

### Additional Information

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