

# Minnesota Medicare Rural Hospital Flexibility Program



NORTH STAR

## Program Evaluation

Third Interim Report

December 2003

office of   
Rural Health Primary Care  
MINNESOTA DEPARTMENT OF HEALTH





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Prepared for  
**MINNESOTA MEDICARE RURAL HOSPITAL  
FLEXIBILITY PROGRAM ADVISORY COMMITTEE  
AND THE FEDERAL HEALTH RESOURCES AND SERVICES  
ADMINISTRATION (HRSA),  
OFFICE OF RURAL HEALTH POLICY**

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Third Interim Report**

**Office of Rural Health and Primary Care  
Minnesota Department of Health  
St. Paul, Minnesota**

**December 2003**

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# TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY OF YEAR 3 FINDINGS.....</b>	<b>vi</b>
<b>CHAPTER 1: INTRODUCTION: BACKGROUND AND METHODS .....</b>	<b>1</b>
THE FLEX PROGRAM.....	2
MINNESOTA-SPECIFIC VARIATIONS IN THE FLEX PROGRAM.....	4
Certification as a Necessary Provider of Health Care Services .....	4
Rural Health Networks .....	5
EVALUATION METHODOLOGY AND DATA.....	5
Case Studies.....	5
Comparisons.....	5
Monitoring Reports.....	7
Site Visits, Telephone Interviews, and Targeted Surveys .....	7
Financial and Other Secondary Data .....	7
<b>CHAPTER 2: IMPLEMENTATION OF THE MEDICARE RURAL .....</b>	<b>9</b>
<b>HOSPITAL FLEXIBILITY PROGRAM .....</b>	<b>9</b>
OFFICE OF RURAL HEALTH AND PRIMARY CARE IMPLEMENTATION ACTIVITIES (YEAR 3).....	9
Flex Program Support and Management .....	10
CAH Eligible Hospitals .....	11
Grants to Hospitals and Communities.....	12
The 2002 CAH Planning and Conversion Grant Summary .....	12
The 2002 Minnesota Rural Flex Grant Award Summary.....	13
The 2002 CAH Quality Improvement Collaborative Grants.....	14
Grant Summary.....	14
Technical Assistance and Communications .....	15
SUMMARY OF YEAR 3 FINDINGS .....	17
<b>CHAPTER 3: PHYSICIAN INTEGRATION AND SATISFACTION.....</b>	<b>18</b>
SUMMARY OF YEAR 3 FINDINGS .....	21
<b>CHAPTER 4: QUALITY OF CARE.....</b>	<b>23</b>
CERTIFICATION SURVEY ANALYSIS.....	23
COMPLIANCE WITH QUALITY ASSURANCE AND PERFORMANCE IMPROVEMENT PLANS .....	23
CAH QUALITY IMPROVEMENT COLLABORATIVE .....	25
SUMMARY OF YEAR 3 FINDINGS .....	27
<b>CHAPTER 5: RESIDENT ACCESS AND SATISFACTION WITH CAHs.....</b>	<b>28</b>
COMMUNITY FOCUS GROUPS.....	28
CAH MARKET SHARE .....	32
SUMMARY OF YEAR 3 FINDINGS.....	34
<b>CHAPTER 6: NETWORK DEVELOPMENT .....</b>	<b>35</b>
SUMMARY OF YEAR 3 FINDINGS.....	37

<b>CHAPTER 7: EMS DEVELOPMENT AND INTEGRATION .....</b>	<b>38</b>
SUMMARY OF YEAR 3 FINDINGS.....	41
<b>CHAPTER 8: FINANCIAL PERFORMANCE OF CAHs.....</b>	<b>43</b>
BASELINE COMPARISONS – 1998: THE YEAR BEFORE CONVERSION.....	43
COMPARISONS OVER TIME .....	45
SUMMARY OF YEAR 3 FINDINGS.....	48
<b>APPENDIX A: Evaluation Design Overview.....</b>	<b>50</b>
<b>APPENDIX B: Community Focus Group Summaries.....</b>	<b>59</b>
<b>APPENDIX C: Summary of Grant Awards .....</b>	<b>68</b>

## LIST OF TABLES

Table 1.1: Flex Grants Awarded to Minnesota and Amounts Distributed to Hospitals ....	3
Table 1.2: Critical Access Hospital Facility Requirements.....	3
Table 1.3: Case Study Data Collection Schedule.....	5
Table 1.4: Data Collection Schedule from All CAHs and Comparison Hospitals.....	6
Table 1.5: Standards of Comparison.....	6
Table 2.1: Year 3 Flex Program Expenses Fall 2001 – Fall 2002 .....	10
Table 2.2: Summary of Year 3 Grant Programs .....	12
Table 2.3: 2002 CAH Planning and Conversion Grant – Use of Grant Funds.....	13
Table 2.4: Summary of Grants Awarded to Hospitals and Communities in Year 3 .....	14
Table 2.5: Year 3 ORHPC Technical Assistance Activities .....	15
Table 3.1: Year 3 CAH Providers Program Expectations of Conversion.....	19
Table 3.2: CAH Provider Satisfaction – Year 3 .....	20
Table 4.1: Outcome of Quality Improvement Collaborative on .....	26
Congestive Heart Failure and Atrial Fibrillation .....	26
Table 5.1: Community Focus Group Survey Results.....	28
Table 5.2: Resident Satisfaction with Quality and Access to Care in CAHs .....	29
Table 5.3: Market Share of Year 1 CAHs Before Conversion (1998) .....	33
Table 7.1: Comparison of Emergency Care and Transfers of Year 1 CAHs, .....	39
in the Year of Conversion and Two Years Later .....	39
Table 8.1: Structural and Operating Characteristics of CAHs and .....	43
Comparison Hospitals, 1998 .....	43
Table 8.2: Mean Operating Expenses of First Year CAHs and .....	44
Comparison Hospitals, 1998 .....	44
Table 8.3: Mean Revenues of CAHs and Comparison Hospitals 1998 .....	44
Table 8.4: Structural and Operating Characteristics of CAHs and .....	45
Comparison Hospitals, 1998 to 2001 .....	45
Table 8.5: Mean Operating Expenses of Year 1 CAHs and .....	46
Comparison Hospitals, 1998 to 2001 .....	46
Table 8.6: Mean Revenues of CAHs and Comparison Hospitals 1998 to 2001 .....	47
Table 8.7: Mean Revenue in Excess of Expenses of Year 1 CAHs and .....	48
Comparison Hospitals, 1998 (Year Before Conversion) to 2001.....	48

## EXECUTIVE SUMMARY OF YEAR 3 FINDINGS Fall 2001-Fall 2002

The Medicare Rural Hospital Flexibility (Flex) Program continues to have a positive impact on health care and hospital viability in rural communities. This report on the third year of the Flex Program evaluation focuses on quality improvement initiatives, hospital networking, emergency medical services and hospital financial performance at the first ten Critical Access Hospitals (CAHs) focusing especially on follow-up site visits and medical staff surveys with the first two Critical Access Hospitals.

### Selected Findings

- All ten Critical Access Hospitals who participated in a 2002 quality improvement collaborative on congestive heart failure and atrial fibrillation noted improvements at the end of the collaborative. They also reported many examples of other quality improvement initiatives undertaken and completed in the past year.
- The ten study CAHs reported no substantive changes in their network relationships in the past year. Overall, the hospitals' network relationships are more formalized than before conversion.
- The first two CAHs reported new dialogues with their network partners, featuring more give and take. One CAH reported their best financial year ever, citing benefits the network relationship brings to patients and to the CAH. The other reported benefits from advanced information technology available through their network partner.
- Medical staff associated with the first two CAHs, while not totally satisfied with the Flex program on all dimensions, rated their satisfaction with the hospital, the primary referral hospital, and their practices in the community higher than on the initial survey two years earlier.
- Emergency room visits in the first two Critical Access Hospitals increased by 17.7% between the conversion year and the follow-up visit.
- All community focus group participants in the first two CAHs to convert rated themselves as "very satisfied" on the questions of access to care and quality of care provided by the CAH.

### Follow-Up With Initial Conversion Hospitals

***"People in the community are no longer by-passing our hospital to use other hospitals for care that could be obtained locally."***

— Community Focus Group Participant

Considerable progress was achieved by the first two CAHs in Minnesota in the two years following their conversion. Major remodeling of the facilities was accomplished, upgrading their physical plants and making changes such as moving to one level or moving nursing stations, positively impacting patient care and accessibility. One of the CAHs had a physician on staff consistently for the first time in several years, through the

J-1 Visa Waiver program. Residents noticed these changes, and in focus group discussions, noted that local residents were no longer bypassing the hospital to seek care in other communities, based on both the consistency of the physician and on the improvements in the physical plant of the facility. At the other CAH, construction allowed better access by moving departments of the hospital to the same level, and adding assisted living for senior community residents through re-use of the facility that was vacated after the hospital remodeling. At the first two CAHs, medical staff felt that the Flex program met or exceeded their expectations through improving the image of the hospital and the availability of referral physicians and hospitals through network agreements, and by increasing the use of mid-level practitioners to serve the community. They were less satisfied with the Flex program's impact on Medicare reimbursements to the hospital, with quality assurance and performance improvement through network agreements, with the availability of clinical consultants and visiting specialists, and with improving emergency medical transportation. Overall, however, medical staff at the first two CAHs were more satisfied with networking arrangements for quality assurance, credentialing arrangements, and referral and transfer agreements than they had been two years earlier, in the year of CAH conversion. They also rated their satisfaction with the hospital, the primary referral hospital, and their practices in the community higher than they did in the survey two years ago.

### **Quality of Care**

With respect to quality of care, the CAHs experienced a slightly higher number of deficiencies on their second survey by the Minnesota Department of Health than on their initial CAH survey. At the Year 1 CAHs, these deficiencies were satisfactorily corrected and the CAHs were brought into compliance with all applicable regulations. Among the four CAHs that converted in Year 2 and received their second survey, one was cited for 11 deficiencies. This CAH later closed, the only CAH to close in Minnesota.

The first ten CAHs were able to submit numerous examples of quality initiatives implemented during Year 3. Quality improvements were noted in areas such as completeness and timeliness on charts and records, improvements in-patient testing procedures for faster results and enhanced patient comfort, and improved practices based on regular patient satisfaction surveys as well as specialized surveys to address quality improvement in specific areas of care.

Finally, with respect to quality, community residents in the first two CAH communities were asked for their opinions regarding quality of care at the CAHs. All of the residents were "very satisfied" with access to care and quality of care at their CAH. They also expressed their desire for additional services in their communities, such as access to mental health care, and specialty care such as pediatrics, dermatology, and cardiology. Local residents felt that their hospitals brought great value to their communities. In addition to the health care itself, other benefits noted were jobs, benefits to the local economy, community involvement, and the attraction of young families and retirees to the community because of the available health services.

## Quality Improvement Collaborative

*“As hard as it is to get away from my facility, I know that one day spent in this workshop saves me three days back on the job.”*

*“It’s nice to know we are not alone – we face similar problems. I thought it was just us.”*

— Participants in the Stratis/ORHPC Quality Collaborative

The first ten CAHs participated in a quality collaborative developed through a partnership of Stratis Health (the state Quality Improvement Organization) and the Office of Rural Health and Primary Care. The collaborative focused on congestive heart failure and atrial fibrillation. Baseline and end of collaborative measures in five areas including patient assessment, use of ACE inhibitors in appropriate patients, patient education, Warfarin planning, and follow-up planning all showed improvements from baseline to end of project. In addition, participants from these rural hospitals discovered that they were “not alone” in some of the problems they faced in dealing with quality improvement activities. At the end of the collaborative, they knew staff from other CAHs and from Stratis Health who they could contact after the collaborative ended, as they were working to maintain these improvements at their rural hospitals. Several staff from the first quality collaborative volunteered to act as mentors for a new quality collaborative taking place during Year 4 of the Flex Program.

## Network Relationships

With respect to CAHs and networking, the overall picture is one of more formalized network arrangements than existed prior to CAH conversion. In the previous two years, while the formal arrangements hadn’t changed, the CAHs were working on more activities with their network partners. They have taken on new projects such as a joint clinic project, increased disaster planning activities, and infection control activities. Both CAHs noted the importance of the network relationships in their success. One administrator pointed out that their network hospital is one of the 100 most wired hospitals in the United States. This means that when a patient is transferred, all of the information is on-line; there is no need to repeat labs, for example. In addition, all radiology is read by the doctors at the network hospital. The administrator feels this results in increased quality of care for the patient. The administrator at the other CAH reported that the positive network relationship results in better customer service, which in turn has “ultimately changed revenues.” Network relationships have enhanced patient care and helped rural hospitals strengthen their positions in providing care as well as financially.

## Emergency Medical Services

*“The physical plant is a big change. The visibility in the community—people have taken more ownership of the hospital through the pledge drive. People are more aware of all the services offered. I think we’re keeping people in town more. We hear about problems from other ambulance services that aren’t CAH—we don’t have those issues. They’ve done a wonderful job of making us feel like we are a part of the hospital.”*

— EMT at a local ambulance service transporting to a CAH in response to a question about the impact of the hospital’s conversion to CAH

In the area of emergency medical services, the Year 1 CAHs saw an increase in the number of emergency room visits at their facilities in the previous two years. Relationships between the CAHs and the ambulance services remain strong and have been enhanced through activities such as Comprehensive Advanced Life Support (CALS) training and cross training of hospital and ambulance staff. These steps are seen as enhancing to professional relationships as well as patient care.

### **Financial Performance**

The financial performance of the Year 1 CAHs has improved. One of the CAHs reported their strongest financial year ever. These hospitals were smaller, with lower patient census, lower revenues, and lower expenses than other rural hospitals in Minnesota at the time of conversion to CAH. Since conversion, the average daily census at the Year 1 CAHs has grown at a faster rate than that of comparable hospitals. Their revenues grew at a rate comparable to other rural hospitals, but the rate of growth of their expenses was lower. Overall, while uneven, there has been growth in revenue at the Year 1 CAHs in the years since they converted to CAH designation.

### **Summary**

The Flex Program has brought benefits to many of Minnesota's rural hospitals. Network relationships have brought more resources in areas such as credentialing, specialist visits, and technology. Conversion to CAH has meant that rural hospitals are beginning to see improvements in their bottom lines. While the progress has been somewhat uneven, the hospitals are generally in a stronger financial position in the years following conversion than previously. Communities have been involved with their hospitals through sharing of information about the Flex Program and as hospitals have undertaken fund drives and information campaigns to assist in upgrading facilities and adding new services. Residents report "hearing around town" that more people are staying in the community to seek their medical care rather than traveling to larger population centers. Emergency room visits are up, contrary to fears that there might be ER closings at CAHs. Relationships with local ambulance services are positive, with EMS personnel reporting respect and acceptance by CAH emergency department personnel. CAHs are reporting many quality improvement initiatives, designed to improve everything from external signage to help people find the emergency room, to taste and temperature of the food, to measures to enhance patient comfort during procedures. Through the quality collaborative developed by the Office of Rural Health and Primary Care and Stratis Health, rural hospital personnel are working with personnel in other communities and with medical experts to enhance patient care. Local medical staff is more positive about the conversion of their local hospital to CAH now than two years ago. This picture is one of stronger rural hospitals, benefiting from relationships with other health providers, to improve patient care and enhance financial stability.

## CHAPTER 1 INTRODUCTION: BACKGROUND AND METHODS

The Balanced Budget Act of 1997 created the Medicare Rural Hospital Flexibility Program, which will be referred to as the “Flex Program” throughout this report. Technical corrections to the Flex Program were made in 1999 by the Balanced Budget Refinement Act and the Medicare, Medicaid, and the State Children’s Health Insurance Program (SCHIP) Benefits Improvement and Protection Act in 2000. The Flex Program features a new category of rural hospital called the Critical Access Hospital (CAH). A CAH has unique licensing and certification rules, receives reimbursement from Medicare for the cost<sup>1</sup> of providing inpatient and outpatient services to Medicare beneficiaries, and must operate within a rural health network. A rural health network is defined as an arrangement between a CAH and another hospital regarding patient referral and transfer; development and use of communication systems; provision of emergency and non-emergency transportation; and credentialing and quality assurance. The Flex Program also encourages CAHs to integrate services with other local providers such as physicians and emergency medical services providers.

The Health Care Financing Administration (HCFA, renamed the Centers for Medicaid and Medicare Services or CMS) authorized the State of Minnesota to participate in the Flex Program in July 1998. The first CAH in Minnesota, Mahnomon Health Center in Mahnomon, was certified on February 2, 1999. There are approximately 80 hospitals in Minnesota with 50 or fewer beds that are geographically eligible to apply for CAH designation. It is estimated by the ORHPC that approximately 65 of these are likely to convert to CAH based on current program eligibility requirements. To date, 46 hospitals have converted to CAH and approximately five to ten more eligible hospitals in the state have expressed interest in the program.

The purpose of this report is to summarize the experience of the Flex Program in Minnesota through the third year, and to draw lessons from that experience for the future administration of the program. In Year 1, only two hospitals converted to CAH status, so the number of observations was limited. For the Year 2 report, eight more CAHs were added to the study in order to extend the “lessons learned” from their experiences in the Flex Program. Baseline measurements of the financial, utilization, and networking experiences of comparison hospitals were taken during Year 1. Additional baseline information was gathered on the Year 2 CAHs for the year before conversion.

The remainder of this chapter provides an overview of the Flex Program, stressing both federal provisions and those that are unique to Minnesota. A summary of the methodology and data sources used is also presented. Chapter 2 discusses the

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<sup>1</sup> The cost-reimbursement rules of Medicare stipulate that providers will be paid the “reasonable cost” of delivering *covered services* to beneficiaries. In defining which costs are “reasonable,” the Health Care Financing Administration (now CMS) has judged some classes of expenses to be “non-allowable”—costs not directly connected to the provision of covered services to beneficiaries. Therefore, the total legitimate costs of a CAH are *not* reimbursed under current Medicare cost finding rules.

implementation of the Medicare Rural Hospital Flexibility Program by the Minnesota Department of Health, Office of Rural Health and Primary Care (ORHPC). Chapter 3 investigates the satisfaction of physicians and medical staff with implementation of the model and the extent to which physicians have been integrated into the CAH model. Chapter 4 assesses the quality of care provided in CAHs and Chapter 5 assesses community satisfaction, perceptions of care, and utilization. The sixth chapter considers rural health networking, exploring whether the Flex Program created new linkages and what the effect of the linkages has been. Chapter 7 assesses the impact of the program on the local EMS system. Chapter 8 includes a look at the financial picture of Year 1 CAHs in the year prior to conversion and in several subsequent years. A more complete analysis of all of the first 10 CAHs will be covered in next year's evaluation report.

### **THE FLEX PROGRAM**

The Labor, Health and Human Services, and Education Appropriations Bill for 1999 Conference Report (October 1998) stated the goals of the Flex Program:

This program will provide grants to states to help them improve access to essential health care services in rural communities by: (1) developing and implementing a rural health plan; (2) developing networks; (3) designating CAHs; and (4) improving rural emergency medical services and other activities. It will provide support for local citizens, employers, and health care providers to conduct community development activities that are necessary to identify their health care needs and design systems of care to address them. For hospitals and other providers, this program will provide technical assistance and support to: (1) develop integrated networks of care; (2) examine the conversion to CAH; (3) improve information systems, quality assurance programs, and other activities.

The Flex Program is composed of two parts: a grant program and an operating program. The grant program is administered nationally by the Office of Rural Health Policy (ORHP) and the operating program is administered by the Health Care Financing Administration (now CMS). The grant program focuses on activities that support conversion and implementation of CAHs and rural health networks. The Minnesota Department of Health, Office of Rural Health and Primary Care, received grants from ORHP beginning in May 1999 to begin program planning and has received additional grants for program continuation. From these funds, the ORHPC has awarded grants to rural hospitals since 1999 to help them assess the feasibility of conversion, educate the community, and apply for CAH designation. In addition to designation-related activities, projects funded by this grant addressed regionalization of health care services, the development and enhancement of rural health networks, workforce training and shortages, consumer and staff education, and emergency medical services issues. The totals of these grants are shown in Table 1.1.

**Table 1.1  
Flex Grants Awarded to Minnesota and Amounts Distributed to Hospitals**

<b>Date</b>	<b>Minnesota Grant From ORHP</b>	<b>Amount Distributed to Rural Hospitals &amp; Communities</b>
May 1999	\$200,000	\$120,000
September 1999	\$550,138	\$330,000
September 2000	\$720,000	\$506,000
September 2001	\$700,000	\$435,000

The operating program focuses on facility regulations and Medicare payment issues for CAHs. The facility regulations and Medicare payment policies of the operating program were developed to improve the administrative and clinical performance of rural hospitals choosing to convert to CAH status. Table 1.2 summarizes the program requirements for CAHs.

**Table 1.2  
Critical Access Hospital Facility Requirements**

<p><b>Criteria for Designating CAHs</b></p> <ul style="list-style-type: none"> <li>• Is located in a state participating in the Flex Program.</li> <li>• Is designated by the state.</li> <li>• Is currently licensed by the state as a hospital, or is a hospital that is closed or downsized to a health center or clinic within the past ten (10) years.</li> <li>• Is located in a rural county or an area of an urban county classified as rural by the Secretary of Health and Human Services.</li> <li>• Is located more than a 35-mile drive from another hospital or is certified by the state as a necessary provider of health services to residents of the area.</li> </ul>
<p><b>Service Criteria</b></p> <ul style="list-style-type: none"> <li>• Makes available 24-hour emergency care services that a state determines are necessary.</li> <li>• Operates no more than fifteen (15) acute beds and up to ten (10) swing beds.</li> <li>• Maintains an average length-of-stay of 96 hours or less on an annual basis.</li> <li>• Provides dietary, pharmacy, laboratory, and radiological services on either a full-time, on-site basis or part-time, off-site basis under arrangement with another provider.</li> </ul>
<p><b>Networking Relationships</b></p> <ul style="list-style-type: none"> <li>• Enters into networking agreements with at least one (1) hospital with respect to:               <ul style="list-style-type: none"> <li>➤ Patient referral and transfer.</li> <li>➤ Communication systems (including, where feasible, telemetry systems and electronic sharing of patient data).</li> <li>➤ Emergency and non-emergency transportation.</li> <li>➤ Enters into networking agreements for credentialing of medical staff and quality assurance with at least one hospital, one peer review organization or equivalent entity, or other appropriate and qualified entity identified by the state.</li> </ul> </li> </ul>

**Table 1.2 (Continued)**  
**Critical Access Hospital Facility Requirements**

<ul style="list-style-type: none"> <li>• <b>Personnel/Staffing Criteria</b></li> <li>• Meets staffing requirements of other rural hospitals except the following: <ul style="list-style-type: none"> <li>➢ Need not meet hospital standards for hours or days of operation, as long as it meets the requirement to provide 24-hour emergency care.</li> <li>➢ Services of a dietician, pharmacist, laboratory technician, medical technologist, and radiological technologist may be furnished on a part-time, off-site basis.</li> <li>➢ Required inpatient care may be provided by a physician assistant or nurse practitioner, subject to the oversight of a physician who need not be present in the facility.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• <b>Medicare Reimbursement</b></li> <li>• The amount of payment for inpatient hospital services is the reasonable cost of the CAH in providing such services.</li> <li>• The amount of payment for outpatient services is the reasonable cost of the CAH in providing such service plus (for those CAHs including professional services within outpatient CAH services) a fee-schedule payment (i.e., resource-based relative value scale (RB-RVS) payments) for professional services.</li> </ul>

SOURCE: BBA, 1997  
BBRA, 1999

**MINNESOTA-SPECIFIC VARIATIONS IN THE FLEX PROGRAM**

The Flex Program affords the states authority to tailor some portions of the program to accommodate local circumstances. One of the primary areas of flexibility is the criterion concerning the location of the facility. The federal program requires that a CAH be located more than a 35-mile drive from a hospital or another CAH, or be certified by the state as a necessary provider of health care services to residents in the area. In recognition of the limitations to access imposed by geography and weather, Minnesota Law established a *necessary provider* definition unique to the state.

***Certification as a Necessary Provider of Health Care Services***

The Minnesota-specific necessary provider definition recognizes the burden that isolation and a shortage of medical providers has on access to health care services. Minnesota’s necessary provider definition is:

Necessary providers of health care services are designated as CAHs on the basis of being more than 20 miles, defined as official mileage as reported by the Minnesota Department of Transportation, from the next nearest hospital or being the sole hospital in the county or being a hospital located in a designated medically underserved area (MUA) or health professional shortage area (HPSA) or located in a county contiguous to a county with a HPSA or MUA. A CAH located in a designated medically underserved area or health professional shortage area shall continue to be recognized as a CAH in the event the medically underserved area or health professional shortage area designation is subsequently withdrawn (Minnesota Statutes 1999, 144.1483(11)).

### **Rural Health Networks**

Rural health networking is a long-established practice of rural providers in Minnesota. The ORHPC has supported network development in recent years through the provision of technical assistance and grants. CAHs are required to have a network agreement that links the CAH with another larger hospital. The federal Office of Rural Health Policy also encourages CAHs to network their services locally, an arrangement sometimes referred to as local integration. Year 3 networking activities will be discussed in detail in Chapter 6 of this report.

### **EVALUATION METHODOLOGY AND DATA**

A variety of methods and data sources are used in the evaluation. (See “Minnesota Rural Hospital Flexibility Program Evaluation Plan, February 2000,” for a complete explanation of methods and data.) Some evaluation questions are addressed using primary data obtained through on-site interviews, focus groups, telephone interviews, and monitoring reports. The remaining questions are answered using secondary data (i.e., data collected for another purpose that is made available to the evaluators).

### **Case Studies**

The evaluation focuses on monitoring salient aspects of program implementation at ten CAHs over a multi-year period. The original evaluation plan called for five CAHs to be selected in Year 1 and five in Year 2. Because only two CAHs were certified in Year 1, eight CAHs were selected for case studies in Year 2. The case-study facilities/communities were site visited as soon as possible following conversion; a second visit will take place approximately 24 months following the first visit. A simplified schedule for CAHs entering the evaluation program and for subsequent monitoring is depicted in Table 1.3. CAH progress toward achieving the operating goals of the program will be monitored (with data assembled from monitoring reports, secondary data analysis, and site visits), documented, and summarized in case studies using a multiple case study evaluation design.

**Table 1.3**  
**Case Study Data Collection Schedule**

<b>Case Study Facility</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
CAH 1- 2	First site visit Baseline data	Follow-up data	Second site visit Follow-up data	
CAH 3 – 10		First site visit Baseline data	Follow-up data	Second site visit Follow-up data

### **Comparisons**

For some components of the evaluation, data will be collected for every CAH. Trends in the data reported will be analyzed and interpreted. The data to be collected are listed in Table 1.4.

**Table 1.4  
Data Collection Schedule from All CAHs and  
Comparison Hospitals**

<b>Facility</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
All CAHs	Historical and current financial and utilization reports, network diagrams, EMS documentation, monitoring reports	Current financial and utilization reports, changes to network diagrams, EMS documentation, monitoring reports	Current financial and utilization reports, changes to network diagrams, EMS documentation, monitoring reports	Current financial and utilization reports, changes to network diagrams, EMS documentation, monitoring reports
Comparison Hospitals	Historical and current financial and utilization reports, network diagrams	Current financial and utilization reports, changes to network diagrams	Current financial and utilization reports, changes to network diagrams	Current financial and utilization reports, changes to network diagrams

A key issue in the evaluation design is determining the standard to which CAHs should be compared. Because no CAHs existed in Minnesota prior to the introduction of the Flex Program, it is not possible to compare the case study CAHs to other CAHs. Instead two different comparisons will be used. First, changes in the performance of individual CAHs will be compared over time — before conversion and following conversion (pre/post analysis). Second, a random sample of ten CAH-eligible facilities was selected as comparison sites. If any comparison hospitals do convert to CAHs, they will be removed from the comparison sample. At least five comparison sites are expected to remain in the sample until the conclusion of the evaluation. Table 1.5 lists the comparisons to be made.

**Table 1.5  
Standards of Comparison**

<b>Evaluation Issue</b>	<b>Comparisons</b>	
	<b>Pre/Post CAH</b>	<b>CAHs to Sample of Small Rural Hospitals</b>
Financial impact	√	√
Changes in utilization	√	√
Physician integration	√	
Physicians' satisfaction	√	
Quality of care	√	
Changes in access	√	√
Changes in resident satisfaction	√	
Network development	√	√
EMS integration	√	

### ***Monitoring Reports***

A baseline report collecting information on CAHs for the year prior to conversion has been collected from all case study CAHs. Additionally, monitoring reports will be collected annually from CAHs to assess ongoing changes in the staffing, network arrangements, quality assurance, and the CAH's ongoing satisfaction with the Flex Program, as well as to report on the uses of grants received under the Flex Program.

### ***Site Visits, Telephone Interviews, and Targeted Surveys***

Site visits have been conducted in the ten case-study CAH communities. The purpose of the site visits is to interview the CAH administrator, to gather information from other CAH staff, and to conduct community focus groups.

Interviews with CAH administrators focus on obtaining information about 1) the use of grant money, 2) the conversion experience, 3) networking relationships and local integration, 4) EMS plans, and 5) the CAH's quality assurance program.

Information from physicians and non-physician providers on physician integration and satisfaction with practice under the CAH model has been obtained through a short written survey. The survey is administered a second time approximately 24 months later. Physician surveys may be augmented by interviews with the local EMS medical director, the hospital medical director, or the emergency room medical director of the hospital to which the CAH primarily refers.

In lieu of community surveys of access to and satisfaction with the CAH model, focus groups have been conducted in case-study communities. The focus groups have been composed of up to twelve participants. To obtain a cross-section of opinion in the community, case-study participants were drawn from a variety of organizations and possess a variety of characteristics. CAH administrators in the case-study communities selected the focus-group participants, based on input about the cross section of community members and characteristics.

Data from all sources (both primary and secondary) for case study facilities have been summarized for analysis. Appropriate comparisons of the characteristics of case study CAHs and the effect they have had on the community will be made. Site visits were conducted following conversion and will be followed up approximately 24 months after the initial visit.

### ***Financial and Other Secondary Data***

Secondary data for the evaluation is derived from a variety of sources including Medicare cost reports, audited facility financial statements, Health Care Cost Information System reports, documentation of activities of EMS agencies (i.e., EMS Regulatory Board, regional EMS Coordinating Boards, and local EMS agencies), MDH Facility and Provider Compliance Division licensure/certification surveys, documentation of CAH quality studies performed by Stratis Health and the Medicaid agency, the Minnesota Hospital Association, and internal documents of case study CAHs.

A table summarizing all components of the evaluation and the data used may be found in Appendix A.

## **CHAPTER 2 IMPLEMENTATION OF THE MEDICARE RURAL HOSPITAL FLEXIBILITY PROGRAM**

This component of the evaluation focuses on the accountability of the Minnesota ORHPC for activities related to the Flex Program. It assesses the use of grant funds and the activities undertaken by ORHPC to continue the program implementation in Year 3.

For Year 3, ORHPC received a grant of \$700,000 (September, 2001). This grant was used for further development of Minnesota's Rural Health Plan, assistance with additional CAH conversions, enhanced networking activities, improvement of emergency medical services, and improved quality of care.

### **OFFICE OF RURAL HEALTH AND PRIMARY CARE IMPLEMENTATION ACTIVITIES (YEAR 3)**

The Minnesota ORHPC engages in a number of activities in the implementation of the Flex Program in the state. These include:

- **Program support:** monitoring changes in federal program legislation and rules and communicating these changes to interested hospitals; convening and staffing the Rural Hospital Flexibility Program Advisory Committee to obtain input on program administration; designating CAHs and networks; meeting with Office of Rural Health staff from other states to compare progress, collectively solve implementation problems, and advocate for changes in the federal administration of the program; preparing federal Office of Rural Health Policy grant applications for subsequent year funding; updating the Minnesota Rural Health Plan as needed; preparing proposed legislation for consideration by the Minnesota legislature to implement needed changes in the state Flex Program; and evaluating performance.
  
- **Grant making and grant administration:** identifying fundable activities; estimating the number of awards and the maximum amounts available; soliciting grant applications; establishing grant review committees as needed; reviewing proposals and making grant awards; processing grant payments; monitoring progress; and receiving and reviewing final reports.
  
- **Technical assistance provision/program communications:** conducting preliminary financial feasibility studies; providing CAH application assistance; conducting mock surveys; providing educational sessions; acting as the liaison between communities and the CMS Regional Office, the Medicare fiscal intermediary, the Medicare Quality Improvement Organization on a Quality Improvement Collaborative for CAHs; and implementing program enhancements and changes (such as Rural Health Works).

An estimate of the allocation of expenses over these three activities (based on the Flex Program Grant awards) is as follows:

**Table 2.1**  
**Year 3 Flex Program Expenses**  
**Fall 2001 – Fall 2002**

<b>Activity</b>	<b>Amount</b>	<b>Percent of Total Expenses</b>
Grants to communities and hospitals	\$470,000	67%
Technical assistance provision/ program communications	57,588	8%
Program support and grant administration	36,719	5%
Program evaluation	20,000	3%
Indirect expenses (overhead)	115,693	17%
<b>TOTAL</b>	<b>\$700,000</b>	<b>100.00%</b>

***Flex Program Support and Management***

In the first year of the Flex program, the Rural Hospital Flexibility Program Advisory Committee was established by ORHPC. During Year 3, the committee met three times (February 14, 2002, April 11, 2002, and October 10, 2002). The ORHPC staffs the meetings, prepares background and research materials, advises the committee chair, and reimburses committee expenses. The following topics were discussed by the committee:

- Rural Health Works. A presentation regarding the pilot study was provided by representatives of the University of Minnesota Extension Service, the Minnesota Center for Rural Health, and the ORHPC
- Details of the Year 4 Flex Program application and work plan
- HRSA Hospital Bioterrorism Preparedness funding report and information
- A presentation and report regarding the CAH Quality Improvement Collaborative was provided by Stratis Health, members of the collaborative, and ORHPC
- Reports and updates regarding CAH designation (which hospitals are designated, which are in process, survey issues, staff/board education concerns)
- Grant awards announcements
- Reports from CAH representatives, Minnesota Emergency Medical Services Regulatory Board (EMSRB), Minnesota Department of Human Services (DHS), Stratis Health (Quality Improvement Organization), and the Minnesota Hospital Association
- Announcements/updates regarding regional/national meetings
- Announcements/updates regarding federal or state legislation affecting the Flex program

The Flex committee's work supported the work of the governor-appointed Rural Health Advisory Committee (RHAC) on two major data gathering efforts. The Rural Ambulance Services Study examined challenges faced by rural ambulance services in the areas of financial stability and in workforce recruitment and retention issues. The Flex committee was also involved in discussions around rural health profile development and preparation for updating the Minnesota Rural Health Plan. The report, "Senior Health Services in Minnesota: A Systems Approach", completed in Fall 2001 provided basic data and maps of service locations, and was reviewed by the Flex committee as background information in plans for developing rural health profiles for Minnesota. The profiles, covering areas such as hospitals, nursing homes, hospices, health services, and health professionals will become part of the information base for revision of Minnesota's Rural Health Plan. In addition, meetings in several communities around Minnesota regarding important issues to be addressed in the rural health plan are anticipated. The committee will be involved in plan development as it progresses.

The ORHPC is the state agency responsible for designating CAHs. Through Year 3, the ORHPC designated 44 CAHs. Of the 44 designated by the ORHPC, 38 had been surveyed and approved by CMS for participation in the program by August 31, 2002. The ORHPC provided designated CAHs a variety of technical assistance services (see below).

During Year 3, ORHPC continued work on its ambitious multi-year evaluation plan, which was designed to complement the work of national evaluators for this program and to provide timely local information for improvement of program implementation activities. Year 1 findings were reported in December 2000. Year 2 findings were reported in April 2002. This report includes findings through Year 3.

ORHPC staff attended regional and national meetings to learn about and to discuss Flex Program-related issues with national policymakers and with colleagues from other state offices of rural health.

Finally, the ORHPC wrote an application to ORHP for Year 4 funding. Evidence of the merit of Minnesota's Year 4 Flex Program Implementation Plan is that Minnesota once again received the maximum grant award to continue its work on the Flex program.

### ***CAH Eligible Hospitals***

In the Minnesota Rural Health Plan (July 1998), the ORHPC identified the set of hospitals eligible to apply for CAH certification. This list was modified in 1999 by the Minnesota legislature when it revised the state's definition of "necessary providers" to include hospitals located in federally designated medically underserved areas and health professional shortage areas. Eligible hospitals then fell into two groups: those that met all of the federal requirements of certification and those that met Minnesota's definition of a "necessary provider of health care services" and other federal requirements. That brought the number of eligible hospitals in Minnesota to 76. During the 2001 Minnesota legislative session, the legislature again modified the language describing hospitals. The legislature changed the necessary provider definition to include hospitals located in a county with a HPSA or MUA or located in a county

contiguous to a county with a HPSA or MUA. This change made all rural hospitals in Minnesota geographically eligible for CAH designation. Approximately 80 hospitals are geographically eligible and are licensed for 50 or fewer beds. Of those, it is estimated that approximately 65 are likely to become CAHs or explore CAH designation.

**Grants to Hospitals and Communities**

Three grant programs were available in Year 3: the 2001-02 Critical Access Hospital Planning and Conversion Grant, the 2002 Minnesota Rural Flex Grant, and the 2002 CAH Quality Improvement Collaborative Grant. A total of 58 applications were submitted to these grant programs. Forty-eight grants totaling \$410,000 were awarded. In addition, a grant was awarded to the Minnesota Academy of Family Physicians for the Comprehensive Advanced Life Support (CALs) training program.

**Table 2.2  
Summary of Year 3 Grant Programs**

<b>Grant Program</b>	<b>Number of Applicants</b>	<b>Total Amount Requested</b>	<b>Number of Awards</b>	<b>Total Amount Awarded in Grant Program</b>
2002 CAH Planning & Conversion Grant	24	N/A	24	\$165,000
2002 MN Rural Flex Grant	24	\$511,157	14	\$195,000
2002 CAH Quality Improvement Collaborative Grant	10	N/A	10	\$50,000
<b>Totals</b>	<b>58</b>		<b>48</b>	<b>\$410,000</b>

**The 2002 CAH Planning and Conversion Grant Summary**

Application guidelines for the 2002 CAH Planning and Conversion Grant Program were sent to each eligible hospital, made available on the ORHPC website, and highlighted in monthly ORHPC newsletters. The grant program was changed in year 3 to a non-competitive, open-ended cycle. Hospitals were encouraged to request funds for CAH conversion activities by submitting a letter of application at the time of need. Each letter of application was reviewed as received, and each hospital sending a request was given an award.

Average Award:	\$6,250
Award Range:	\$4,000 - \$10,000

Activities supported by this grant program included financial feasibility studies, community education and needs assessments, hospital policy and procedure development, staff education, CAH application preparation, and additional cost report analysis. Twenty-four hospitals received an award; several hospitals accomplished two or more objectives (e.g. financial feasibility study, CAH application preparation) with one

grant award, for a total of 29 projects under this grant. One hospital awarded a grant for a financial feasibility study was unable to meet the terms of the grant agreement in the time allowed, and the project was not completed. The table below summarizes the projects funded by the 2002 CAH Planning and Conversion grant.

**Table 2.3**  
**2002 CAH Planning and Conversion Grant – Use of Grant Funds**

<b>Use of Grant</b>	<b>Number of Projects</b>
Financial feasibility studies	<b>14</b>
Community Forums/ Education	<b>1</b>
CAH Application preparation	<b>4</b>
Staff Education	<b>6</b>
Interim Cost Report	<b>2</b>
Review of Chargemaster	<b>2</b>
<b>Total Projects Funded</b>	<b>29</b>

There has been a gradual shift in the grant programs from initial financial feasibility study grants to CAH implementation and reimbursement strategy project grants. This reflects the fact that many hospitals have now completed their financial feasibility work and are moving on in their activities toward and beyond conversion.

***The 2002 Minnesota Rural Flex Grant Award Summary***

Application guidelines for the 2002 Minnesota Rural Flex Grant Program were sent to each eligible hospital, made available on the ORHPC website, and announced in the ORHPC monthly newsletter. The grant program was also announced in the State Register and the Minnesota Department of Health Consolidated Grant Notice, as well as through the Emergency Medical Services Regulatory Board (EMSRB) and the Minnesota Hospital Association.

Applicants eligible for this grant program consist of rural hospitals with 50 or fewer beds, CAHs, rural health networks (including EMS organizations), and rural nonprofit organizations. The grant program funded activities that addressed the objectives of the overall Minnesota Rural Hospital Flexibility Program.

Twenty-four applications were submitted; fourteen grants were awarded. The maximum for any grant award was \$25,000. The grant requests and awards are summarized as follows:

Average Amount Requested:	\$21,298
Average Award:	\$13,929
Award Range:	\$3,000 – \$25,000

Projects funded by this grant addressed regionalization of health care services, the development and enhancement of rural health networks, workforce training and shortages, consumer and staff education, and emergency medical services issues. The projects funded through this grant program are summarized in Appendix C.

**The 2002 CAH Quality Improvement Collaborative Grants**

Stratis Health, the Medicare Quality Improvement Organization, developed and facilitated a 10-month collaborative quality improvement project for the first ten hospitals that converted to CAH status.

The ORHPC awarded a \$5,000 grant to each participating hospital. The award offset costs associated with staff time for collaborative-related work and travel expenses for attending collaborative workshops. A total of \$50,000 was awarded in this grant program.

**Grant Summary**

Table 2.4 below shows a summary of the grants by hospital that were made during Year 3.

**Table 2.4  
Summary of Grants Awarded to Hospitals and Communities in Year 3**

<b>Hospital/ Organization</b>	<b>City</b>	<b>01-02 CAH Planning &amp; Conversion</b>	<b>01-02 Quality Improvement Collaborative</b>	<b>2002 Flex Grant</b>	<b>Total Year 3 Awards</b>
Riverwood Health Care	Aitkin		\$5,000		<b>\$5,000</b>
Albany Area Hospital	Albany	\$9,500			<b>\$9,500</b>
Appleton Municipal Hospital	Appleton	\$10,000			<b>\$10,000</b>
White Community Hospital	Aurora	\$7,000			<b>\$7,000</b>
Lakewood Health Center	Baudette		\$5,000		<b>\$5,000</b>
United Hospital District	Blue Earth	\$5,000			<b>\$5,000</b>
Canby Community Health Services	Canby	\$4,000			<b>\$4,000</b>
Community Memorial Hospital	Cloquet			\$8,000	<b>\$8,000</b>
Cromwell Fire and Ambulance	Cromwell			\$25,000	<b>\$25,000</b>
Riverview Hospital	Crookston			\$10,000	<b>\$10,000</b>
Lac qui Parle Health Network	Dawson			\$22,000	<b>\$22,000</b>
Medisota	Dawson			\$20,000	<b>\$20,000</b>
First Care Medical Services	Fosston	\$7,500			<b>\$7,500</b>
Glacial Ridge Hospital	Glenwood	\$10,000		\$17,000	<b>\$27,000</b>
Grand Meadow Ambulance	Grand Meadow			\$3,000	<b>\$3,000</b>
Granite Falls Hospital	Granite Falls	\$10,000			<b>\$10,000</b>
Kittson Memorial Hospital	Hallock	\$8,000		\$8,000	<b>\$16,000</b>
Hendricks Community Hospital	Hendricks	\$7,500		\$15,000	<b>\$22,500</b>
Meeker-McLeod-Sibley CHS	Hutchinson			\$15,000	<b>\$15,000</b>
Meeker County Medical Hospital	Litchfield	\$5,000			<b>\$5,000</b>
Long Prairie Memorial Hospital	Long Prairie	\$4,000			<b>\$4,000</b>
Luverne Community Hospital	Luverne			\$5,000	<b>\$5,000</b>

Hospital/ Organization	City	01-02 CAH Planning & Conversion	01-02 Quality Improvement Collaborative	2002 Flex Grant	Total Year 3 Awards
Mahnomen Health Center	Mahnomen		\$5,000		\$5,000
Region Nine Development Comm.	Mankato			\$15,000	\$15,000
Melrose Area Hospital	Melrose	\$7,500			\$7,500
Mercy Hospital & Health Care Center	Moose Lake	\$5,000			\$5,000
Renville County Hospital	Olivia		\$5,000		\$5,000
Ortonville Municipal Hospital	Ortonville	\$7,500			\$7,500
Paynesville Area Health Care	Paynesville	\$5,000			\$5,000
Perham Memorial Hospital	Perham	\$4,000			\$4,000
Pine Medical Center	Sandstone		\$5,000		\$5,000
St. Michael's Hospital	Sauk Centre	\$8,000			\$8,000
St. James Health Services	St. James	\$5,000			\$5,000
St. Peter Community Hospital	St. Peter	\$10,000			\$10,000
Lakewood Health System	Staples	\$7,500			\$7,500
Minnewaska District Hospital	Starbuck	\$5,500			\$5,500
Tracy Municipal Hospital	Tracy		\$5,000		\$5,000
Lakeview Memorial Hospital	Two Harbors		\$5,000		\$5,000
Tyler Health Care	Tyler	\$5,000			\$5,000
St. Elizabeth's	Wabasha	\$7,500		\$20,000	\$27,500
Westbrook Health Center	Westbrook		\$5,000		\$5,000
Wheaton Community Hospital	Wheaton		\$5,000		\$5,000
Winona CHS	Winona			\$12,000	\$12,000
Zumbrota Health Care	Zumbrota		\$5,000		\$5,000
<b>Totals</b>		\$165,000	\$50,000	\$195,000	\$410,000

**Technical Assistance and Communications**

During Year 3, in addition to the program support and grant-related activities, the ORHPC conducted several technical assistance and communications activities. Table 2.5 summarizes the technical assistance activities of the office.

**Table 2.5  
Year 3 ORHPC Technical Assistance Activities**

	Total Contacts <sup>a</sup>	In-person Contacts	Mock Surveys
Year 3 CAH converts	1,204	31	16
Considering CAH/ Conversion in process	810	22	1
Non-hospital organizations	66	5	0
Total	2,080	58	17

<sup>a</sup> Contacts by telephone, e-mail, fax, and in person. Numbers are approximations.

The number of contacts with hospitals and non-hospital organizations provided by the ORHPC rose dramatically from Year 1 to Year 2. During Year 1, contacts totaled about 200. This rose to over 2000 during Year 2, reflecting the increased knowledge about and interest in CAH designation by hospitals, the services provided by the ORHPC in technical assistance visits and “mock surveys,” and many phone, e-mail, and fax communications with these organizations. During Year 3, the number and types of technical assistance contacts remained consistent with Year 2. The higher number of hospitals that converted to CAH during Year 3 is reflected in Table 2.5 in the higher number of contacts and mock surveys for hospitals that became CAHs, rather than those who were considering and did not complete the conversion process during this time period.

A summary of the types of technical assistance activities provided by the ORHPC is listed below:

- Financial services
  - Conducting preliminary financial feasibility study
- Educational services
  - Presenting CAH education sessions for hospital staff
  - Preparing CAH education/information materials for use by hospital staff
  - Presenting an overview of the Flex Program to community and/or hospital governing board
  - Preparing CAH education/information materials for use by community and/or hospital governing board
- CAH application assistance
  - Designing network agreements
  - Designing referral and transfer agreements
  - Designing network communications agreements
  - Designing emergency and non-emergency transfer agreements
  - Designing credentialing and quality assurance agreements
  - Developing and establishing a professional practice review process
- Developing and establishing an emergency services plan
- Discussing and identifying what is needed to show community involvement in the CAH decision-making process
- Identifying information needed for a community needs assessment and discussing how to collect it
- Assisting with completion of CMS form 1514
- Survey preparation services
  - Providing sample CAH policies and procedures
  - Conducting a “mock survey” of the facility
- Featured articles about CAH in each monthly issue of *Office of Rural Health & Primary Care Monthly Update* and three out of four issues of *Office of Rural Health & Primary Care Quarterly*. In place of *Critical Access News*, an episodic publication dedicated to the Flex program, a section of **Hot Topics** added to the ORHPC website and several listservs were established to directly communicate with parties interested in particular issues or programs.

The MHHP, as noted earlier, provided technical assistance and communication services in connection with the ORHPC.

### **SUMMARY OF YEAR 3 FINDINGS**

- The ORHPC has continued to target hospitals that would most likely benefit from the Flex Program. This is demonstrated by the continued high number of contacts with hospitals seeking information about CAH designation, continued grants to assist in the conversion decision-making process, and the large increase in the number of hospitals that converted to CAH during Year 3 compared to Years 1 and 2.
- The ORHPC continued to effectively implement the Flex Program in Minnesota, with emphasis on program management, awarding grants, and providing direct technical assistance to hospitals and communities.
- The ORHPC awarded 48 grants under three grant programs totaling \$410,000. This continued on the foundation of work that included 37 grants in Year 1 and 44 grants in Year 2 to a variety of hospitals, other organizations, and networks. One CAH administrator said “we had a tight budget in the days of conversion. We would not have been able to do some of these things – or have done them as well without the grants.” Also, an administrator reported “it helped us gather information and make decisions on a timely basis.”
- Grants made during Year 3 focused not only on conversion planning and assessment, but through the Flex Grant program, supported the other areas of the Flex program, such as EMS, network development, and quality improvement.
- The ORHPC developed with Stratis Health (the QIO) a quality collaborative focused on improvement in patient outcomes related to atrial fibrillation and heart failure. The first ten CAHs participated and positive results were noted. (This effort is described in more detail in Chapter 4).
- The ORHPC brought together information to assist in the ongoing development of the Rural Health Plan. This included utilization of the information contained in the ORHPC report “Senior Health Services in Minnesota: A Systems Approach”. The Office also was actively gathering statewide data through surveys and a qualitative community study on the workforce and financial challenges facing rural EMS providers. This work will help inform future EMS activities as part of Minnesota’s implementation of the Flex Program.

## **CHAPTER 3**

### **PHYSICIAN INTEGRATION AND SATISFACTION**

Physician (and non-physician provider) integration into CAHs through employment creates a potential benefit for a CAH community. There are two primary reasons for formally integrating providers into a CAH. The first reason concerns recruitment and retention of providers. Making a provider an employee of the CAH assures the provider a level of pay and benefits that might otherwise be unattainable in many small rural communities. The stability of pay and benefits also encourages retention. The second reason concerns what is often referred to as the “alignment of incentives” between the medical staff and the hospital. Payment systems often produce inconsistent behavior between hospitals and their medical staffs. For example, hospitals and physicians may compete with one another over outpatient laboratory, EKG, or radiology services. Physicians may believe they have an incentive to produce more services for patients, because payment is linked to individual units of service. Some physicians are reluctant to provide pro bono services to the hospital under the terms of their medical staff bylaws (e.g., committee membership and emergency room coverage). Employing providers removes many of these issues by relieving physicians of many of their financial concerns.

The evaluation measured changes in the employment of physicians’ pre- and post-conversion to CAH. Through a medical staff survey, the providers at CAHs were asked whether they had been informed and whether they approved of the conversion to CAH. They were also asked to rate their expectations of the benefits of conversion for the hospital, the community, and their own practice. Finally, the practitioners were asked a set of questions related to their satisfaction with CAH practice.

In the hospitals that converted to CAH during Year 1 (n = 2), neither employed the physicians. This continues to be the case two years later. One hospital provided office space to the practitioners and the other had a management agreement with an urban-based integrated delivery system that staffed the adjacent rural health clinic. This type of management agreement integrated the physicians into the hospital environment.

With respect to practitioners’ relationships with other medical staff, of those that responded, half reported no change in their relationships since conversion to CAH. Half reported changes, but these were all reported as positive changes. One respondent did not think the question was applicable. The positive changes included adding an additional physician partner which helped with existing physicians’ workloads, better team relationships among the medical staff, changes and adjustments related to new locations of nurses’ stations, etc. due to remodeling and how staff could now interact in new ways, and finally, better working relationships based on shared training in Comprehensive Advanced Life Support (CALs).

The medical staff was also asked to share expectations regarding the benefits to the hospital, community and their practices of converting to a CAH and how well the program met their expectations. As second evaluation visits occur, staff members are

asked if the actual performance corresponded with their expectations. The results of the survey of expectations may be found on Table 3.1.

**Table 3.1  
Year 3 CAH Providers Program Expectations of Conversion (n=8)**

	<b>Fallen Short of Expectations (1)</b>	<b>Met Expectations (2)</b>	<b>Exceeded Expectations (3)</b>	<b>Average Score</b>
<b>Program Expectations</b>	<b>Number of responses</b>			
Improving Medicare reimbursement to the hospital	2	5	1	1.875
Improving image of hospital in the community because of network linkages	1	5	1	2.00
Improving hospital quality assurance and performance improvement programs due to network linkages	3	3	1	1.71
Increasing the use of non-physician providers in the community		2	5	2.71
Improving physician relationships with referral physicians and hospitals	1	3	3	2.29
Improving the emergency transportation system	3	2	2	1.86
Improving the availability of clinical consultants and visiting specialists	3	2	2	1.86

As the figures in Table 3.1 demonstrate for Minnesota’s first two CAHs, the Flex program is meeting or exceeding expectations in the areas of:

- Improving the image of the hospital in the community because of the network linkages of the CAH
- Increasing the use of non-physician providers in the community, and
- Improving physician relationships with referral physicians and hospitals

The use of non-physician providers had the highest score in relation to expectations, with an average score of 2.71.

Areas in which the Flex program is not seen as meeting expectations by medical staff at the first two CAHs include:

- Improving Medicare reimbursement to the hospital
- Improving hospital quality assurance and performance improvement programs due to network linkages
- Improving the emergency transportation system, and
- Improving the availability of clinical consultants and visiting specialists

In the year of conversion and two years later, CAH medical staff members at the first two CAHs were asked to rate their satisfaction with the CAH’s networking arrangements on a five-point Likert scale with 1 being “very dissatisfied” and 5 being “very satisfied.”

These findings are described in Table 3.2. In the most recent survey, with respect to these networking arrangements:

*Satisfaction with networking arrangements for quality assurance*

- Approximately 67% were somewhat or very satisfied compared to 40% in Year 1,
- Approximately 33% percent were neutral compared to 20% in Year 1,
- No one was somewhat or very dissatisfied. In Year 1, 40% were somewhat or very dissatisfied.

*Satisfaction with credentialing arrangements*

- Slightly less than 63% were somewhat or very satisfied compared to 40% in Year 1,
- 25% were neutral, compared to 40% in Year 1,
- 12.55% were somewhat dissatisfied compared to none in Year 1,
- None were very dissatisfied compared to 20% in Year 1.

*Satisfaction with referral and transfer arrangements*

- 78% were somewhat or very satisfied, compared to 60% in Year 1 who were somewhat satisfied (no one is Year 1 was very satisfied),
- 22% are neutral vs. 20% in Year 1,
- No one was dissatisfied compared to 20% very dissatisfied in Year 1.

Overall, satisfaction with networking, credentialing, and referral and transfer arrangements is higher than two years ago at these CAHs.

**Table 3.2  
CAH Provider Satisfaction – Year 3  
Current Survey**

	<b>Very Dissatisfied (1)</b>	<b>Somewhat Dissatisfied (2)</b>	<b>Neutral (3)</b>	<b>Somewhat Satisfied (4)</b>	<b>Very Satisfied (5)</b>	<b>Average Score</b>
Satisfaction with networking arrangements...						
Quality Assurance			3	4	2	3.89
Credentialing		1	2	4	1	3.625
Referrals & Transfers			2	3	4	4.22
Overall satisfaction with.....						
The Hospital				3	5	4.625
Your primary referral hospital		1	1	3	4	4.11
Your practice in your community		1		2	6	4.44

CAH medical staff members were also asked their level of satisfaction with the hospital, the primary referral hospital, and their practices in the community. One respondent was very dissatisfied with all of these. An additional respondent was very dissatisfied with the primary referral hospital. But, for the most part, the staff members were quite satisfied on these three dimensions. Results show:

*Satisfaction with the hospital*

- 100% were somewhat or very satisfied compared with 80% in Year 1,
- No one was neutral, which was the same as Year 1
- No one was dissatisfied with the hospital, compared to 20% in Year 1.

*Satisfaction with the primary referral hospital*

- 80% were somewhat or very satisfied, while in Year 1 no one was very satisfied and 80% were somewhat satisfied
- 11% were neutral (no one was neutral in Year 1)
- 11% were somewhat dissatisfied; no one was very dissatisfied; In Year 1, no one was somewhat dissatisfied, but 20% were very dissatisfied.

*Satisfaction with their practices in the community*

- 89% were somewhat or very satisfied compared to 80% in Year 1
- One person was somewhat dissatisfied with their practice in the community compared to one person being very dissatisfied with their practice in Year 1.

Overall, the majority of medical practitioners were satisfied or very satisfied with the hospital, the primary referral hospital and their practice in the community.

### **SUMMARY OF YEAR 3 FINDINGS**

- Of the Year 1 CAHs, no real changes in employment of medical staff members by the CAH or changes in office arrangements occurred, therefore maintaining the same level of staff integration into the CAH as in Year 1.
- Some of the staff at the Year 1 CAHs felt that conversion to CAH fell short of their expectations in the areas of improving Medicare reimbursement to the hospital, improving hospital quality assurance and performance improvement programs due to network linkages, improving the emergency transportation system, and improving the availability of clinical consultants and visiting specialists. Conversion to CAH met or exceeded staff expectations in improving the image of the hospital in the community due to network linkages, increasing the use of non-physician providers in the community, and in improving physician relationships with referral physicians and hospitals. All but one staff member reported an increase in their practices over the past 24 months. Changes in relationships or medical practices over the past 24 months included adding a physician, changes in relationships between nursing staff and ambulance personnel through Comprehensive Advanced Life Support (CALS) training, and some readjustments needed to adapt to communications and workflow after extensive remodeling at both facilities.
- Overall, the majority of CAH medical staff was satisfied with the hospital, the primary referral hospital, referrals and transfers, and their practices in the community. There

was less satisfaction with the quality assurance networking arrangements with other facilities and with credentialing.

## **CHAPTER 4 QUALITY OF CARE**

Assuring the quality of services provided in small rural hospitals is a concern of policymakers, practitioners, and the public at large. Hospitals that are small and produce small volumes of service, that do not offer the complete range of services offered by other hospitals, and that allow the use of non-physician providers to deliver inpatient services, may be perceived as providers of low quality care. Perception of the quality of care delivered in CAHs is as important as the reality: local residents may avoid seeking services in CAHs if they *believe* that CAHs provide poor quality care. Therefore, it is important to measure the impact of conversion on the quality of care delivered in these facilities and to make the results known to local residents.

### **CERTIFICATION SURVEY ANALYSIS**

One of the fundamental structural measures of quality is the ability of hospitals to be certified as CAHs on their initial survey. The Year 1 CAHs passed their initial surveys on their first attempt and obtained certification from CMS. Both of the Year 1 CAHs participated in the mock surveys conducted by the ORHPC and found the visits to be very helpful for the actual survey.

After one year of operation, both Year 1 CAHs had received their second survey from the Minnesota Department of Health, Facility and Provider Compliance Division. These surveys took place approximately one year after the hospitals were granted CAH designation. Assistance in preparing for this second survey was offered by the ORHPC and was utilized by the facilities that were surveyed.

Unlike the initial survey that measured only the structural aspects of quality, the second survey included process and outcome measures. This more extensive evaluation of quality produced more cited deficiencies. In the second survey of the Year 1 CAHs, nine deficiencies were cited between the two hospitals. Of the Year 2 CAHs, only four have received second surveys due to budget constraints in the survey office. The results of the first three surveys of Year 2 CAHs showed that one had two deficiencies cited. Results of these second surveys were reported in the previous two evaluation reports. The fourth Year 2 CAH to have a second survey since the last evaluation report had 11 deficiencies on the second survey. This CAH has subsequently closed.

### **COMPLIANCE WITH QUALITY ASSURANCE AND PERFORMANCE IMPROVEMENT PLANS**

As part of the ongoing evaluation of the Flex program in Minnesota, CAH administrators were asked to provide examples of quality problems identified by and addressed through their quality assurance/performance improvement systems. The purpose is to: (1) gauge the effectiveness of the problem identification process at the CAHs and (2) assess the probable impact of the planned intervention. The CAHs were able to provide many such examples.

Some of the examples provided by CAHs include:

- One CAH identified a problem with missing diagnoses on outpatient forms when tests are ordered. They initiated a monitoring effort that has now resulted in 99% of patient forms meeting the indicator before tests are run. This helps insure that tests being performed are appropriate for each patient.
- A CAH noted that MDS (minimum data set) swing bed charts were not complete 25% of the time and were not signed 20% of the time by Day 14. The process has been reorganized so that the RNs in the nursing home are now in charge of the process. The charts are now more complete and the situation continues to be monitored for further improvement.
- A process improvement was initiated by one CAH to shorten the turnaround time to Strep. pneumoniae sensitivity testing. The initiative resulted in moving the testing in-house, even though the cost of this is not covered. It was determined that this was needed for good patient care and that the costs would be absorbed to cover this.
- Another process improvement activity at a CAH related to an evaluation of new lancets for blood draw to increase patient comfort when performing finger stick punctures. Conversion to new lancets, which met standards for adequate blood draw volumes while increasing patient comfort, has been completed. This is one of several rapid cycle improvement projects conducted over the last year by this CAH.
- On patient surveys at one CAH, patients complete a specialized survey based on the departments that were utilized, such as Cardiac Rehab, Hospital, Dietary, and Therapy. Survey results are used to adjust practices, focused on both quality improvement and access improvement. One result has been an initiative to improve care for the Native American population that had a diabetes rate of 50% who are served by the hospital. These initiatives are helping to provide better services to this population.
- Finally, one CAH participates in a cooperative that performs quarterly patient satisfaction survey analysis. In this group, the hospital's level of patient satisfaction is measured on 25 items in dimensions such as general quality, respectful treatment, emotional support, comfort and cleanliness, food, education, and discharge planning. In its most recent quarter, the hospital had several 100% satisfaction ratings in areas such as confidentiality, respectful treatment, clarity with which staff informed the patient about their condition and treatment, cleanliness of the facility, explanations of tests prior to the test being performed, and clear patient discharge instructions. They were the only hospital in the group of twelve to receive 100% satisfaction ratings on patient comfort in sharing personal concerns, meals being well prepared and served at the appropriate temperature, and use of the nurse call button and all other room equipment being explained clearly. They also rated highest in the group on explanation of medications at discharge and possible side effects that could arise. The hospital uses these results to maintain consistent performance and improve in areas that are identified by patients as areas of concern. They also ask permission for personal follow-up with the patient about areas of concern.

Community focus groups were conducted at the Year 1 CAHs for a second time, two years after the initial focus groups. The initial focus groups took place in the year of

conversion, when the changes at the CAH were relatively new to the community. The subsequent focus groups were conducted to examine changes over time as the community utilized the hospital under its new CAH designation.

In the past year, three of the focus group members in these communities had been admitted to the CAH in their community, and nine had used the outpatient services of the hospital. At both Year 1 CAHs, all were very satisfied with the quality of care, based on a scale from very dissatisfied to very satisfied. One person noted that there has been improvement over the past several years in quality of care at one of the CAHs, based on chart review findings. It was also noted that there was increased satisfaction noted from Indian Health Service patients who had been referred to the CAH. At the other Year 1 CAH, when asked if the hospital, within its scope of service, provides high quality care, the typical response from group members was “absolutely”.

Similarly, all rated their satisfaction with access to care as “very satisfied”. At one of the CAHs, members of the community reported that people in the community were no longer by-passing the CAH to use other hospitals for care that could be obtained locally. The changes in the physical plant and the consistency of the J-1 Visa physician contributed to this change in healthcare-seeking behavior.

It should be noted that focus group members, as in previous years, were selected from a suggested list provided to the CAH administrators by the evaluator. This list included suggested participants from church groups, the senior center, the chamber of commerce, service clubs, other local organizations, residents who live in town or out of town, people who have used the CAH and those who have not used it, and others, as appropriate. Administrators then invited local residents to participate in the meeting. Because of this, the focus group members may not be representative of all patients and may be somewhat biased in favor of the CAH.

### **CAH QUALITY IMPROVEMENT COLLABORATIVE**

In order to address ways to improve quality of care in CAHs, the ORHPC partnered with Stratis Health (the QIO) to develop a quality collaboration involving the CAHs and the QIO. The following represents a summary of the first year collaborative project.

The first ten CAHs worked with Stratis Health and the ORHPC in a collaborative effort to improve the quality of care for patients hospitalized for atrial fibrillation and congestive heart failure. The long term goal was to build capacity at these hospitals for quality improvement activities, with atrial fibrillation and congestive heart failure as a starting point because the small hospitals had enough of these cases to use as a pilot.

The collaborative process was based somewhat on a model from the Institute for Healthcare Improvement (IHI) using a combination of collaboration among the participants and advice from experts. Each CAH organized a team at their facility to work on the collaborative project. This could include medical staff, administrative staff, and others as appropriate. A critical component was to make sure that a physician was involved for clinical expertise and that the hospital administration was committed to a quality improvement process.

The collaborative included a combination of learning workshops on both substantive information with respect to the treatment of these medical conditions as well as information on quality improvement processes and strategies, as well as monthly conference calls in which each of the hospitals could share their experiences and learn from the other participants. Besides the treatment and quality improvement process training, discharge planning was an important component in the collaborative so that gains made through the quality improvement process would continue once the patient was released and to help prevent unnecessary re-admissions.

Collaborative participants were involved in a number of activities to help them focus on the quality improvement process. This included focusing on the hospitalization experience from the patient’s perspective by following the process from admission, through treatment, discharge, and follow-up. In addition, each CAH documented their collaborative process through a storyboard. These were later shared with other CAHs in the collaborative and each participant walked through the processes at their facility.

Baseline measures were taken at the beginning of the collaborative and at the end. Aggregated outcomes from the quality improvement project are shown in Table 4.1 below.

**Table 4.1  
Outcome of Quality Improvement Collaborative on  
Congestive Heart Failure and Atrial Fibrillation**

<b>Quality Measure</b>	<b>Baseline</b>	<b>End of Collaborative</b>
Increase use of left ventricular function assessment in patients with heart failure	36%	43%
Increase the use of ACE Inhibitors in ideal patients with left ventricular ejection fraction of less than 40%	77%	100%
Improve patient education for patients discharged with heart failure (all elements needed to be present)	3%	17%
Increase the number of atrial fibrillation patients discharged on Warfarin or who have a plan for Warfarin after discharge	77%	85%
Increase the number of patients that have a plan for a follow-up visit after discharge	39%	68%

Participants in the project reported a positive experience, particularly related to the factual information shared as well as the supportive environment with the staff from other CAHs. Some comments from collaborative participants included:

“It’s nice to know we are not alone – we face similar problems. I thought it was just us.”

“We found better responses on patient satisfaction surveys after nursing staff implemented the revised patient education.”

“As hard as it is to get away from my facility, I know that one day spent in this workshop saves me three days back on the job.”

One statement about the success of the collaborative is that several participants volunteered to be mentors to CAHs participating in the next Stratis/ORHPC quality improvement collaborative, begun in Year 4.

### **SUMMARY OF YEAR 3 FINDINGS**

- Results of second surveys showed nine deficiencies for the Year 1 CAHs and those Year 2 CAHs surveyed. These were in the areas of annual review of all aspects of the CAH program and quality assurance review, review by a physician and non-CAH professional of patient care policies, securing of x-rays, incomplete documentation of patient assessment and patient care plans, and failure to develop a vulnerable adult abuse prevention plan and related background checks. CAHs have 60 days to correct deficiencies noted in their surveys. One of the Year 2 CAHs subsequently closed, the only CAH to close in Minnesota. Follow-up with the Minnesota Department of Health, Facility and Provider Compliance Division showed that the other CAHs were in satisfactory compliance.
- CAHs submitted examples illustrating that quality and performance improvement activities are occurring on an on-going basis, including internal improvement projects as well as comparison to other hospitals on standard metrics.
- Community residents continue to have little awareness of the licensing status of the CAHs. At both Year 1 CAH communities, the residents continue to be very satisfied with access to care and quality of care at the CAH. Additionally, at one CAH, residents were aware of a decrease in bypass behavior by local residents.
- The first ten CAHs participated in a quality collaborative jointly sponsored by Stratis Health (the state Quality Improvement Organization) and the ORHPC focused on improving the quality of care for patients with congestive heart failure and atrial fibrillation. Measures at the end of the study period showed improvement on all five dimensions being addressed.

## CHAPTER 5 RESIDENT ACCESS AND SATISFACTION WITH CAHs

The impact of conversion to CAH designation on access to services and community members' satisfaction is difficult to measure. Several changes have taken place in the Flex program, such as the change to a 96-hour annual average length of stay, during the time that the CAH program is in the process of implementation. In future portions of this multi-year evaluation, utilization data will be examined to discern trends. For this report, in order to assess resident satisfaction with access and quality of care, community focus group members were asked about these dimensions following the conversion to a CAH.

Patient satisfaction with care is an indicator of quality. Residents' satisfaction with the CAH model – whether or not respondents actually used services – will help determine community acceptance of conversion and help explain changes in inpatient and outpatient utilization. Residents' perceptions of the impact of CAH conversion on access are included in their overall satisfaction with the model. Both patient satisfaction and resident satisfaction were measured in community focus groups.

### COMMUNITY FOCUS GROUPS

Community focus groups were held in both of the Year 1 CAH communities two years after the initial visit, with the following number of residents in attendance:

Community A	9
Community B	12

(Note: Community A and Community B were described in the First Interim Evaluation Report, December, 2000 and Communities C through J were described in the Second Interim Evaluation Report, April 2002).

Focus group members were asked a series of questions regarding their use of the hospital and their view of the importance of the hospital to the community. The results are described in Table 5.1 below.

**Table 5.1  
Community Focus Group Survey Results**

Items	Community:	
	A	B
They or a family member had been admitted to a hospital in the last year	1	2
Had been admitted locally	1	2
Had used the outpatient services of this hospital in the last year	3	6
Importance of maintaining the hospital in the community (Number rating it "very important")	9	12
<b>Total number of residents at the focus group</b>	<b>9</b>	<b>12</b>

Most focus group members had not been admitted or had a family member admitted to the hospital in the last year—either locally or elsewhere. A higher proportion had used the outpatient services of the hospital in the last year, so could speak knowledgeably about the quality of care they received. This knowledge will provide insights into residents’ assessment of both quality of and access to care in their communities.

Residents were also asked how important it was to maintain a hospital in the community. On a scale of 1 to 3, with 3 being “very important,” all residents rated it as 3. In the discussion, responses such as “the reason I’m staying here in the community after retirement is because the hospital is here” were typical among focus group members.

Focus group members, who had used either the inpatient or, largely, outpatient services of the hospital, were asked about their satisfaction with the quality of care provided in the CAH. These residents were also asked about their satisfaction with access to care. These ratings were given on a scale of 1 to 5, with 1 being “very dissatisfied” and 5 being “very satisfied.” The results are shown in Table 5.2.

**Table 5.2**  
**Resident Satisfaction with Quality and Access to Care in CAHs**  
 (Number rating it as “very satisfied”)

Items	Community:	
	A	B
Satisfaction with quality of care	9	12
Satisfaction with access to care	9	12
<b>Total number of residents at the focus group</b>	<b>9</b>	<b>12</b>

In terms of resident and patient satisfaction with quality of care at the CAH, all focus group members rated their satisfaction with a score of 5, “very satisfied.”

In terms of satisfaction with access to care, the ratings also expressed high satisfaction.

In contrast to satisfaction ratings in Year 1 for these hospitals, the satisfaction ratings are higher in Year 3. In Community A, during the first year after conversion, two residents rated quality as neutral to somewhat satisfied and all focus group members rated access as less than 5, split between neutral and somewhat satisfied. In Community B, satisfaction ratings were high during Year 1 and continue to be high in Year 3. Comments about satisfaction in Community A included several statements that residents were no longer bypassing the hospital to seek care in neighboring communities. Focus group members said that local residents are noticing changes at the hospital, such as updating of the facility, and other improvements in the care being provided. In Community B, focus group members pointed out that with new construction at the facility, access was easier now that the hospital was all on one level, the nursing home had been reintegrated through some additional construction, and the

community appreciates that the old hospital had been converted to assisted living connected to the new facility.

Focus group members in these communities said that services, such as home health care provided through the hospital, “gives confidence to community members that they can stay here and receive care when they need it”. In one of the communities, a health professional from a neighboring tribal agency noted that they were hearing about big improvements at the hospital from patients referred from IHS (Indian Health Service”).

With respect to access to care, one focus group member said “the hospital has a tremendous mission to all the aspects of medical care that take place in a remote area.” Another person noted “this hospital does an excellent job of doing that”.

A brief summary of each community focus group is presented in Appendix B and a summary of overall common focus group themes is presented below.

As in the previous CAH evaluation visit, most community residents could not articulate the difference between a hospital and a CAH. There was some knowledge expressed about differences in “fee payments” or reimbursements to the hospital. Little was known about number of beds, average length of stay, or other elements of CAH designation. Some residents still noted that this meant that “critical care” or emergency care was available at the facility.

When asked if they would use the hospital tomorrow, if needed, all focus group members said yes. One resident said “they have great nurses and doctors. Quality of the staff, quality of the building, quality of the care and concern---if you judge this hospital compared to other hospitals, it is much better than most rural hospitals.” They noted that residents are aware of the “newness” of the facility and that “modern equipment” is available for diagnostic tests and so forth. They noted that because many tests were available locally, that the elderly did not have to drive elsewhere to obtain medical care. Respondents also mentioned network affiliations of the CAHs when discussing available care. One person said that they “are good for the community and good for the staff”. Residents in both communities also appreciated that staff at the CAHs do an excellent job of determining when care could be provided locally and when it was necessary to transfer a patient elsewhere. They appreciated that more specialists are available (“specialists come here now”) and that there is a smooth transition when a transfer is required. (More detailed descriptions from these community focus groups can be found in Appendix B).

In describing the quality of care at the CAH, respondents mentioned several ways in which they felt that the quality of care was known in the community and beyond. Some noted that they personally had received high quality care. One person said that “talk in the community” about the hospital is very positive now. Another mentioned “witnessing” this quality when visiting patients at the hospital (“nurses are great”). Finally, one person mentioned that “patients from the (tribal) health center have had a positive experience at the hospital”.

In terms of access to care, most of the focus group members said they were very satisfied with access. Facility changes at Community B improved physical accessibility to the hospital. It also allowed the addition of assisted living, giving new options to seniors and helping to maintain home health care in the community. Residents in both communities noted the importance of access of emergency room services, particularly based on their distances to the next closest medical facility.

Focus group members were also asked about what services were most important for a hospital to provide. The most frequently cited services were:

- ER
- Cardiac care and cardiac rehab
- Lab and specialized screening and tests (one person noted that many of these are now available in-house where formerly they were “mobile services”—mammogram, CT, ultrasound)
- General surgery
- Physical therapy
- Chemotherapy (one person noted “they do a lot of chemo here—the drive for three hours to the next facility would be too much for most patients”)
- Prenatal care
- Cancer treatment

Residents were also asked for their “wish list” of services that they would like to see in their communities. These included:

- Kidney dialysis
- Obstetrics
- Mental health care
- Cardiology
- Dermatology
- Pediatrics

Focus group members were asked about their concerns regarding the future of their hospitals. The major concerns are the ability of the hospitals to attract and retain staff in the future and the shrinking populations in the communities. One person said they have a “fear of the community shrinking and how this will affect the hospital’s future. Shrinking of school enrollment will affect the hospital. I don’t have a real concern about the hospital’s effect on the community”. Another person noted that the “hospital has grown while that community has not grown. That’s an important a factor we need to watch. The growth of the hospital should help the growth to the community”. Some fear there will be “no one left to be patients”. Residents also recognized that there was a population shift from winter to summer and the need to maintain the facility to address the summer needs even though there weren’t as many residents in the winter to support the hospital.

Community residents were asked where they would go for care if the hospital was not located in their community. One resident in Community A mentioned a facility about 35

miles away. One resident in community B mentioned a “comparable” facility to their hospital about 60 miles away. However, most other residents in the CAH communities mentioned facilities ranging from 75 to 175 miles away. Clearly this would represent a hardship for patients seeking hospital care and for their families.

Finally, residents were asked what benefits the hospital brings to the community. Responses included:

- Jobs
- Peace of mind—comfort in knowing care is close. Without it, people wouldn’t live here or move here.
- Benefits to the economy of the community
- Elderly care (“people have decided to retire here because there is a hospital”)
- Community involvement
- Health education
- The resort community needs a hospital that is within a reasonable drive
- Young couples move back here to raise their families—having a hospital is an important factor in that decision

As one resident put it, “the hospital is a very important spoke in the county wheel. It puts money back into the community. Income of the staff goes back to the community through their purchases and taxes.” Another person noted that it helped local stores and restaurants. One even noted that the hospital was an important consideration in siting the casino (“they chose this community because there was a hospital here”). Finally, one person said that people would live elsewhere even if their job were in this community if the hospital weren’t here.

These focus group findings reiterate the importance of the local hospital to the community. Many of the community residents recognize improvements in physical plant and available services that have taken place recently and look forward to making use of the improved services in the future. As residents summed it up, “the hospital attracts people to live here”. “The quality of the facility, the quality of staff, and availability of services are important”. “People are isolated here. We have to have a hospital”.

## **CAH MARKET SHARE**

Use of CAHs by local residents relative to other alternatives is the ultimate test of patient satisfaction with the CAHs and access to them. Patient destination (market share) studies measure where patients from a specific market obtain inpatient health services. CAHs that retain or increase market share are likely meeting the needs of patients in terms of the range of services offered and the quality of services provided. Use of local services may be considered a proxy for patient satisfaction, given that other alternatives are available.

In Chapter 8, it is noted that utilization in the Year 2 CAHs, measured by average daily census, was flat between 1998 and 1999, the year before conversion and the year of conversion. However, utilization rose greatly in the following two years. The average length of stay rose very slightly. This shows improvement in numbers of patients using the CAH. While these hospital statistics show increases in patient use, they do not give

a contextual picture of the propensity of local consumers to use their community hospital as opposed to choosing medical services elsewhere.

Table 5.3 presents market share information for several Year 1 CAHs. (Only one of the two case-study CAHs reported patient origin data to the Minnesota Hospital and Healthcare partnership for all years.)

Source: Minnesota Hospital and Healthcare Partnership MHHP

Note: Due to rounding, total may not equal 100%.

**Table 5.3  
Market Share of Year 1 CAHs Before Conversion (1998)  
and through 2001**

	<b>Hospital Admissions from CAH Primary Market</b>		
	To CAH	To All Other Rural Hospitals	To All Urban Hospitals
<i>1998 Year before conversion</i>			
Number	304	373	90
Market share (%)	39.6	48.6	11.7
<i>1999 Year of conversion</i>			
Number	321	484	316
Market share (%)	28.6	43.2	28.2
<i>2000</i>			
Number	312	455	306
Market share (%)	29.1	42.4	28.5
<i>2001</i>			
Number	300	499	294
Market share (%)	27.4	45.7	26.9

Primary Market as defined by MHHP

The picture of Year 1 CAH market share in the year before conversion and the years following conversion is somewhat mixed. Generally, the CAH shows an increase in market share based on number of patients in the year of conversion, followed by a slight decline in subsequent years. Other rural hospitals show, overall, an increase in the number of patients from the CAH primary market. This may indicate that patients are utilizing network partners of the CAH, although the hospital association does not collect these data. At urban hospitals, generally there is a decline in the number of patients from this market over the subsequent years (the first year data appears artificially low—this may be a reporting problem).

Since there is considerable volatility in small rural markets with respect to hospital utilization, data for the Year 1 CAH that reported market share information is probably an inadequate source from which to draw conclusions. Generally, these data show a steady or slightly increased market share for rural hospitals and from 2000 on, a decrease in the patients from the CAH market utilizing urban hospitals. The evaluation will continue to examine data over time to monitor market share changes for CAHs and other rural hospitals.

### **SUMMARY OF YEAR 3 FINDINGS**

- Year 1 CAH communities continue to be supportive of the CAHs. Most residents cannot articulate the differences between a hospital and a CAH. Community residents are aware of the improvements in the physical plants of the CAHs that have taken place in the past two years.
- Overall, the residents of the Year 1 communities had highly favorable opinions of the quality of care provided and the access to services. In contrast to satisfaction ratings in Year 1 for these hospitals, the satisfaction ratings are higher in Year 3.
- Improved quality of care for tribal members who use the hospital in addition to the services provided by IHS, was noted in one community. An important change in access to care was noted, particularly with regard to accessibility upgrades at one of the CAHs due to new construction and one-level access to services. The ability to access specialists through networking arrangements was also noted by community residents. (see Appendix B for Community Focus Group summaries).
- For the one Year 1 CAH for which data were available, the market share increased in the year of conversion in terms of number of patients. This declined slightly over the next two years. Other rural hospitals saw an increasing number of patients from this market, but urban hospitals showed a decline in patient numbers from this market.

## CHAPTER 6 NETWORK DEVELOPMENT

CAH designation requires establishment of one or more relationships with full-service, acute care hospitals. The requirement is based on the assumption that the larger facility will provide the CAH with clinical and administrative support. The support is intended to improve quality and efficiency, which will help assure the local availability of services. In some locations in Minnesota, CAH-like networking arrangements have existed for many years. Designation will merely formalize these relationships. For other hospitals, conversion to CAH may mean finding and establishing mutually beneficial relationships with new partners.

To examine the changes over time in networking behavior, the CAHs were asked to submit background information on their network relationships in the year before CAH designation. Then, they were followed in the year of conversion and again in the following year to examine changes in network relationships, including those that resulted from their planning for and conversion to CAH and in subsequent activities.

In the first year evaluation, the two CAHs were a contrast in networking behavior. Prior to conversion, one was not a member of any formal network or system, while the other was a member of several networks, including a multi-hospital system, a hospitals-only network, a regional cooperative, and a community network

For Hospital A, at approximately the same time that the hospital converted to CAH, the supporting hospital signed a management agreement with hospital A to provide administrative services. In the first year of operation as a CAH, the hospital administrator reported no changes in networking arrangements.

Two years later, the network relationships at the Year 1 CAHs are formally the same as in Year 1. Again, for the second year in a row, administrators reported no changes to the networking arrangements, according to their annual monitoring reports. Hospital B reported that they are developing a joint clinic project with their network partner. They see this, in a sense, as expansion of their networking relationship with their partner. In the evaluation interview, the administrator reported that this would not have been possible in the past. The CAH has made a conscious decision to be strategic and work on this relationship knowing that “for both of us to be successful here we have to work together and truly support each other.”

At the other CAH, while there have not been specific changes in networking arrangements, the CAH has expanded its contacts with more partners and expanded the activities with its network partner. The CAH is working to “include public health as much as possible to keep them in the loop” (they have limited funding for activities). They have expanded work with the network partners in disaster planning, infection control activities, and they report their partner is “tremendously helpful for them in many areas.”

In interviews with CAH administrators, changes in networking behavior before and during conversion were discussed. The results of these discussions are presented below.

One CAH administrator noted the advantages they receive from their network relationship in such things as the referral and transfer of patients. The administrator pointed out that their network hospital is one of the 100 most wired hospitals in the United States, according to a recent survey. As a result, when a patient is transferred, there is no need to repeat labs, etc. Everything is on line, including dictation from the CAH. All radiology is read by the doctors at the network hospital. The administrator feels that this results in increased quality of care for patients.

At the other CAH, the administrator noted they have really worked hard on their network relationship, resulting in having physicians available, such as specialists; referral services; and support. These all result in better customer service. The administrator reported that improved customer service has “ultimately changed revenues.” The CAH just completed their best year ever financially, and are stronger than in the past. The benefits of their network relationship have contributed to these enhancements for patients and for the bottom line.

Overall, the networking relationships of the Year 1 CAHs have been described in positive terms. Many of these relationships existed prior to CAH designation, and were continued or enhanced during conversion. Both Year 1 CAH administrators were able to report on the benefits of these continued relationships over time, as was reported above. In addition, as in first year, administrators were asked to rate their current satisfaction with the six aspects of networking (patient referral and transfer, communications, credentialing, quality assurance, emergency transportation, and non-emergency transportation) on a five-point Likert scale with one representing “very dissatisfied” and five “very satisfied”. In the first year of operation as a CAH, the administrator at Hospital A was somewhat or very satisfied with all aspects except non-emergency transportation, with which she was somewhat dissatisfied. The administrator at Hospital A in Year 3 was very satisfied with all aspects of networking except quality assurance, with which she was somewhat satisfied. These are, overall, higher ratings than in Year 1. At hospital B, in the first year as a CAH the administrator rated all six aspects as a 3 (neutral). In Year 3, the administrator is now somewhat satisfied with all of the aspects of the network relationships except for credentialing, which she rated as neutral. These scores show improved satisfaction with network arrangements, with credentialing staying the same.

All of the first ten CAHs were asked to report on any changes in their networking agreements in their annual monitoring reports. All reported that there had been no changes to networking relationships in the past 12 months. Part of network development is the integration of health services at the local level. From the perspective of integration of local health services, a few changes were reported. One CAH now owns a rural health clinic, operated as a department of the hospital. This did not exist prior to conversion to CAH. One CAH discontinued the rural health clinic after conversion to CAH. Several CAHs reported changes in their relationships with the local

ambulance service. These changes will be explored further in the Year 4 evaluation report.

CAHs entered into networking agreements with other hospitals or agencies. For example, in the area of quality assurance, seven CAHs have one formal agreement in place, while three have no formal agreements. In the area of referral and transfer, one CAH has four separate formal agreements with other hospitals, two CAHs each have 3 agreements in place, and one has two QA agreements in place. Overall, CAHs have a number of agreements in place around referral and transfer and emergency transportation, with a variety of networking partners. CAHs have fewer such agreements for QA, credentialing, and communications.

The CAHs are involved in many networking relationships, some of which are with their primary referral hospital. But, they also have a range of networking agreements with other facilities to meet their needs for credentialing, quality assurance, patient transport, and so on.

### **SUMMARY OF YEAR 3 FINDINGS**

- The Year 1 CAHs continued existing relationships with their primary referral hospitals and in some cases these relationships were expanded. CAHs are also expanding relationships with new networking partners.
- CAHs are involved in a number of agreements for patient transfer and referral, clinical services, credentialing, quality assurance, purchasing, and emergency transportation. Some CAHs are involved in multiple agreements in one or more of these areas.
- The CAH administrators are satisfied with the networking relationships. Administrators at the Year 1 CAHs report higher levels of satisfaction with network relationships than were reported in Year 1.
- No changes were reported in network agreements by administrators on their annual monitoring reports, suggesting that fundamental aspects of the relationship did not change.
- Year 1 CAHs are integrated substantially by virtue of their diverse networking relationships. This integration with full-service, acute care hospitals, as well as other networking partners, helps to insure the local availability of services and the quality and efficiency of such services.
- Based on the additional observations from the Year 1 CAHs, the Flex Program appears to have resulted in some change in networking behavior of rural hospitals. The network relationships are more formalized than before CAH designation and some additional services have been added. New dialogues are taking place with respect to what each partner gives and receives through the network relationship.

## **CHAPTER 7 EMS DEVELOPMENT AND INTEGRATION**

Integration of EMS services with CAHs is essential to assure quality of care and access to services. CAHs are required by law to “make available” 24-hour emergency care services. According to the interpretive guidelines from CMS for CAHs:

This does not mean that the CAH must remain open 24-hours-a-day when it does not have inpatients (including swing-bed patients). A CAH that does not have inpatients may close (i.e., be unstaffed) provided that it has...a system to ensure that a practitioner with training and experience in emergency care is on call and available by telephone 24-hours-a-day.

Because CAH emergency rooms may at times be closed and because personnel on-call are allowed 30 minutes to respond (60 minutes in frontier areas – Cook, Lake, Koochiching, Lake of the Woods, Kittson, and Marshall Counties), it is essential that CAHs and EMS providers carefully coordinate their services. EMS providers must know when the emergency room is closed.

CAHs in Minnesota are required to document in their application their planned hours of operation (i.e., emergency room staffing) and their call plan for emergency services when the CAH is closed. In addition, a transportation agreement that specifies the roles of the CAH and one or more EMS providers must be in place. As was noted in Chapter 6, some CAHs have up to five such agreements for emergency transportation.

All of the case study CAHs submitted EMS plans at the time of designation. The plans displayed the following similarities and differences:

- Both Year 1 CAHs operate the local ambulance service. In one case, the ambulance service is owned by the county but leased by the hospital.
- They are Basic Life Support (BLS) services. The ambulance services have mutual aid agreements with surrounding services.
- Both of the ERs at the Year 1 CAHs remained open 24 hours a day, seven days a week. Neither of the CAHs plans to close their ER.
- The EMS plans acknowledge the responsibility of CAHs to comply with all COBRA/EMTALA requirements concerning treatment and transfer of ill or injured patients.

The EMS plans of all of the case study CAHs satisfy the requirements of designation. There have been no material amendments to the EMS plans.

The number of emergency room visits to the CAHs and the number of emergency room and acute care transfers for the year prior to conversion and the year of conversion are shown in Table 7.1.

**Table 7.1**  
**Comparison of Emergency Care and Transfers of Year1 CAHs,**  
**in the Year of Conversion and Two Years Later**

	<b>Year of Conversion</b>	<b>2 Years After Conversion</b>	<b>Number Difference</b>	<b>Percentage Difference</b>
ER Visits	3,608	4,245	+637	+17.7
Transfers ER to another hospital	225	347	+122	+54.9
Transfers Acute to another hospital	28	32	+4	+14.3
Number of days ER was closed	0	0	n/a	n/a

The overall number of ER visits increased at both of the first year CAHs. ER visits for the Year 1 CAHs increased by 17.7 percent. The data continue to show growth in ER visits over time at the CAHs. The first interim evaluation report hypothesized that conversion has no effect on the use or availability of emergency room services. This hypothesis was based on the notion that mere conversion to CAH would be unlikely to stimulate ER usage. It further speculated that if local medical staffing improved as a result of conversion or the public perception of quality improved due to networking relationships of the hospital, then local residents may be more inclined to use the CAH emergency room. Based on residents improving perceptions of the CAHs (as noted in Chapter 5), this may be an explanation for the increase in ER visits over time. The number of ER visits will be monitored for the remainder of the evaluation period to continue to explore what effect CAH conversion might have had on ER use.

The number of transfers from the Year 1 CAHs' emergency rooms increased two years after conversion compared to the year of conversion. The Year 1 CAHs experienced an eighteen percent drop in ER transfers in their first year after conversion. In the past year, these transfers increased by about 26%. One EMS staff member reported that "out of town transfers seem to have increased this year...." but this was seen as a normal fluctuation in types of cases seen from year to year. Both the increase and decrease represent greater fluctuation than occurred in the Year 2 CAHs, where the change in one year was less than one percent. These may be attributable to the small number of Year 1 CAHs or may be related to just the overall increase in the number of patients seen in the emergency room. This indicator will also be tracked over time to look for patterns in and explanations for changes in transfers from CAH emergency rooms.

The transfers from acute care beds at the Year 1 CAHs to referral hospitals increased by 14 percent since the year of conversion. However, for the Year 1 CAHs, this represented only four additional transfers. This number will also be monitored over time to look for trends in acute transfers. The extent to which the change to a 96 hour annual average length-of-stay as opposed to a stricter 96 hour maximum may have influenced acute care transfers is not known.

Overall, the Year 1 CAHs showed an increase in the number of ER visits, an increase in the number of ER transfers, and an increase in transfers from acute care beds. The trends in ER use and transfer from the ER and from acute beds will continue to be monitored across all the study CAHs.

Site visits were conducted and CAH administrators and EMS Medical Directors were interviewed at each of the Year 1 CAHs regarding EMS planning. In addition, background information and CAH applications were reviewed for information on EMS development and integration. This research showed:

- The first year CAHs both operate the local ambulance services. One has four volunteer co-directors handling the many duties of ambulance captain. The other has a paid ambulance director. One has several trained paramedics on the staff, although they do not operate an ALS service.
- None of the first year CAHs plan to operate their Emergency Rooms less than 24 hours a day and they have never closed their ERs since conversion to CAH. At one CAH, ambulance staff work in the ER and five are on the staff.
- The hospitals submitted EMS plans as part of their application process that meet the requirements of designation as a CAH. No substantive changes to these plans have occurred.
- Hospitals report generally good relationships with local EMS providers and they indicate that this has not changed since CAH designation. At one CAH, EMS staff said relationships were better over the past twenty-four months due to replacing locum physicians with full time staff. This allowed more continuity in communication and EMS staff feel that now the physician “knows what they do”. Training received in Comprehensive Advanced Life Support (CALS) is also seen as a positive.

In the first year of Flex Program grants to communities and hospitals, no grants were made specifically or exclusively for EMS or EMS-related projects. Some of the 13 Flex grants assisted with the preparation of CAH applications and undoubtedly dealt with the compiling or formalization of EMS plans. In the second year, six grants totaling \$110,000 were awarded to CAHs, CAH-eligible hospitals, and rural ambulance services for projects addressing recruitment and retention of EMS volunteers, training, collaboration with other emergency services providers, and regional trauma system development. In the third year, 6 grants totaling \$71,000 were awarded to CAHs, CAH-eligible hospitals, rural ambulance services, and a consortium of hospitals, county public health agencies, clinics, and county emergency preparedness agencies. These grants addressed advanced life support training, volunteer EMS recruitment and retention including first responder recruitment and training, pediatric emergency training, and development of an emergency preparedness plan and implementation of incident management training in multiple counties.

Finally, the focus groups and interviews at CAHs provided information about relationships between hospital staff and ambulance staff. At one of the CAHs, a member of the ambulance crew reported:

*We have a good relationship with the hospital. We primarily operate on standing orders and written protocols. We hear that the hospital here is more receptive to ambulance personnel than at neighboring facilities. Here, they actually put us to work. They need our service and know we provide a good service.*

At this CAH, five ambulance members work at the hospital, including three RNs, one LPN, and an OT. This CAH has also begun sending follow-up postcards to patients transported by the ambulance service. They hear back informally from patients, but are not yet conducting satisfaction surveys. This is among plans for the future. At the other CAH, they are “just starting to cross train—one EMT is an x-ray tech, one is activities director, and the clinic nurse is a paramedic on the squad.

When asked what impact conversion to CAH had on emergency medical services in this community, one EMT responded:

*The physical plant is a big change. The visibility in the community—people have taken more ownership of the hospital through the pledge drive. People are more aware of all the services offered. I think we're keeping people in town more. We hear about problems from other ambulance services that aren't CAH—we don't have those issues. They've done a wonderful job of making us feel like we are a part of the hospital. One of the (ambulance staff) is a trainer for the customer service program (at the hospital).*

At the other CAH, one of the ambulance staff members said that because of CALS training, the death rate is down at the hospital. Their CALS training was supported through a Flex grant. The administrator at this hospital pointed out the importance of EMS due to poverty, domestic abuse, alcohol abuse, and suicide attempts. Her rural area has high levels of all of these, and the availability of high quality EMS integrated with the hospital is invaluable.

Finally, CAH administrators were asked what they consider the most pressing concerns for future viability of the CAH model. One administrator said “the 35 mile ambulance radius is a crucial issue for the success of the CAH model.” That CAH is located less than 35 miles from the next closest hospital and owns their ambulance service.

### **SUMMARY OF YEAR 3 FINDINGS**

- The EMS plans of all ten study CAHs satisfy the requirements of designation. None of the CAHs made significant amendments to their EMS Plans in the first year of operation. The Year 1 CAHs also have made no significant changes in the past year.
- Two years after the conversion year, the number of emergency room (ER) visits to the Year 1 CAHs grew by 17.7 percent. There has been a pattern of increased ER visits at the Year 1 and Year 2 CAHs. At the Year 1 CAHs, emergency room transfers increased between the year of conversion and two years later. Transfers represented 6 percent of ER visits in the year of conversion, and 8 percent two years later. Finally, acute care transfers increased by fourteen percent, but this is a change of four patients. At this time it is unclear what role the 96 hour annual average length-of-stay may play in transfers.

- Year 1 CAHs remain strongly integrated with EMS and report good relationships with EMS providers. Cross training of EMS staff in the hospital is taking place at some CAHs. CALS training and continuity of physicians at the CAH have been seen as positive steps in CAH-EMS relationships and in patient care.

## CHAPTER 8 FINANCIAL PERFORMANCE OF CAHs

### **BASELINE COMPARISONS – 1998: THE YEAR BEFORE CONVERSION**

In order to assess the financial impacts of conversion to CAH, two methods are possible. One is to examine changes in financial condition pre- and post - conversion. The second method is to examine CAH financial data compared with data from similar “comparison hospitals” that have not converted to CAH. Both of these comparisons can be made using data from the Year 1 CAHs and ten comparison rural hospitals (see Chapter 1 on research methodology and data). In addition, now that several years have elapsed since the Year 1 CAHs’ conversion, it is possible to look at the CAHs pre and post conversion and over several additional years. Data for the comparison hospitals for these same years help to show any similarities and differences in the performance of CAHs in comparison to other rural non-CAH hospitals over the same time period. Further analysis of the first ten CAHs and the ten comparison hospitals will be included in the next evaluation report, when more complete data are available.

Table 8.1 reports certain structural and operating characteristics of the CAHs that converted in Year 1 and the comparison hospitals. The Year 1 CAHs were somewhat smaller than the comparison hospitals in the year before conversion. The CAHs had an average bed size of 18 in 1998 and the comparison hospitals had an average bed size of 25.

The average daily census of the CAHs was much less than that of the comparison hospitals, 1.6 patients compared to 3.9 patients. Despite the differences in average daily census, the average lengths of stay were almost identical, 2.8 for the CAHs and 3.0 for the comparison hospitals.

**Table 8.1  
Structural and Operating Characteristics of CAHs and  
Comparison Hospitals, 1998(The Year Before Conversion)**

	1998 Year 1 CAHs (n=2)	1998 Comparison Hospitals (n=10)
Bed Size	18	25.0
Average Daily Census	1.6	3.9
Average Length of Stay	2.8	3.0
Mean Total Patient Days	576.5	1454.2

Source: Health Care Cost Information System (HCCIS), 1998

Looking at other characteristics of the Year 1 CAHs and comparison hospitals, the CAHs’ total patient days averaged 577 in the year prior to conversion while the comparison hospitals averaged 1454 total patient days. The first hospitals in Minnesota who chose to convert to CAH designation were smaller, with much lower average

patient days and a much lower average daily census than the group of ten rural comparison hospitals.

In addition to the basic structural and operating characteristics shown above, it is important to look at the financial baseline of the CAHs in comparison to a group of other rural hospitals during the same year. Table 8.2 shows the average of total operating expenses for Year 1 CAHs and the average for the comparison hospitals in the year before conversion.

**Table 8.2**  
**Mean Operating Expenses of First Year CAHs and**  
**Comparison Hospitals, 1998 (The Year Before Conversion)**

	1998 Year 1 CAHs (n=2)	1998 Comparison Hospitals (n=10)
Mean Operating Expenses	2,886,793	3,983,406
Difference	\$1,096,613	

Source: Health Care Cost Information System (HCCIS), 1998

In the year before conversion (FY 1998), the expenses of the Year 1 CAHs totaled 38% less than the comparison hospitals, or \$1,096,613. This is partially a reflection of the lower acute inpatient use rate of the CAHs, as seen in the average daily census and overall patient days shown in Table 8.1. How this changes over time after conversion to CAH designation will be examined later in this chapter.

Mean revenues in the year before conversion for the Year 1 CAHs and the comparison hospitals are shown in Table 8.3. In the year prior to conversion to CAH, the mean patients revenue of the comparison hospitals was 48% greater than that of the CAHs, or approximately \$1,277,154 per hospital. This is a reflection of the lower patient days and average daily census shown in Table 8.1.

**Table 8.3**  
**Mean Revenues of CAHs and**  
**Comparison Hospitals 1998 (The Year of Conversion)**

	1998 Year 1 CAHs (n=2)	1998 Comparison Hospitals (n=10)
Net Patient Revenue	2,658,403	3,935,557
Other Operating Revenue	268,276	96,354
Non-operating Revenue	68,278	163,447

Source: Health Care Cost Information System (HCCIS), 1998

Other operating revenue is money earned by hospitals in the sale of goods and services associated with hospital operations. Examples include cafeteria meals, copying of medical records, and the sale of outdated equipment. In 1998, the year prior to conversion, the mean amount of other revenue of Year 1 CAHS was much higher than that of the comparison hospitals.

Non-operating revenue is income from sources not associated with the operation of the hospital. It includes interest income, gifts, and tax money. The comparison hospitals, on average, posted \$95,169 (or 139.39 percent) more non-operating revenue than the CAHS in the year before conversion.

Overall, the mean total revenue (patient, operating, non-operating) for the CAHS was 40.08% less than that of the comparison hospitals (\$1,200,401) in the year prior to conversion.

From Tables 8.1 through 8.3 it is clear that the first hospitals that chose to convert to CAH designation in Minnesota were smaller in terms of number of beds, had much lower average daily patient census and average patient days, as well as lower expenses and revenues than other rural hospitals in Minnesota.

### COMPARISONS OVER TIME

Looking at changes over time from the year before conversion, the Year 1 CAHS were smaller and had lower patient days, lower average daily census and a slightly shorter average length of stay than the comparison hospitals. In the year of conversion, the Year 1 CAHS gave up an average of 3 beds. They maintained their average daily census, but both their average length of stay and their total patient days declined slightly during the conversion year.

**Table 8.4  
Structural and Operating Characteristics of CAHS and  
Comparison Hospitals, 1998(The Year Before Conversion) to 2001**

	1998 CAHS (n=2)	1998 Comp. (n=10)	1999 CAHS (n=2)	1999 Comp. (n=10)	2000 CAHS (n=2)	2000 Comp. (n=10)	2001 CAHS (n=2)	2001 Comp. (n=10)
Bed Size	18	25.0	15	25.0	15	24.5	15	24.5
Average Daily Census	1.6	3.9	1.6	4.2	3.2	4.276	4.264	4.45
Average Length of Stay	2.8	3.0	2.5	3.0	3.0*	2.8*	3.0*	2.9*
Mean Total Patient Days	576.5	1454.2	552	1548	590	1523.4	610	1577

\*changed to rounded data in 2000

Source: Health Care Cost Information System (HCCIS), 1998 – 2001

(Note: Three of the comparison hospitals converted to CAH designation in 2001. One converted in February, the other two late in the year. The average daily census increased, the average length of stay remained the same, and the total patient days declined for the hospital that converted in February 2001.)

However, in the next two years, the Year 1 CAHS show growth in the average daily census and the total patient days, with their average length of stay remaining about equal to the year before conversion. In 2000, the average daily census for the Year 1 CAHS jumped from 1.6 in the previous two years to 3.2. By 2001, the census was even greater at 4.264. At the comparison hospitals during this period, the average daily census grew, but not at the same rate as at the CAHS. Couple these data with the

reports from community focus groups that local residents are “no longer bypassing the CAH for care at other hospitals” and a picture of improved performance in basic operating characteristics can be seen. The CAHs show a 166.5% growth in the average daily census, while the comparison hospitals show a growth of 14.1% over the same period. (by year, CAH: 0%, 100%, and 33% annual growth; comparison: 7.7%, 1.8% and 4.1% annual growth.) CAHs’ average patient days grew by 5.8% over the period, while the comparison hospitals showed growth in patient days of 8.4%.

As was shown in Chapter 7 (Table 7.1), CAHs experienced an increase in ER visits and in both ER and acute bed transfers in the two years following conversion. ER registrations grew from 1703 to 2030 at the Year 1 CAHs, according to HCCIS data. At comparison hospitals, the pattern showed an increase in ER registrations from 1998 to 1999, followed by a drop in 2000 and an increase in 2001. The Year 1 CAHs averaged 1703 ER registrations in 1998 (the year prior to conversion) rising steadily to 2030 in 2001. Comparison hospitals had an average of 2016 registrations in 1998, growing in an unsteady pattern to 2067 in 2001. Between 1998 and 2001, ER registrations increased 19.2% at the Year 1 CAHs and 2.5% at the comparison hospitals.

The change in operating expenses over time is another important element in examining changes that may accrue from CAH designation. Table 8.5 shows the average of total operating expenses for Year 1 CAHs and the average for the comparison hospitals.

**Table 8.5**  
**Mean Operating Expenses of Year 1 CAHs and**  
**Comparison Hospitals, 1998 (Year Before Conversion) to 2001**

	1998 CAHs (n=2)	1998 Comp. (n=10)	1999 CAHs (n=2)	1999 Comp. (n=10)	2000 CAHs (n=2)	2000 Comp. (n=10)	2001 CAHs (n=2)	2001 Comp. (n=10)
Mean Operating Expenses	2,886,793	3,983,406	2,843,308	4,141,085	3,129,357	4,532,579	3,454,024	4,962,309

Source: Health Care Cost Information System (HCCIS), 1998 - 2001

From the year prior to conversion through 2001, the Year 1 CAHs continue to have mean operating expenses lower than those of the comparison hospitals. Over the period from 1998 through 2001, the mean expenses of the CAHs increased \$567,231 or 19.65% while the expenses at the comparison hospitals grew \$978,903 or 24.57%.

Table 8.6 shows patient revenues as well as operating and non-operating revenues of the Year 2 CAHs and comparison hospitals.

**Table 8.6  
Mean Revenues of CAHs and  
Comparison Hospitals 1998 (Year Before Conversion) to 2001**

	1998 CAHs (n=2)	1998 Comp. (n=10)	1999 CAHs (n=2)	1999 Comp. (n=10)	2000 CAHs (n=2)	2000 Comp. (n=10)	2001 CAHs (n=2)	2001 Comp. (n=10)
Net Patient Revenue	2,658,403	3,935,557	2,623,357	4,154,187	3,004,674	4,633,510	3,410,558	5,129,502
Other Operating Revenue	268,276	96,354	239,466	165,945	122,763	171,787	108,365	185,404
Non-operating Revenue	68,278	163,447	407,929	121,608	241,014	159,532	126,556	221,500

Source: Health Care Cost Information System (HCCIS), 1998 – 2001

In contrast to expenses, net patient revenues at the Year 1 CAHs and the comparison hospitals grew at comparable rates over the period from 1998 through 2001. For CAHs, net patient revenue increased 28.3% over the period while the increase for comparison hospitals was 30.3%. So while expenses were climbing more rapidly at the comparison hospitals, both CAHs and comparisons saw equivalent percentage increases in patient revenue.

With respect to other revenue, the picture is much less clear. For other operating revenue, the CAHs showed a steady decline over the period (59.6% decrease between 1998 and 2001). In contrast, the comparison hospitals showed a huge increase in other operating revenue over the same period (92.4%). The CAHs showed a pattern of decreasing revenue in this category over the period while the comparison hospitals showed increasing revenue each year.

For non-operating revenue, the CAHs showed a major increase over the period (85.4%) while the comparison hospitals showed a 35.5% increase over the same period. The CAHs showed an inconsistent pattern of non-operating revenue during the period. There was a major increase in this revenue source in 1999 and 2000, but then these revenues were much smaller in 2001. The comparison hospitals also showed fluctuation, but not to as great an extent as the CAHs. The Flex Evaluation First Interim Report (December, 2000) noted that the “large amounts of other operating and non-operating revenues in the CAHs helped fuel their profitability in the first year of the Flex Program”. The role of these income sources in on-going CAH profitability will continue to be monitored.

When combining all of these revenue sources, the revenues for the CAHs grew by 21.7% over the period from 1998 through 2001 while the comparison hospitals showed an increase of 32.0%. So, while the CAHs and comparison hospitals showed similar growth in patient revenue, revenue from other sources showed a much more diverse picture over the same time period.

Finally, in looking at revenue in excess of expenses, for the Year 1 CAHs there is a mixed pattern. Revenues in excess of expenses increased sharply in the year of conversion, but then dropped in the subsequent two years. However, these revenues were higher in each of the years following conversion than in the year prior to conversion.

**Table 8.7**  
**Mean Revenue in Excess of Expenses of Year 1 CAHs and Comparison Hospitals, 1998 (Year Before Conversion) to 2001**

	1998 CAHs (n=2)	1998 Comp. (n=10)	1999 CAHs (n=2)	1999 Comp. (n=10)	2000 CAHs (n=2)	2000 Comp. (n=10)	2001 CAHs (n=2)	2001 Comp. (n=10)
Mean Revenue In Excess Of Expenses	108,163.5	174,623.5	425,136	286,004.1	239,093.5	418,276.5	188,503	565,142.5

Source: Health Care Cost Information System (HCCIS), 1998 - 2001

For the comparison hospitals, there has been continuing growth in revenues in excess of expenditures over the period. This may be an indicator of why these comparison hospitals have continued to operate under traditional licensure rather than seeking CAH designation.

It will be important to continue to monitor this information over the next year and at the other study CAHs which will show the experience of additional CAHs in the years following conversion to CAH designation.

Overall, the Year 1 CAHs had much lower patient days and average daily census counts in the year prior to conversion when compared to the sample of ten rural comparison hospitals. This was also reflected in their lower operating expense and patient revenue figures. In the year of conversion, Year 1 CAH expenses fell while those for the comparison hospitals rose. Net patient revenues also declined for the CAHs in the year of conversion but rose 5.6% for the comparison hospitals. Over the subsequent years, the expenses at the CAHs grew at a slower rate than that of the comparison hospitals while net patient revenues grew at comparable rates in the two groups of hospitals.

### **SUMMARY OF YEAR 3 FINDINGS**

- Before conversion, the Year 1 CAHs were smaller than the comparison hospitals and showed lower average daily census and total patients days than the group of comparison hospitals. They had lower revenues and expenses than those of the comparison group.
- In the year of conversion, the average daily census increased in the Year 1 CAHs at a rate faster than that at comparison hospitals.
- Year 1 CAHs increased their net patient revenues at a comparable rate to the group of comparison hospitals, while their expenses grew at a slower pace than those of the comparisons during the period 1998 through 2001

- Based on the information available to date, conversion to CAH appears to have increased revenues for the Year 1 CAHs, but not evenly across the years.

## **APPENDIX A**

### **Evaluation Design Overview**

## Evaluation Design Overview

Evaluation Component	Data	Method	Comments
1. Analysis of Grant Program			
Classify the use of grant funds	ORHPC grant award documents; grant applications	Tabular presentation and description of the uses of grant funds	Objective is to assure that grant funds are spent on activities specified in the ORHP “Guidance for Program Grant Funds for FY 1999”
Assess the outcome of activities funded by grants	Monitoring reports; interviews with CAH grantee administrators	Descriptive analysis of the success of conversion assessment and implementation planning activities undertaken by grantees	Objective is to provide an understanding of the usefulness of grant-funded activities in planning for and making the conversion to CAH status
Identify problems encountered by grantees in meeting their stated objectives	Monitoring reports; interviews with CAH grantee administrators	Descriptive analysis of the problems encountered by grantees in the course of making conversion assessments and planning for the implementation of CAHs	Objective is to provide an understanding of possible barriers to program implementation in Minnesota
Assess the distribution of grant funds to hospitals	ORHPC grant award documents	Geographic analysis of the distribution of grant awards compared to CAH eligible facilities	Objective is to assure that grant funds are reaching target hospitals
Assess ORHPC’s CAH marketing activities	ORHPC internal documents, newsletter, presentations, and collaborative activities with Minnesota Hospital and Healthcare Partnership	Tabular presentation and description of ORHPC’s CAH marketing activities	Objective is to assure that all CAH-eligible hospitals are aware of the MRHFP and that grant funds are reaching target hospitals

## Evaluation Design Overview

Evaluation Component	Data	Method	Comments
2. Analysis of financial performance and utilization of CAHs and comparison hospitals			
Assess financial performance of CAHs and comparison hospitals	Financial records for CAHs and comparison hospitals (e.g. Medicare cost reports, audited financial statements)	Tabular presentation of data with accompanying narrative	The objective is to determine whether conversion to CAH status improves the financial condition of facilities
Assess the utilization of CAHs	Utilization records (inpatient and outpatient) of CAHs and comparison hospitals	Tabular presentation of data with accompanying narrative	The objective is to determine how conversion to CAH status affects use of services
Assess the rate of transfers from CAHs	Transfer records from case study CAHs; patient origin studies	Simple quantitative analysis of trends in transfer data, pre/post conversion	The objective is to determine how conversion to CAH status affects the rate and final destination of patient transfers
3. Analysis of physician integration and satisfaction with CAH			
Document physician integration activities in case study CAHs	Interviews with CAH administrators; monitoring reports	Narrative description of physician integration practices of case study CAHs	The objective is to document the degree of physician integration and methods used by CAHs to integrate physicians into their operations
Assess physician satisfaction with CAHs	Interviews with CAH physicians, local EMS medical directors, and receiving-hospital medical directors; satisfaction questionnaire	Tabular presentation of satisfaction data by providers type (e.g., physician, nurse practitioner, local EMS medical director, receiving-hospital medical directors) and narrative assessment of physician satisfaction	The objective is to document the degree of satisfaction with CAHs of various medical professionals who come into contact with CAHs

## Evaluation Design Overview

Evaluation Component	Data	Method	Comments
4. Assessment of quality of care delivered in CAHs			
Document compliance with federal and state licensure and certification criteria and innovative QA/credentialing arrangements	MDH Facility and Provider Compliance CAH survey documents; CAH credentialing and quality assurance agreements; interviews with CAH administrators; monitoring reports	Count of hospitals that have passed certification surveys; descriptive comparison of components of CAH QA/credentialing plans and agreements	Objective is to determine whether CAHs meet federal and state licensing requirements and to identify and document innovative models of interorganizational cooperation in regard to QA/credentialing
Assess case-study CAHs' experience with state licensing and certification surveys	MDH Facility and Provider Compliance Division CAH survey documents	Tabular comparison of documented survey deficiencies at case-study CAHs prior to and after conversion	Objective is to identify trends in the experience of CAHs in regard to state licensing and certification surveys
Assess CAHs' on-going compliance with their own written QA plans	CAH QA plan and QA committee records; monitoring reports	Determine proportion of case study CAHs that can provide two examples over the past year of quality problems identified and addressed through their systems; narrative description of types of problems and interventions	Objective is to determine compliance with facilities' own QA programs
Assess CAH participation in special quality studies of Stratis Health and the state Medicaid agency	Records of Stratis Health and state Medicaid agency	Narrative summary of CAH participation in special QA studies	Objective is to document CAH participation in external quality assurance studies

## Evaluation Design Overview

Evaluation Component	Data	Method	Comments
5. Assessment of resident access to services and satisfaction with CAHs			
Assess community residents' satisfaction with CAH model	Community focus groups in case-study communities	Qualitative analysis of focus group responses; synoptic narrative summary of responses across groups	Objective is to determine whether area residents are satisfied with the CAH and its network relationships
Assess former patient's perception of care provided in CAHs	Community focus groups in case-study communities (second visit)	Qualitative analysis of focus group responses; synoptic narrative summary of responses across groups	Objective is to determine area residents satisfaction with the quality of care delivered in CAHs
Assess the impact of community satisfaction on CAH utilization	Community focus groups in case-study communities (second visit); utilization reports	Comparison of changes in utilization with area residents' satisfaction and perceptions of quality	Objective is to determine the impact of community satisfaction with the CAH and perception of the quality of care on utilization
6. Assessment of network development			
Document changes in networking behavior after conversion	Interviews with CAH administrators and monitoring reports	Diagram networking relationships of CAHs and document changes over time	Objective is to determine the impact of CAH conversion on network development
Document difference in networking behavior between CAHs and comparison hospitals	Interviews with CAH and comparison hospital administrators; monitoring reports	Diagram networking relationships of comparison hospitals and compare them to CAHs; document similarities and differences	Objective is to determine whether the networking behavior of CAHs differs from that of other rural hospitals

## Evaluation Design Overview

Evaluation Component	Data	Method	Comments
7. Analysis of emergency medical services (EMS) integration with CAHs			
Document components of CAH emergency service plans (e.g. hours of operations, referral and transfer agreements)	CAH emergency service plans and referral and transfer agreements and protocols; interviews with CAH administrators; monitoring reports	Description of the methods employed by CAHs to assure emergency medical services noting changes over time methods	Objective is to assess the effect of conversion to CAH on the coordination and provision of emergency medical services in the community
Assess the impact of conversion to CAH on the availability of emergency room services	Utilization reports; monitoring reports (number of days and portions of days the ER is closed); interviews with CAH administrators	Tabular presentation of data with accompanying narrative	Objective is to document whether conversion to CAH reduces access to local emergency medical services
Assess the level of EMS integration with CAHs	Interviews with CAH administrators, monitoring reports; EMSRB, regional EMS coordinating councils, and local EMS agency records	Identification and documentation of activities bringing EMS and CAH resources and functions into closer coordination and/or unified control	Objective is to document the degree of EMS integration with CAHs
Assess the impact that MRHFP grants have had on the local emergency medical system	Grant proposals and award documents; monitoring reports; interviews with CAH administrators	Description and assessment of the impact of grant-funded EMS integration or EMS improvement projects	The objective is to provide an understanding of the usefulness of grant-funded activities to promote EMS-CAH integration or improve local emergency medical services

## **APPENDIX B**

### **Community Focus Group Summaries**

## **Community A**

Community A has a population of 1200, up about four percent over the last decade. Population projections show slight increases in population over the next few years. Minorities compose twenty-six percent of the population. The median age is 45 years old, with twenty-seven percent of the population being age sixty-five or older. The median family income is \$37,500 and fourteen percent of the residents live below poverty level. The median home value is \$48,500.

Major employers in the community are the casino and the hospital. One resident noted that having the hospital in the community was a factor in determining the location of the Native American owned-casino. Residents noted that the hospital brings benefits to the community such as piece of mind for families and the elderly, knowing that health care is close by. It was felt that people would live elsewhere even if their job were in the community if the hospital was not there. One resident noted that the hospital brings additional benefits to the community as businesses can survive because of the financial stability that the hospital brings. Residents noted that stores and restaurants were available because of the financial benefits of having a hospital in town. Residents noted that one thing they would like to see would be more senior housing. A market study showed that there was a need for senior housing in the area.

In terms of concerns about the hospital, local residents are concerned about recruitment and retention of staff and were aware that this was an issue common to many rural hospitals. They specifically mentioned administrative staff and nursing staff as key retention targets. This community has employed a J-1 Visa Waiver physician over the past two years, providing physician stability. Previously, much of the staffing had been through locums. In addition, the group members expressed concerns about recruiting and retaining ambulance personnel. One person noted the low pay and that this is a concern with respect to recruitment and retention. Another noted that the “ambulance drivers don’t know if they want to continue” due to low pay.

The focus group consisted of the president of the hospital auxiliary, a representative from the local Indian Health Services office, a county board member, a city council member, two staff from the hospital, a priest, a community resident who worked with the priest, and a community resident who described herself as the local “big mouth”.

Most of the community focus group members could not articulate the difference between a hospital and a CAH. One group member knew some detail about differences in reimbursement, greater use of mid-levels under physician supervision, and the 96 hour average annual stay. Most of the group members noted that the community had been quite aware of the problems at the hospital because it was going to close prior to becoming a critical access hospital. This community had worked closely with the hospital several years ago to “save the hospital”.

All of the residents expressed confidence in the hospital. They noted the physical improvements over the past two years as well as the recent stability of physicians, and knew that more testing/screening procedures were now available. One resident noted the relationship with the network hospital and described it as a “partnership”. Another

person said that the hospital had good collaboration with the Indian Health Service and this was seen as a “positive reflection on the facility”. This person said that IHS doctors did not previously have confidence in the hospital, but “came here and met the doctors and feel better and more confident about the hospital”. Residents noted that people in town were now saying good things about the hospital and no longer bypassing the hospital when they needed medical care. One person noted that a friend had recently had a heart attack and would not have survived in the hospital had not been there to provide care. Another resident noted that all of the services are together now (hospital, clinic, home health care) and that people are “seeing the changes”.

In terms of the types of conditions for which people would use the hospital, all the focus group members expressed confidence that they providers at the hospital could be trusted to decide when care should be given locally and when a transfer to another facility would be appropriate.

Residents in the focus group felt that the hospital provides high quality care within its scope of services. When asked how they made this determination, it was a combination of talk in town, personal experience, interaction with the staff and during visits to patients (nursing staff were particularly mentioned as “really good here”), and as a result of interaction between the hospital and Indian Health Service (patients at IHS “talk positively about their experiences at the hospital”).

The most important services for focus group members are ER, cardiac rehabilitation, physical therapy, screening and testing, as well as blood pressure checks and other services that “invite the community in” to the hospital. The wish list for additional services includes dialysis, OB, and more specialist outreach in the areas of podiatry, mental health, cardiology consults, and dermatology.

In the future, group members wanted to ensure that awareness of the hospital is maintained, through such devices as the newsletter and articles in the paper. They want to maintain the hospital in the community, knowing that the next major medical center is 75 miles away (the next closest rural hospital is about 30 miles away). They want to continue to recruit and retain medical and administrative staff to ensure that the hospital will survive to provide services to local residents.

## **Community B**

Community B has a population of 1100 people, about fifty less than ten years ago. Demographers estimate that the population will decline another 4 percent in the next few years. Minorities represent six and one half percent of the population. The median age of residents is 42, with almost twenty-five percent of the population being age 65 and older. The median family income is \$43,000 and the median home value is \$53,800. Nine percent of the population lives below the poverty level.

Major employers in the area include the hospital, a small medical company, and the resort industry. A large manufacturer is located in a neighboring town, employing many people in the area. Community focus group members expressed concerns about the town's declining population. They said there is a "fear of the community shrinking and how that will affect the hospital's future. Shrinking of school enrollment will affect the hospital, but there is no real concern about the hospital's effect on the community." Another resident stated, "the hospital has grown tremendously in the last eight to ten years, while the community has now grown in that time. That's an important factor we need to watch. The growth of the hospital should help the growth of the community". Finally, one person noted "the hospital attracts people to live here--quality of the facility, quality of the staff, availability of services. People are isolated here. We have to have a hospital".

Twelve people attended the community focus group. Participants included members of an intergenerational group that has been formed in the community to increase the communication and understanding across the generations.\* Focus group members ranged in age from teens to senior citizens—representing all of the generations. Other focus group participants included a county commissioner, a representative from the local bank, a civil engineer, and the hospital's "mission leader". This was the most age-diverse focus group of any conducted as part of the multi-year evaluation of the Flex program in Minnesota.

When asked where people would go for medical care if there weren't a hospital in their community, the closest facility mentioned is 65 miles away. One focus group member noted that there is a hospital that is closer, to the east of their facility. But, the person felt that no one would go there because of issues of reputation – "poor quality staff, poor quality doctors, poor quality building—the staff isn't happy and it shows in the quality of care." Also, they would choose to go to a hospital to the west of their town, because the major medical centers to which they may be transferred were also to the west. Other possible facilities mentioned were 100 miles to 175 miles away. This is a frontier county.

When asked what benefits the hospital brings to the community, focus group participants said "this hospital is very involved in the community—Relay for Life, hospital picnics,—I never heard grandma talk about the hospital being involved in things like this in (another community in the region with a hospital). Group members mentioned health care, jobs, elderly care, community involvement, health education, tuition assistance for an LPN program on campus, and school nurses as some of the benefits accruing from the hospital. Another participant said "the hospital is a very important spoke in the

county wheel. It puts money back into the community. Income of the staff goes back into the community through their purchases and taxes". Other participants said,

- ❖ "People have decided to retire here because there is a hospital"
- ❖ "The hospital brings in new employers and employees"
- ❖ "Young couples come back here and raise their families – and having a hospital here is an important factor in that decision"
- ❖ "The hospital provides annual screenings for the community and immunizations, like flu shots. "A resort community needs to have a hospital within a reasonable drive. People with known health conditions, like a heart condition, do check on the health services available. We have enhanced 911 here".

Members of the focus group felt the community was not concerned about the license status of the hospital-whether it was a CAH or something else. As one person stated, "I don't think they really care, as long as the facility is here and operating." Another said, "As long as the hospital delivers satisfactory services, it doesn't matter. If people are satisfied with the services, people will know that the hospital is good based on word of mouth."

In terms of the difference between a hospital and a critical access hospital, one person said,

*A CAH means a rural setting, where there is less access to multiple facilities. There hospital here has a mission to provide all the different services needed to address that things that could take place in a remote area or transfer or med-evac to a hospital elsewhere. This hospital does an excellent job of transferring appropriately."*

Residents participating in the focus group had no reservations about using the hospital. One said, "they have great nurses and doctors. Quality of the staff, quality of the building, quality of the care and concern---if you judge this hospital compared to other hospitals, there is no comparison." Residents appreciated the changes in the building that have been completed over the past two years. They described them as follows:

- ❖ "Very accessible."
- ❖ " All on one level. I can find where I want to go;"
- ❖ "They made the old hospital assisted living—the whole continuum of care is here."
- ❖ "Health care exercise is available here, too."

In terms of networks in which the hospital is involved, residents knew that the clinic was part of a larger system in a neighboring state and that they were the clinic located farthest east from the main network facility. They were also aware that a different network existed that supported air ambulance.

Focus group members knew that these relationships were important in access to additional testing and screening activities as well as emergency transfers when needed.

Focus group participants said that the most important services for the hospital to offer are cardiac care, emergency care, prenatal/maternity care, cancer treatment, x-ray and lab, and general surgery. They noted that in the past, many tests were done via mobile

services that are now in-house. One person did note that it's hard for residents to know what the hospital offers because "until you need the service, you don't know what they have here." This person noted that they offer chemotherapy which is extremely important because "the drive to (the major medical facility) is three hours and that's too much for patients."

The focus group members pointed out that in this community, there is a large shift in population from winter to summer. Because it is a major resort area, the hospital needs to be available to serve the summer residents and tourists who sustain injuries or have a medical emergency while vacationing. But at the same time, these are not year-round residents who support the hospital during the rest of the year. The job of maintaining the hospital infrastructure and services falls on the year-round community residents, who are fewer in number and often on fixed incomes. That's why focus group members and members of the intergenerational group felt it was important to dialogue with resort owners in planning for the future in order to sustain a viable medical facility in a community with falling population.

\*The intergeneration group was developed to begin a community dialogue. They compiled lists of issues and problems, which included alcoholism, teen pregnancy and lack of teen opportunities and entertainment in the community, materialism, lack of involvement in the community by the nearby resorts, and economic development. A strategic planning session to address these concerns is scheduled in a month. The goal of the group is to open lines of communication across the community. The oldest person in the group is 94, the youngest is 16 (fourteen when it started). Focus group members said the group has "opened eyes to the importance of communicating with your community". It showed that "every age bracket was concerned about the welfare of the community – they just saw each issue differently". They think "this dialogue will keep going. It affected the local political campaigning. People were talking about it during the election – even those that weren't involved in the 'dialogue'." They faced problems getting this effort underway. At the early meetings, no elected officials attended, nor did anyone from school leadership." As the group has been successful in improving the dialogue within the community, they are also focusing on relationships with the other town in the county. The two towns "have long standing historical animosity. (Our town) is using the intergenerational dialogue as an opportunity to bridge communication with (the other town)."

## **APPENDIX C**

### **Summary of Grant Awards**

# History of Minnesota Rural Flex Grant Awards

## 2001 Grant Awards

**Grantee: Houston County Public Health, Caledonia**

**Project: Emergency Medical Services workforce development**

**Award: \$25,000**

Houston County's three ambulance services came together in a collaborative effort to address recruitment, training, and retention of volunteer Emergency Medical Technicians in this project. The ambulance services, along with Houston County Public Health, Houston County Emergency Management, the Houston County Sheriff's Department, and Gunderson Lutheran, Inc., have jointly developed a plan for county-wide emergency training, combined strategies for recruiting volunteers, held events in recognition and appreciation of existing volunteers, and engaged employers in exploring options for increasing the availability of daytime employees willing to take on-call EMS shifts. This was the first time emergency response agencies throughout the county successfully collaborated.

Results of this successful project include:

- Increased EMS Volunteerism: The Houston Community Ambulance Service increased its volunteer roster from 9 to 18 crew members in one year.
- Joint training: Eleven EMS-related services (police, fire, Sheriff, ambulance) attended joint training on Cold Water Rescue Awareness and Air Bag Safety. This was the first time this type of training was made available in this county, and the first time all EMS-related services attended training together. Agricultural Trauma training was also made available for the first time. Thirty-six participants from Houston County and neighboring counties in Wisconsin and Iowa attended.
- Communications enhancement: The combination of out-dated communications equipment and the hilly terrain in this county caused great hardship in the area of reliable communications. This grant award assisted in the purchase of pagers, portable radios, and a channel base radio used in dispatching emergency messages.

**Grantee: Tracy Area Medical Services**

**Project: Development of an ambulance services consortium**

**Award: \$15,000**

Tracy Area Medical Services, a CAH, leads efforts to consolidate ambulance services serving seven small communities in this project. Project activities include: hiring a shared Medical Director, developing standardized protocols, developing a training curriculum, group purchasing, and creating a centralized billing system.

Ambulance services in this area are extremely vulnerable financially and report difficulty in recruiting and retaining volunteer EMTs. The consolidation of these services

strengthens the pre-hospital care available in the region, provides training and staffing enhancements that help crews maintain adequate numbers of volunteers, creates options for group purchasing resulting in significant savings, and maximizes reimbursement possibilities through centralized billing.

**Grantee: Roseau Area Hospital**

**Project: Expansion of diabetes center and education**

**Award: \$21,000**

Roseau Area Hospital, a 25-bed rural hospital in Roseau County, has expanded its Diabetes Center to include more comprehensive education and assistance to area patients living with diabetes. Grant dollars made it possible for a part-time diabetes educator to expand her training and knowledge, and provided the development and printing of educational materials.

As a result of this project, the Diabetes Center has informed more area citizens about the signs and risks of diabetes, offered more screenings, and has ultimately provided treatment and education for residents who had unknowingly been living with the disease.

**Grantee: Community Health Information Collaborative (CHIC), Northeast Minnesota**

**Project: Regional telepharmacy and teleradiology assessment**

**Award: \$25,000**

CHIC is a collaborative of hospitals, clinics, and public health services in an eleven county region of northeastern Minnesota designed to plan and develop a shared information network linking hospitals, medical clinics, academic health programs, public health agencies and other appropriate organizations. The goal of this project was to assess the need and operational and financial feasibility of implementing telepharmacy and teleradiology systems within the network.

As a result of the assessment, an infrastructure was developed to pilot telepharmacy and teleradiology services between Grand Rapids and Deer River (phase one), and between International Falls and Bigfork (phase two). The provision of telepharmacy and teleradiology services in these communities will increase access to these services locally, provide higher quality services in the community, and reduce the costs of pharmacy and radiology services.

**Grantee: Cook County North Shore Hospital, Grand Marais**

**Project: Recruitment, training, and retention of EMTs and trauma training for nurses**

**Award: \$25,000**

The Cook County North Shore Hospital is undertaking two projects with this grant award. One is the development of a training program for the nursing staff that will provide intensive training focused on critical care, trauma, and obstetrical patients. The other is a collaborative project with Cook County Schools in developing and

implementing a school-based EMT training program and offering it as part of the school's curriculum.

Students enrolled in this program spend an hour every weekday at the hospital participating in EMT and other healthcare training. This innovative approach is providing high school students the necessary training to become EMTs and gives them an understanding of health-related careers. Several students currently enrolled in this program report the intention of furthering their education in health care and seeking employment in emergency and/or rural settings.

**Grantee: North Region Health Alliance, Northwest Minnesota**  
**Project: Health Wellness/Prevention Program**  
**Award: \$15,000**

The North Region Health Alliance (NRHA) is a provider cooperative consisting of nine independent health care systems in northwestern Minnesota. The NRHA is actively involved in the Health Care Purchasing Alliance development efforts in the same region of the state, and proposed this project as a tool to assist the Health Care Purchasing Alliance's efforts in fully assessing and addressing community health needs.

An assessment tool and plan for gathering information and opinions from community members has been developed.

**Grantee: Immanuel St. Joseph's Hospital and Gold Cross/Mayo Health Systems Medical Transport, Mankato**  
**Project: Development of a Regional Trauma System**  
**Award: \$20,000**

This project formed a collaboration of rural health care providers in a nine-county area in south central Minnesota with the goal of developing a rural trauma system. The project is currently underway. Thus far, ambulance Medical Directors and Managers have participated in a regional retreat to learn about the differences in pre-hospital care delivery within the region, the experience of other trauma system development projects, available county, state, and national resources, and to develop a more detailed work plan.

**Grantee: Murray County Memorial Hospital, Slayton**  
**Project: Comprehensive Needs Assessment for Collaboration between 3 Rural Hospitals**  
**Award: \$17,000**

The hospitals in Slayton, Westbrook, and Tracy (each is a Critical Access Hospital) are exploring opportunities to collaborate and possibly consolidate certain services. Approximately 600 residents in the combined market areas for the three hospitals were surveyed in order to confirm which services were needed and wanted in each area, and whether consolidation of some services and administration functions was feasible. Initial results include the combined billing and leadership of the three facilities.

**Grantee: Lakewood Health Center, Baudette**

**Project: 1) Development of a physician recruitment and retention program and 2) Analysis of appropriateness of establishing a provider-based Rural Health Clinic**

**Award: \$25,000**

Lakewood Health Center contracted with the Minnesota Center for Rural Health for the development of a detailed physician recruitment and retention plan. In addition, the CAH and the clinic, as part of the ongoing integration of the two organizations, contracted with consultants to thoroughly analyze the organizational composition of the facilities and the appropriateness of establishing a provider-based Rural Health Clinic.

As a result of the grant, the physician recruitment and retention plan has been fully implemented. Also, the clinic and CAH continue to assess integration feasibility, and establishment of a provider-based Rural Health Clinic is likely.

**Grantee: Lac qui Parle Health Network**

**Project: Group purchase of ultra sound equipment**

**Award: \$25,000**

Lac qui Parle Health Network is a non-profit management service organization comprised of five rural hospital systems. In an effort to continue integration of the member hospitals and improve patient access to quality services, Lac qui Parle Health Network developed a plan to purchase and coordinate the shared use of diagnostic ultra sound equipment.

The portable ultra sound equipment is used mainly in the emergency room of each facility, and is moved from facility to facility on a weekly basis. Physicians at each of the hospitals have been trained and credentialed on the use of the new testing equipment. Each facility has reported increased utilization of ultra sound testing since implementation.

**Grantee: Mahnommen Health Center**

**Project: Workforce Enhancement and Training**

**Award: \$14,000**

Mahnommen Health Center (a CAH) identified workforce retention as problematic in part due to the lack of educational and training opportunities for staff. With this award, an assessment was conducted, and a managerial team-building program was implemented. Ongoing continuing education workshops are occurring, workplace safety educational programs have been conducted, and a library of "Training Network" videos (such as "Don't Shoot the Messenger", "From Stress to Success") has been established.

**Grantee: Greater Northwest Emergency Medical Services**

**Project: Critical Incidence Stress Management Training and Awareness**

**Award: \$ 8,000**

Greater Northwest Emergency Medical Services and neighboring West Central Emergency Medical Services are regional EMS planning agencies serving First Responders, Ambulance Services, Hospitals, and other emergency support services (e.g. Fire, Law Enforcement) in a total of 21 rural Minnesota counties.

With this grant award, Critical Incident Stress Management teams (comprised of peers and mental health professionals) were created to provide education, counseling, and diffusion of post-traumatic stress experienced by emergency response volunteers.

## **2002 Grant Awards**

**Grantee: Medisota/Rural Health Alliance – Alexandria**  
**Project: Develop Health Professional Recruitment**  
**Award: \$20,000**

Medisota and the Rural Health Alliance are hospital consortiums serving a combined total of 33 hospitals in west central and southwest Minnesota. The consortiums have similar purposes including shared services, organization of specialty services, contracting, shared physician recruitment, and staff education.

With this award, these consortiums employed a dedicated staff recruiter, who created and implemented a detailed recruitment plan focusing first on nursing, lab and radiology technician positions. By the end of the first year of this project, the recruitment efforts resulted in five placements: two medical lab technicians, one radiology technician, one physical therapist, and one registered nurse.

**Grantee: Community Memorial Hospital – Cloquet**  
**Project: Provide Life Support Training**  
**Award: \$8,000**

The Cloquet Community Memorial Hospital and the local EMS providers provide the emergency care for a large geographic area in northern Minnesota. Hospital staff and regional EMS providers assert that quality, affordable educational opportunities in advanced life support are needed, and the availability is limited.

By hosting a course on Comprehensive Advanced Life Support (CALS) training for the local EMS and hospital staff, Community Memorial Hospital increased the skills, knowledge, and competencies of the community's emergency medical services providers. The CALS training combines local EMS staff with the hospital medical staff creating a team of critical care providers, enhancing the regional EMS response and improving the quality of health care services. Five physicians, seven paramedics, and nine registered nurses completed the course.

**Grantee: Cromwell Fire and Ambulance Service – Cromwell**  
**Project: Develop a videotape to encourage volunteerism**  
**Award: \$25,000**

Cromwell Fire and Ambulance Service, a licensed Basic Life Support service in Carlton County, was awarded a grant to coordinate the development of a videotape to be used as a tool to assist with recruiting volunteers. The proposed plan was to target teenagers and young adults, and to address the importance of and rewards associated with serving one's community. The grantee pledged to make the video available for all ambulance services in Minnesota at no charge.

Unfortunately, the project leader was unavailable to initiate the project due to personal illness, and a request to extend the contract was not made before the contract terminated.

**Grantee: Riverview Healthcare Association – Crookston**  
**Project: Develop a diabetes self-management program**  
**Award: \$10,000**

Riverview Healthcare Association (a critical access hospital) assessed the need for more intensive diabetes management and education. The hospital reports that 22 percent of nursing home patients have diabetes, and that on average, 50 percent of intensive care patients and 20 percent of acute care inpatients are living with the disease.

This grant award offset costs associated with the development of a comprehensive diabetes self-management program that meets the requirements of the American Diabetes Association Education Program. By meeting these requirements, the hospital provides a needed service to the community, and is able to seek reimbursement for these services. The hospital hired and trained a registered nurse to serve as the program instructor, and the CQI process, including measurements of patient satisfaction and percentage of patients reaching self-selected goals related to diabetes care is in place.

**Grantee: Lac qui Parle Health Network – Dawson**  
**Project: Purchase medical transcription**  
**Award: \$22,000**

The Lac qui Parle Health Network consists of the hospitals in four southwestern Minnesota communities: Dawson, Appleton, Madison, and Benson. The network provides a mechanism for addressing workforce shortages, joint purchasing of equipment, and collaborating on business office and administrative functions. The project objective was to develop a software environment capable of allowing cross coverage staffing for medical transcription among the hospitals in Dawson, Appleton, and Madison.

The Lac qui Parle Health Network accomplished this objective, noting that the software compatibility makes it possible for network members to implement cross coverage and possibly share the time of off-site transcriptionists. An added success of this project was that call coverage between network members was established and all three organizations are now capable of providing digital dictation for the regional radiology group through securely encrypted email communications.

**Grantee: Glacial Ridge Hospital – Glenwood**  
**Project: Develop regional health network**  
**Award: \$17,000**

Clinic and hospital providers in 14 central Minnesota communities spanning nine counties have begun the process of forming an electronic information network. Secure, accurate, and timely information is critical for both continuous quality improvement and continuity of care as patients move from rural settings to tertiary centers. In addition, new federal laws and standards regarding privacy of information require all healthcare providers to implement electronic systems and operational procedure safeguards. Glacial Ridge Hospital applied for funding on behalf of the forming network.

This grant award helped the Central Minnesota Health Information Network finalize the formal structure of the network (forming a 501 (c) (3) creation of bylaws, Board of Directors and staff responsibilities, office logistics, banking relationships, and the beginning of a strategic plan). The network is continuing to focus on objectives surrounding electronic connectivity. Now that the first hurdle of legal and formal structuring has taken place, the network is actively seeking and successfully winning additional grants from foundations and federal funding sources. They received the highly competitive Rural Health Network Development grant award from the Health Resource Services Administration, Office of Rural Health Policy in 2003.

**Grantee: Grand Meadow Area Ambulance – Grand Meadow**  
**Project: Develop pediatric emergency training**  
**Award: \$3,000**

The Grand Meadow Area Ambulance Service is staffed by volunteer EMTs, and serves a year-round population of approximately 3500. An increase in emergency calls involving children prompted the service to seek additional training and equipment specifically related to pediatric emergency care.

With this award, Grand Meadow Area Ambulance provided pediatric emergency training and related equipment. In one report, the director of the ambulance service relayed that a serious pediatric call was received within hours of the equipment being secured in the ambulance. The EMT responding to the call returned enthusiastic about the new equipment, which assisted his ability to administer emergency care for and transport a young girl.

**Grantee: Kittson Memorial Hospital – Hallock**  
**Project: EMT Training**  
**Award: \$8,000**

The Kittson County Volunteer Ambulance Service, owned and operated by Kittson Memorial Hospital, is staffed by eight volunteer EMTs and several first responders. Kittson county is in the far northwestern corner of the state, bordering Canada and North Dakota. Twenty-one percent of the county's population is over 65 years old, and more than 12% of the population are below the poverty level. The nearest large

hospital (with limited tertiary services) is in Grand Forks, North Dakota, 75 miles from Hallock. The nearest full service tertiary hospital is 150 miles away, in Fargo, North Dakota. A fully-staffed, trained emergency response team is imperative in this frontier region.

The goal of this project was to recruit and train additional volunteer EMTs necessary for full on-call coverage. With this award, approximately 15 veteran EMTs received refresher training, and eight newly recruited volunteers participated in new EMT training. In addition, two automatic defibrillators were purchased.

**Grantee: Hendricks Community Hospital – Hendricks**  
**Project: Develop telecommunications system**  
**Award: \$15,000**

In fulfilling a requirement for Critical Access Hospital (CAH) designation, Hendricks Community Hospital entered into a network agreement with Avera McKennan Hospital in Sioux Falls, South Dakota. One of the necessary provisions of the network agreement addresses how the CAH and the other hospital will communicate. The leadership of the Hendricks Community Hospital saw great benefit in officially joining the telemedicine and teleconference available linkage with the Avera McKennan Hospital. Such a linkage would give the Hendricks Community Hospital access to additional services, provider specialist consultation, and medical staff education.

This grant award offset a portion of the cost associated with selecting, purchasing, installing, and learning to use the telecommunications equipment at the Hendricks Community Hospital.

**Grantee: Meeker-McLeod-Sibley Community Health Services – Hutchinson**  
**Project: Implement Minnesota Incident Management System for emergency responders**  
**Award: \$15,000**

The Meeker-McLeod-Sibley Communities Team, comprised of the hospitals, county public health agencies, county emergency management, and clinics in these three counties has enjoyed a successful seven-year collaboration focusing on improving the health of their communities. The goal of this project was to provide Minnesota Incident Management System (MIMS) training for all area healthcare providers, EMS response personnel, and local public health representatives. In addition, a detailed local emergency response plan was to be developed.

As a result of this grant, the work group was able to begin the process of developing a regional emergency preparedness plan. The MIMS training was postponed due to the necessity of involved persons to focus on mandatory smallpox vaccination planning.

**Grantee: Luverne Community Hospital – Luverne**  
**Project: Conduct a community needs assessment**  
**Award: \$5,000**

Luverne Community Hospital, located in Rock county, is a 28-bed acute care hospital providing a variety of health care services to the area. Statistics for the area (Rock and Nobles counties) indicate a high incidence of inactive, overweight elderly within the population. The Luverne Fitness Center, jointly owned and operated by the City of Luverne and Rock County, is open to the public, but does not currently offer programs designed for chronic disease management or the older adult population.

With this grant award, the hospital was able to form a steering committee and develop a survey tool used to assess the community's perceived needs and likely use of new programs targeting the older adult population and addressing chronic disease management. As a result of the survey, five new program areas were identified, including the proposed project targeting older adults. The steering committee is continuing to meet regularly to discuss planning and implementation of the new programs.

**Grantee: Region Nine Development Commission – Mankato**  
**Project: Develop a Rural Health Network and community needs assessment**  
**Award: \$15,000**

The Region Nine Development Commission and its partners in the Community Care Partnership, a regional, rural health network, have successfully collaborated for over 10 years, addressing health needs for the large uninsured and underinsured populations in the region.

With this grant award, Region Nine Development Commission and the Community Care Partnership were able to conduct a community needs assessment and develop a strategic plan to meet the emerging needs.

**Grantee: St. Elizabeth's Medical Center – Wabasha**  
**Project: Develop distance learning program for Licensed Practical Nurses**  
**Award: \$20,000**

St. Elizabeth's Medical Center in Wabasha, like many small rural facilities struggles to recruit and retain qualified medical staff. The hospital formed a partnership with The Workforce Development Inc., a private non-profit organization that provides job training for low income youth and adults in the same region of the state, and Northwest Technical College in Bemidji.

With this grant award the partnership developed a distance learning Licensed Practical Nurse associate degree program. Students were recruited from the Wabasha area through The Workforce Development Inc., tuition was provided by the hospital, an onsite clinical laboratory was created, and nurses on staff at St. Elizabeth's volunteered as mentors and clinical facilitators for the new students.

**Grantee: Winona Community Health Services – Winona**  
**Project: Recruit and train volunteer emergency first responders**  
**Award: \$12,000**

Ambulance and first responder services throughout Winona county find it difficult to maintain adequate numbers of trained volunteers on their squads. The weakening structure of the squads coupled with the aging population and growing needs for responsive emergency services prompted the Winona Community Health Services to partner with the Winona Hospital and emergency response services in planning for the recruitment and training of emergency services personnel across the county.

As a result of this grant, an extensive recruitment campaign and training activities were planned and implemented.

## 2003 Grant Awards

**Grantee:** Becker County Children's Initiative  
**Project:** Training and curriculum development for rural psychologists  
**Award:** \$23,000

**Grantee:** Cloquet Hospital  
**Project:** Joint venture between hospital and physicians  
**Award:** \$9,000

**Grantee:** Central Minnesota Health Information Network  
**Project:** Feasibility of centralized credentialing  
**Award:** \$24,000

**Grantee:** City of Fairfax  
**Project:** EMS supplies and training  
**Award:** \$3,000

**Grantee:** First Care Medical – Fosston  
**Project:** EMS education and coordination  
**Award:** \$18,000

**Grantee:** Cook County North Shore Hospital  
**Project:** Cook County EMS website  
**Award:** \$6,000

**Grantee:** Greater NW EMS  
**Project:** Training EMS managers  
**Award:** \$17,000

**Grantee:** Mahnommen Health Center  
**Project:** EMS training, supplies, and equipment  
**Award:** \$20,000

**Grantee:** Medisota  
**Project:** Development and implementation of an obstetrical services training program  
**Award:** \$20,000

**Grantee:** Minnesota Ambulance Association  
**Project:** Outreach and training programs for ambulance service organization reps  
**Award:** \$17,000

**Grantee:** Renville County Hospital  
**Project:** Heart to heart program and transportation support  
**Award:** \$10,000

**Grantee:** Rushford Good Shepherd Home  
**Project:** Joint training and staff development with Winona Health and Rushford  
**Award:** \$20,000

**Grantee:** Community Ambulance and Fire St. James  
**Project:** Trauma nurse training and certification  
**Award:** \$10,000

**Grantee:** St. Elizabeth's Hospital – Wabasha  
**Project:** Expansion and enhancement of certified nursing assistant training program  
**Award:** \$23,000