Mercy Hospital/ CHI- Fargo
AED Collaborative

Catholic Health Initiatives
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Year 1 Annual Report

HRSA 13-280

Rural Access to Emergency Devices

At A Glance

70 AEDs placed through

12 CHI Facilities into

61 Recipient Agencies and Locations

11 Red Cross Trainings Conducted

98 People Trained

113 Current Certification Cards Submitted

337 Community Benefit Hours

Project Design

Under the leadership of Mercy Hospital-Devils Lake (ND), 12 small hospitals have joined forces in a rural AED Collaborative to place 220 AEDs in rural Minnesota and North Dakota. While the 12 sites are bound through common service barriers (rurality, distance and limited resources) and organizational ties (Catholic Health Initiatives sponsorship), their choice of local partners and AED placements reflect the unique needs and strong networks of each community.

Partnering with local EMS and county task forces, the Collaborative prioritized needs based on three criteria: first responder; regular service to 250+ individuals over age 50; and high volume community agencies.

<u>Once placed, the AED Collaborative project has four programmatic objectives:</u>

1. Over the three year project period, increase access to AEDs within the service area.
2. Over the three year project period, increase the utilization rate of AEDs in the event of heart attack or Sudden Cardiac Arrest prior to EMS arrival.
3. Over the three year project period, increase the survival rate (from 911 call to hospital arrival) of individuals experiencing heart attack or Sudden Cardiac Arrest.
4. Over the three year project period, increase awareness of AEDs as a complementary intervention for heart distress symptoms after calling 911.

Mercy Hospital-Devils Lake (North Dakota) serves as the project's lead agency. Nicole Threadgold is serving as the interim AED Project Coordinator with Kensi Eisenzimmer serving as the AED Project Assistant. Each of the 12 hospitals has designated its Chief Development Officer as Project Lead to implement local AED plans, training, and placement. They will also be responsible for gathering, aggregating and reporting project data to the Project Coordinator. AEDs will be purchased through Catholic Health Initiative's established contractual policies for best pricing.

Need

Demographics

The northern plains states of Minnesota and North Dakota experience great diversity in economic resources and health care between urban and rural settings. The Twin Cities of Minneapolis and St. Paul anchor the region with 2.9 million people in the seven-county metropolitan area (2,813 square miles). In this urban environment median household income is $67,891, the median poverty rate is 8.1%, just 10.3% of residents are over the age of 65; and the EMS response rate averages 3 minutes 45 seconds for the fire department, 8 minutes for the police department.

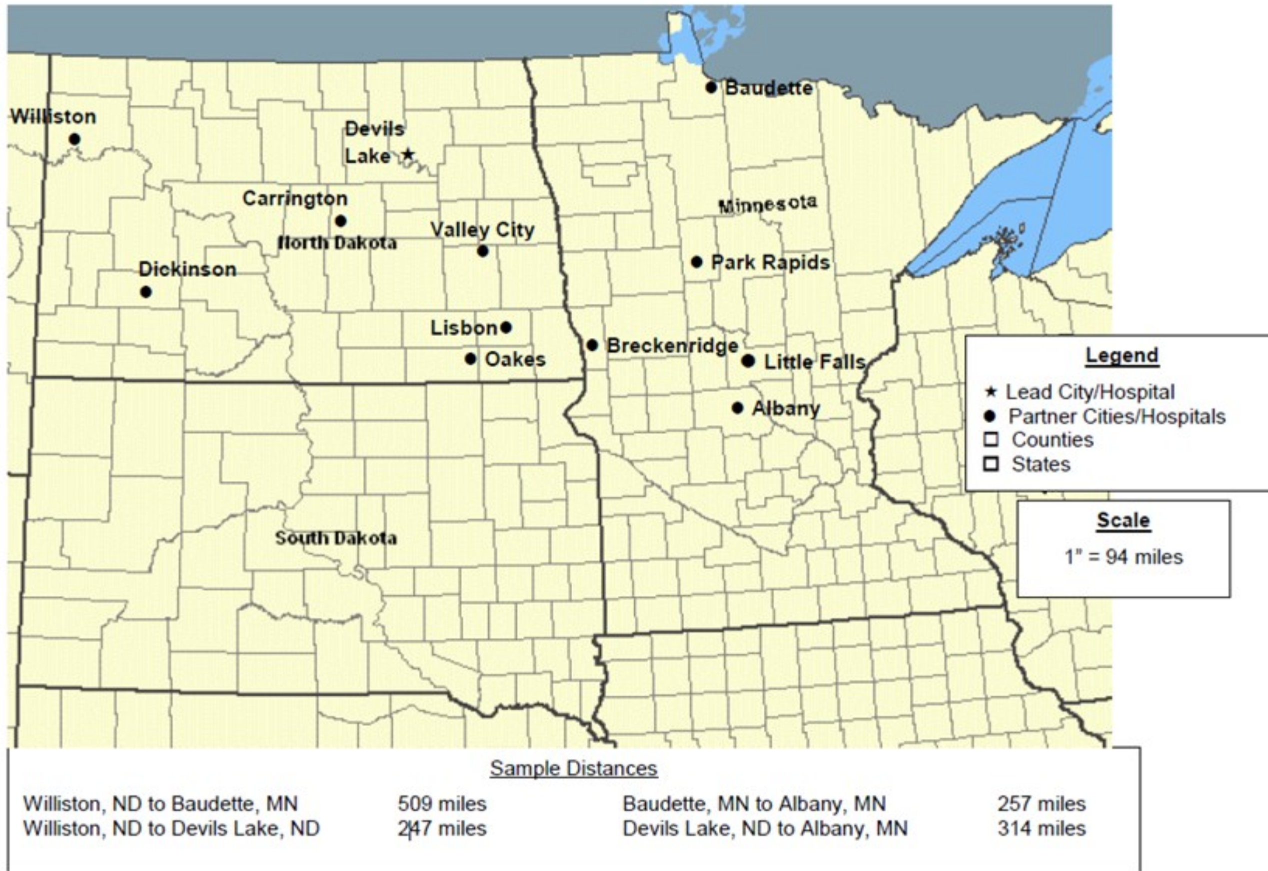
In contrast, the collaborative's five Minnesota Critical Access Hospitals serve approximately 81,084 residents and visitors spread over 8,626 square miles. The median household income is $48,060. The median poverty rate is 12.2%; nearly 18% of residents are over the age of 65; and the EMS response rate averages 10-45 minutes. Most counties have just one or two ambulances with more than a 1,000-mile coverage area.

North Dakota is even more rural with neighbors and institutions, such as the collaborative's seven Critical Access Hospitals are mutually dependent on each other. The targeted counties cover 9,573 square miles and average just 9.4 residents per square mile. The median poverty rate is 9.1%. Seniors in the services area over age 65 average comprise 18.7% of the population compared to 14.4% statewide. The median income is $49,121, mirroring the state average.

HRSA

Health Resources Services Administration (HRSA) office of Rural Health Policy awarded Mercy Hospital Devils Lake an award for Rural Access to Emergency Devises grant. Under the leadership of Mercy Hospital-Devils Lake, the project includes 12 other CHI Fargo Division facilities. The total estimated cost for the AED Collaborative project is $1,034,720 over the next three years. Of this, HRSA has awarded $198,061 in federal funds in the first year, with the remaining year one cost of $143,080 to be provided as a match from the CHI Fargo Region facilities. The award is for 12-month budget period with 2 additional allocations for the remaining two years, providing $595,920 of potential federal assistance of over the three year period.

Geographical Map of Participating Hospitals



Local Partnerships and Prioritization

Many of the targeted local communities have at least one AED. A significant push catalyzed placement and training between 2002 and 2004. In the intervening years, many communities also saw firsthand the value of an AED.

Little Falls, MN. August 18, 2010. *Marc Pelzer's life was saved last month by one of the five defibrillators donated by his daughter to the Morrison County Sheriff's Department in 2006. It was totally unacceptable that the Little Falls Police and the Morrison County Sheriff's Department previously had no AEDs in their squads.* – Morrison County Record.

Communities now want access to life saving technology. However many organizations, including first responders, lack the resources to replace aging AEDs (from mid-2000s) or are unable to fund the purchase and training for new AEDs.

The Development Officer from each hospital has contacted first responders, ambulance services, community service centers (e.g., senior centers), and community gathering places (e.g., hockey rinks) to determine the number of individuals served, service population age range, whether the agency/facility currently has one or more AEDs and if so, the age of the AED.

The Development Officer then prioritized the responses:

- Priority Level 1: First responders
- Priority Level 2: Agencies, facilities, or gathering places serving at where at least 250 individuals over age 50 gather on a regular basis
- Priority Level 3: Community agencies, facilities or gathering places to which the average EMS response time is greater than 12 minutes.

The prioritization process winnowed AED requests from over 250 to 220. Due to the extent of the local project collaboration, information on each hospital, its partners, and AED placement is provided:

AD Recipients

Mercy Hospital of Devils Lake, Devils Lake, ND

Devils Lake Police Department
Ramsey County Sheriff
Benson County Emergency Mgt Office
Ramsey County Senior Centers
Retired Senior Volunteer Program
Devils Lake Park Board
Cando Park Board
St. Olaf Church Parish Center

Mercy Hospital of Valley City , Valley City, ND

Valley City Police Department

St. Joseph's Health Services, Park Rapids, MN

Hugo's Family Marketplace
Park Rapids Schools
Hubbard County
Blueberry Pines Golf Club
Bethany Lutheran Church

Lisbon Area Health Services, Lisbon, ND

Police, Sheriff
Fire Department

Oakes Community Hospital, Oakes, ND

Good Oil, LaMoure, ND
The Ranch House, Fullerton ND
Prairie Pothole Lodge, Ludden ND

Carrington Health Center, Carrington, ND

Foster County Medical Center
New Rockford Community Clinic
Carrington High School

Mercy Medical Center, Williston, ND

Bethel Lutheran Nursing and Rehabilitation Center
Recreation Center
Northwest Human Resource Center

St. Joseph's Hospital & Health Dickinson, ND

Beach, Golva, Sentinel Butte, Dickinson Rural and City Of Dickinson Fire Departments
Beach, Golva, Sentinel Butte Ambulance Services
Golden Valley County SW District Public Health Unit
ABLE
West River Community Center

St. Gabriel's Healthcare, Little Falls, MN

St. Otto's Care Center
Mary of Lourdes Middle School
Bridgeway Estates
Morrison County Food Shelf
Morrison County Fair Grounds
Swanville Senior Center

Lakewood Health, Baudette, MN

Lake of the Woods Ambulance Service
Lake of the Woods County Law Enforcement
Mt. Carmel Lutheran Church
Sportsman's Lodge
Sportsman's Lodge Oak Island
Arnesen's Rock Harbor Lodge
Ballard's Resort
Zipple Bay Resort

Albany Area Health Care, Albany, MN

Avon Clinic
Mercy Manor
Albany Golf Course
Holy Family School

St. Francis Health, Breckinridge, MN

Barney Volunteer Fire Dept.
Barney Rescue Vehicle
Lidgerwood Volunteer Fire Dept.
Barney City Hall
Lidgerwood KC Hall
Lidgerwood Public School

70 AED's distributed throughout 55 locations.

Partnership Agreements

Each organization signed a Memorandum of Understanding outlining their responsibilities should they receive one or more AEDs.

Each organization receiving one AED (or multiple) must send three individuals per AED unit to AED training. All non-first responders participate in a half day session leading to Red Cross certification. All first responder agencies (EMS, police, sheriff, fire) are provided with a more rigorous full day course. If the recipient already has AED certified staff, the agency is able to submit those certifications in lieu of training.

All courses will include the following curricular components:

- CPR
- Safety for victims and rescuers including site assessment and blood/airborne pathogens
- Electrode placement
- Delivering the shock
- Hands-on practice

Each hospital will also be provided with an AED simulator to be used in conjunction with future community AED trainings.

Placement

Once the AED training is complete, the Project Lead will meet with each agency's liaison to review the expectations for reporting and document each AED's installation data. All sites will provide the hospital with a one-page fact sheet on each AED, via Zoll's internal tracking system for each unit.

Items included on the Fact Sheet are:

- Organization name, mailing address, phone, fax and email
- Physical address and location of where the AED is placed inside the facility
- Primary AED contact person – name, phone, email
- Device type and serial number
- Installation date
- Installation battery expiration date

Recipients will perform visual AEDs battery checks monthly, the AED will display either a green or red check light depending on battery status. They will note the date and individual conducting the check. Recipients must agree to absorb all maintenance costs after the initial placement.

Community Outreach and Public Relations (PR)

AED effectiveness is like a three-legged stool. AEDs must be available, AEDs must be used, and citizenry must recognize the link between cardiac arrest/ Sudden Cardiac Arrest and AED use. Community partnerships and training support the first two legs. Communication, outreach and a coordinated public relations (PR) campaign complete the triangle. As the AEDs are placed, the public needs to be informed and trained. The Project Lead for each hospital will implement a three-fold information and education campaign.

1) Prepare press releases for local newspapers and radio stations (a key source of community information). Press releases will contain information on AED placement and rationale, community training, Sudden Cardiac Arrest, the local AED partnership members, CHI support, HRSA funding.

- Similar articles will be prepared and distributed to recipient agencies to include in their mailings, newsletters, websites or other distribution networks.

2) Add internet-based information. Each hospital will add an AED webpage to their site. The webpage will contain AED locations including a map, an explanation of Sudden Cardiac Arrest, and contacts for local trainings.

- Project outcome and impact data and/or stories will be included in the hospital's annual community benefit report. The Project Coordinator will forward this information as well as project-wide data to CHI for regional/ national reporting (available in print and through the websites).

3) Each recipient organization will be asked to publicize Sudden Cardiac Arrest (SCA) and the AED project at its location and/or through a newsletter or similar publicity piece. To supplement these efforts, each recipient site will receive two signs per AED notifying the public that an AED is available at that location. Each site will also receive one adult and one child Red Cross Heart Saver poster to be placed near the AED location.

Partnership Agreements, Continued

Data Collection and Reporting

Data collection is vital to evaluation the AED project's effectiveness. The vast distances between sites requires a streamlined system with the same requirements for all. The Project Coordinator will develop common reporting forms for process data.

Each site will be responsible, quarterly, for reporting the following items to the AED Project Assistant:
1) Number, type, cost of AEDs purchased/received
2) Verification of training including: name of trainer, date/times of training, training location, participant trainees (name and affiliation – 1st responder, agency employee/ volunteer)
3) Number of AEDs placed including a copy of the 1 page AED placement information/Fact Sheet from each local agency
4) AED Utilization/Patient Incident reports. This data is required for each AED incident and is based on MNSTAR and NEMSIS requirements
5) Examples of PR and outreach materials and/or processes

The Project's Assistant is then responsible for data aggregation. She will:
1) Report AED placements to state EMS offices quarterly.
2) Create a quarterly formative report which aggregates data from all 12 sites. The quarterly report will be distributed to the Project Lead and CEO at each partner hospital plus to CHI-Fargo Division Headquarters. The Project Leads will then share the data with local EMS and partner agencies.
3) Create an annual summative report that includes the aggregated data by site, by state, and for the region.

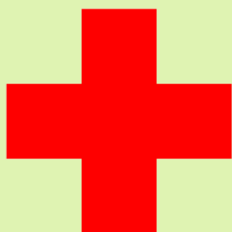
The Project Coordinator and Project Leads will attend quarterly regional meetings via teleconference or travel to Fargo, ND to discuss implementation processes and efficacy, formative data, and lessons learned. Programmatic improvements will be implemented by site or regionally, as appropriate.

Evaluation

An external evaluator will be hired through the University of North Dakota's Center for Rural Health. The evaluator will analyze the AED utilization and patient data to establish response time benchmarks if none were previously available. The evaluator will review all data components for trends and progress against project objectives. The resulting report will include data, statistical analysis for trends and progress against project objectives, and recommendations for program improvement. The Project Coordinator will meet with the 12 Project leads to discuss summative data and document lessons learned and make recommendations for program improvements.

AED Training Preferred Partner Selection Process

Red Cross and American Heart Association both submitted bids for the AED training portion of the grant. Upon review, the bid from American Heart Association was incomplete. Multiple requests were made to the agency submitting the bid on behalf of American Heart Association (Fargo Moorhead Ambulance) for bid completion; however, no follow-up bid was submitted. Red Cross was then selected as the preferred partner for the grant.



AED Preferred Partner Selection Process

A committee of CHI stakeholders with areas of expertise in Supply Chain, Clinical, and Foundation was brought together. This team consisted of the following folks, with the intent of selecting the devices based on a **combination** of clinical and financial criteria.

- Nathan Andreasen, Regional Director Supply Chain
- Todd Lawley, Senior Planning Associate, Strategy & Business Dvlp, Foundation
- Roxanne Wells, Mercy Hospital Devils Lake ND Foundation
- Mary Helland, Chief Nursing Officer
- Jane Smalley, Outpt Nurse Manager, Little Falls MN
- Brenda Huwe, Manager Emergency Services, Park Rapids MN

Three vendors were invited to participate in the bid process, which was based on their membership with Healthtrust, CHI's GPO. These vendors, Zoll, Phillips, and Physio-Control all presented their clinical options to the committee on Thursday, January 2nd, 2014. Subsequent conference calls with each vendor and our team focused on their AED program management offerings. Bids from each company were received, analyzed, and then discussed with the team. Clinical review, as well as the financial analysis, each contributed to our selection of Zoll as our grant provider.

Clinical reasons included the feedback capabilities the Zoll devices offered on chest compressions depth, as well as the device assisting with proper wind pipe alignment. Financially, Physio-Control had an acquisition cost that placed them out of the running. Philips and Zoll were priced competitively, but when weighing the clinical preference for the Zoll device, Zoll was selected as our preferred partner for the grant.

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Year 1 Timeline

9/2013 – Grant Approval notice

10/2013 – Official News Release on Grant award sent to sites

11/2013 – Memorandum of Understanding created; AED Preferred Partner Selection Committee compiled; CHIF Grants Team aligned reporting requirements

12/2013 – Official grant kick-off call with site leads; Zoll selected as preferred partner

1/2014 – Kensi Eisenzimmer hired as Grant Assistant; Red Cross selected as preferred partner; contact with UND on evaluation piece

1/2014 – 2/2014 – Communication to each AED recipient if still interested in an AED; compile recipient site contact information

3/2014 – 5/2014 – MOU's to recipient agencies; AEDs ordered

5/2014 – Project Lead transfers from Roxanne Wells to Nicole Threadgold; Year 1 progress report, narrative and financial, is submitted to HRSA

6/2014 – Red Cross training schedule proposed

7/2014 – Red Cross trainings in each of the recipient communities; AED location and summary by state sent to MN and ND Division of EMS services; Community Benefit hours submitted for FY14 to each MBO

8/2014 – Year 1 review of grant with site leads; roll out of marketing materials; proposed Evaluation contract received from UND

Lessons Learned

The rural nature of our service area, which qualified us for the grant, has proven a challenge for certain aspects of implementing the grant:

- As stated in our original proposal, each recipient site would either train 3 people per AED on its use, or submit certification cards that showed certification within the last 6 months of signing the Memorandum of Understanding.
- Some recipient agencies received multiple AEDs, as the need was valid; however, their cumulative staff size is smaller than the number of trained individuals per AED required by the grant.
- The minimum number of required attendees per training with the Red Cross is 8. Some trainings proved difficult to get 8 attendees, as some recipient sites submitted current certification cards in lieu of sending people to the training.
- Some recipient sites had staff with current certification cards according to Red Cross and American Heart Association standards (certification is good for 2 years); however, the grant had written the certification must have occurred within 6 months of signing the MOU. In certain cases, the recipient agencies had no remaining staff to send who needed certification, as they all held cards that were still within the 2 year certification requirement with Red Cross or American Heart Association.

Additional lessons learned:

- The Year 1 timeframe left little room for dissemination of the AEDs and training once all other initial grant set-up processes occurred.
- The AEDs were sent directly to recipient site in Year 1. It is preferred to send them to each hospital in Year 2 until each site has met their training requirements.
- Communication from Zoll's information management system began going to each recipient site upon shipment of the AED. The sites had not yet completed their training requirements and were not aware of the information management system's name (with differs from Zoll)
- Two training options were offered through Red Cross: Layperson or Professional. It was discovered that those who have previously completed training and would only need a refresher class, did not have that option in Year 1.

Thank you!

All recipient sites have expressed gratitude for being part of this grant opportunity. CHI is proud to be the lead for this grant and offer the opportunity through this grant for improved access to AEDs in the rural areas we deliver healthcare.

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