Implementing HeartRescue in MN

Working together to save lives.

A key task of developing the consortium was creating various teams to accomplish the goals of the grant and to develop additional goals based on recognized needs in MN communities or agencies. These teams were established to lead three focus areas: Bystander Response, Pre-hospital Response, and Hospital Response.

1. **Bystander**
   Partnering with existing groups and programs to improve public awareness and response.

2. **Pre-hospital**
   Working with EMS agencies and medical directors to improve care during transport.

3. **Hospital**
   Experts in resuscitation working together to develop and initiate new, ground-breaking practice.

**GOALS**

- Improve bystander CPR rates by training 10% of MN. Increase access to AEDs for rapid use.
- Improve quality of care by data driven solutions. Develop education and tools for all pre-hospital levels.
- Research new solutions to expedite definitive care for CA patients. Create post cardiac arrest resources.
Organizational goals and accomplishments

The coordinated efforts through the MRC have shown Minnesota to be a leader in resuscitation success.

The implementation of the HeartRescue Project, funded through Medtronic Philanthropy, has offered Minnesota the opportunity to develop a truly collaborative effort around the system of cardiac arrest care and the collection of out of hospital cardiac arrest (OHCA) data. The collaboration of many groups and agencies has led to changes in cardiac arrest care that could not have been accomplished if they were working alone. These efforts are leading to significant state-wide changes in protocol that are showing a measurable impact on outcomes.

The MRC has an extensive web of partners including state level agencies, police and fire departments, ambulance agencies and hospital systems that are working on improving survival. Community level agencies including schools, faith-based, and government programs are engaged in bystander response solutions and creating awareness. These partnerships have been key to the success of the MRC. They have lead to new ideas in training, opportunities for collaborative research, successful passage of policies, and most importantly - more survivors who are returning to their families, lives, jobs, and normal activities.

“Improving cardiac arrest outcomes is like a puzzle - all the pieces need to fit together for solutions to work.”

The MRC has prided itself on grants available to communities and agencies to improve survival. Approximately 30% of the overall grant budget has been used for grants toward equipment, data collection, community events, training, and much more. This included partial funding of a LUCAS device for Brainerd Lakes Police Department. They often arrive on scene and have a long wait for EMS due to the rural area and winding lake roads. Within a month of receiving the device, a lone officer arrived on scene with a cardiac arrest patient. He applied the LUCAS device and AED. With this new lifesaving tool, he was able to provide care with uninterrupted, ongoing CPR. The patient survived! MRC dollars have meant lives saved in Minnesota!
Today in MN, communities are better prepared for cardiac emergencies by.....................

Learning CPR and how to use an AED

More than 89,664 Minnesotans have learned CPR

Registering 4,793 AEDs across Minnesota

Using crowdsourcing apps to identify and map AED locations

Being designated as a Heart Safe Community, Campus, or Business.

3,701 AEDs used on OHCA patients

I AM THE FACE OF BYSTANDER RESPONSE

Dale had his cardiac arrest while referring a basketball game at Fridley HS. A high school student started CPR and an AED was brought from the school hallway. Dale was resuscitated by bystander CPR and public AED use.
Today in MN, first responders and EMS are better prepared for cardiac emergencies by..........................

Dispatchers engaged in ‘Fast Track’ CPR instructions

Rapid EMS Response

Using Standardized Protocols & Pit Crew CPR

Improving skills at 8 resuscitation academies and more than 50 presentations at statewide conferences

Using new technologies in Minnesota.
5,096 Automated CPR Devices applied

Data collection covering 85% of the population and feedback tools for quality improvement and education

Collaborative research opportunities

I AM THE FACE OF PRE-HOSPITAL RESPONSE

Jamie had her cardiac arrest when she was 18 years old and working at Mall of America. None of her co-workers knew CPR. Mall security first responders and Allina EMS arrived on scene and provided CPR and AED.
Creighton was sleeping at home when Wendy heard him making odd sounds, she called 911 and started CPR with instruction from dispatch which was continued enroute to the hospital. He was brought to the U of M, where he was placed on ECMO and taken to the cath lab. Creighton was part of a new pilot for rapid cath lab access where 50% of patients survived.
Strategies to Improve Cardiac Arrest Survival: A Time to Act

Recommendations from the Institute of Medicine Report - how do we compare?

1. Establish a National Cardiac Arrest Registry - The MRC has been collecting data through CARES since 2010. Currently, CARES collection covers approximately 85% of the entire state's population. The MRC works with the Minnesota Department of Health and the Emergency Medical Services Regulatory Board to evaluate data, determine feedback solutions, and find ways to capture the remaining rural areas. MN CARES is also collecting data from Wisconsin, North and South Dakota.

2. Foster a Culture of Action through Public Awareness and Training - The MRC has supported and implemented several training programs and provides resources for ongoing events and training. We have created public service announcements, media tools and online education for CPR and AED use. The MRC is a key partner in the Heart Safe Designation program in Minnesota. We worked with AHA to pass the CPR in Schools and AED Registry Laws in Minnesota.

3. Enhance the Capabilities and Performance of EMS Systems - The MRC has provided ongoing education through annual academies and speakers at rural conferences. We have assisting with resources for dispatch, police and fire first response and ambulance services including equipment and other tools.

4. Set National Accreditation Standards Related to Cardiac Arrest for Hospitals and Health Care Systems - The MRC is working with the development of a Time Critical Care Team to create streamlined systems for cardiac arrest, stroke, STEMI, and trauma for EMS and hospitals.

5. Adopt CQI Programs - The MRC provides reports to EMS and hospital systems to assist with benchmarking and education following the US HR model of ‘Measure and Improve’.

6. Accelerate Research on Pathophysiology, New Therapies, and Translation of Science for Cardiac Arrest - The MRC, through the APIC lab and Dr. Yannopoulos is part of several NIH research grants investigating new therapies. The MRC works to help the Minnesota community better understand the science behind resuscitation care and how they can be part of the solution.

7. Accelerate Research on Evaluation and Adoption of Cardiac Arrest Therapies - The MRC works with local EMS and cardiologists to implement ground-breaking research to improve survival and change the standard of care for cardiac arrest patients.

8. Create a National Cardiac Arrest Collaborative - The MRC has created solutions for collaboration through our committee structure that has created a platform for discussion and cooperative efforts. These committees have continuously updated goals and strategies to ensure that we are on the cutting edge of solutions.