Goal:
To improve survival rate from sudden cardiac death in the state of Minnesota by 50% in 5 years by connecting bystander, pre-hospital and hospital initiatives and implementing CARES to track outcomes and improvements.

Committee Structure for the MRC

MRC Staff & Advisory Board

Bystander Care Committee

Pre-Hospital Care Committee

Hospital Care Committee

Minnesota Department of Health
Bystander Response

1. Legislation – CPR in Schools and AED Registry

2. CPR training tools and tracking

3. Awareness media campaigns

4. Post cardiac arrest support
Bystander Update

- Heart Safe Designations – 30+ communities across the state
- PSA – Timberwolves, Movie Theatre’s and FD Mailing
- CPR in Schools Support and grant partnership with AHA
- Legislation for the AED Registry
- New partnership with YMCA

CAMPAIGN OUTLET    IMPRESSIONS

Movie Theatre CPR PSA    500,000
Athletics Tablings    77,500
Gopher Radio    630,041
Social Media    40,000 – 150,000
Goldy’s Run    15,000
TOTAL    1,262,541 – 1,372,541
Minnesota AED Registry

Provides:
- Maintenance Program
- Management Tool
- Notifications of Recalls

Could Provide:
- Dispatch Notification
- Auto Notification
- Identification of Gaps

✓ It can be public or private or mobile.
✓ It can be single units or multiple with several sites.
Prehospital Response

1. Standardize statewide protocols for SCA patients

2. Training tools and educational partnerships for EMS

3. Improved 911 dispatcher assisted CPR or telephone CPR

4. Collaboration with state-wide efforts and initiatives
Pre-hospital Update

- Dispatch meeting – ‘Fast Track CPR’ and finalized training tracks for primary centers
- Pit Crew training videos
- Support Mission LifeLine efforts by grants for AED placement in Fire Responders and rural EMS
Hospital Response

1. Cath Lab Initiative

2. Statewide sharing of best practices

3. In-hospital cardiac arrest training

4. Collaborative efforts in research
New Hospital Report

- Good work in the field + good work in the ED + good work post admission
  - Overall survival rate after admission in MN is 25% compared to national average of 14%

<table>
<thead>
<tr>
<th></th>
<th>MN</th>
<th>National</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shockable rhythm</td>
<td>46%</td>
<td>29%</td>
</tr>
<tr>
<td>Bystander witnessed</td>
<td>56%</td>
<td>44%</td>
</tr>
<tr>
<td>Hypothermia field</td>
<td>25%</td>
<td>17%</td>
</tr>
<tr>
<td>Survived to admission</td>
<td>51%</td>
<td>38%</td>
</tr>
<tr>
<td>Survived to discharge</td>
<td>25%</td>
<td>14%</td>
</tr>
<tr>
<td>Dc with a good cpc</td>
<td>23%</td>
<td>12%</td>
</tr>
<tr>
<td>Inhospital hypothermia</td>
<td>71%</td>
<td>51%</td>
</tr>
<tr>
<td>Utstein arrest survival</td>
<td>48%</td>
<td>36%</td>
</tr>
</tbody>
</table>
Data Collection

1. Partnership with MN Department of Health
2. Expansion of data set to entire service areas
3. Expansion into other agencies and entire county coverage
4. Expansion to neighboring states
5. Potential future work with EMSRB
## Data Collection

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
<th>Bystander CPR</th>
<th>Bystander AED</th>
<th>Field Hypo</th>
<th>Patients to cath lab</th>
<th>Discharged</th>
<th>Utstein</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>605</td>
<td>28%</td>
<td>8%</td>
<td>9%</td>
<td></td>
<td>13%</td>
<td>42%</td>
</tr>
<tr>
<td>2012</td>
<td>1208</td>
<td>30.5%</td>
<td>9%</td>
<td>11%</td>
<td>40%</td>
<td>12%</td>
<td>47%</td>
</tr>
<tr>
<td>2013</td>
<td>1419</td>
<td>35.8%</td>
<td>9%</td>
<td>15.7%</td>
<td>44%</td>
<td>12.5%</td>
<td>45.7%</td>
</tr>
</tbody>
</table>
MN CARES Update 2013/2014

- New Dispatch Module- two agency entering
- New In Hospital Hypothermia module Pilot- no takers
- New Agencies:
  - F-M Ambulance- ND
  - Ringdahl EMS- Pelican Rapids, Fergus Falls and Jamestown ND
  - Winona Ambulance
  - Woodbury EMS
- One agency excluded from annual reports
- New Hospitals:
  - Sanford Health- Fargo
  - Essentia- Fargo and Brainerd
  - Lake Region Healthcare
  - Winona Health
  - Gunderson Lutheran
  - Mayo (partially)

- 1808 cases entered
- 5 missing outcomes
- 1707 non-traumatic cares cases
- 1438 cardiac cares cases
- 194 Survivors
- 178 Neurologically Intact
- Utstein: 38.6%
- Utstein Bystander: 45.7%
## CARES Data

<table>
<thead>
<tr>
<th></th>
<th>7 County</th>
<th></th>
<th>MINN</th>
<th></th>
<th>National</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>1019</td>
<td>1071</td>
<td>1198</td>
<td>1418</td>
<td>26487</td>
<td>31535</td>
</tr>
<tr>
<td>Survival</td>
<td>13.5%</td>
<td>14.8%</td>
<td>13.6%</td>
<td>13.7%</td>
<td>10.4%</td>
<td>10.6%</td>
</tr>
<tr>
<td>Good CPC</td>
<td>12.2%</td>
<td>13.4%</td>
<td>12.1%</td>
<td>12.5%</td>
<td>8.2%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Utstein Bystd</td>
<td>46.2%</td>
<td>52.7%</td>
<td>46.2%</td>
<td>45.7%</td>
<td>38.7%</td>
<td>37.8%</td>
</tr>
</tbody>
</table>
What Does Minnesota Do Differently?
Thoracic Pump

- > 200 LUCAS devices
  - All Major EMS Agencies
  - All Hospitals

- ResQPod (ITD)
Pit Crew CPR

- 24/7 PCI
- Prehospital activation of labs
- Higher percentage of AED application PTA of EMS
  52.4% to 26.5%
- 75% response time < 8 min
- TH - In and out of hospital
- EPs – early participation in patient care plan
Grants and Funding

CPR/AED Program Implementation
- Cass County
- St. Anthony Fire Department
- Dakota County Heart Restart
- Eden Prairie Fire Department
- City of Evansville
- St. Louis Park Fire Department
- Minnetonka Fire Department
- Hopkins Fire Department
- Richfield Fire Department
- Burnsville Fire Department

Program Support
- National SCAA Conference
- National AED Registry
- TLC Conference for EMS Educators

CARES Implementation
- Allina Medical Transportation
- North Memorial Ambulance

Equipment for Pre-hospital Care
- Health East
- Burnsville Fire Department
- North Memorial – Park Rapids
- North Memorial – Faribault
- City of Breezy Point
- White Bear Lake Fire Department
SUCCESS FACTORS

• Collaboration drives innovation
• Active engagement, not passive learning
• Ideas can be contagious
• Advocacy is influential
Questions?

This life was saved by someone who knew CPR.