To Join Audio: Teleconference (877) 985-5153 Pass Code 7543907

Slides: Net Meeting Access:
Meeting number: SW474610 Meeting passcode: SW474561
Participant Join:
URL: http://www.mymeetings.com/nc/join.php?i=SW474610&p=SW474561&t=c

Welcome!
• Restrooms
• Cell Phones on Silence or Vibrate
• Wireless Access Code: Nay3
• Travel Scholarship ND DOH
• **SIM ND Simulation Sessions**
  – RED – STEMI Simulation Day 1 available
  – Green – STROKE Simulation Day 1 available
  – 1 CME Available for each simulation attended
  – 45 minute sessions 1:30 - 2:15, 2:15 – 3:00, 3:00 – 3:45, 3:45 – 16:30

Tickets
2014 Exhibitors - Thank you!

- AHA Advocacy Life is Why
- Covidien
- Genentech
- Penumbra
- SIM – ND
- ND DOH Division of EMS and Trauma ND Stroke and Cardiac Systems of care program
- Essentia Health
- Astra Zeneca
- Sanford Airmed
- Daiichi Sankyo Inc

- Phillips Healthcare
- The Medicines Company
- AHA Quality and System Improvement
- Physio-Control
- Janssen Pharmaceuticals
- Avera eCare
- Experience Health ND
- Cordis
Point Of Entry Protocol: GOAL

5

Less than 90 Minutes
ND STEMI Statistics

• In ND 43% of adults have 3 or more risk factors for Cardiovascular disease.

• CV disease is the #1 leading cause of death in ND.
Almost 250,000 Americans experience STEMI, the deadliest form of heart attack, each year.

30% STEMI patients fail to receive percutaneous coronary intervention (PCI) or thrombolytic therapy.

Of those who receive PCI, only 40% are treated within the door-to-balloon timeframe of 90 minutes, recommended by the American Heart Association.

Of those who receive thrombolytic therapy, fewer than half are treated within the recommended door-to-needle timeframe of 30 minutes.

70% of those patients who aren’t eligible for thrombolytic therapy fail to receive PCI, the only other option to restore blood flow to blocked arteries.
Regional Rural Mission: Lifeline Grant Impact

- South Dakota 2010
- North Dakota 2011
- Wyoming 2012
- Rural Minnesota 2013
- Nebraska 2014
- Montana 2014
Mission: Lifeline Committee Structure

- Mission: Lifeline Taskforce Co-Chairs Dr. Tom Haldis Dr. Jeff Sather
- Mission: Lifeline Taskforce 100 Members
- Mission: Lifeline Taskforce Quality Committee
- Mission: Lifeline Taskforce EMS Advisory Committee
- Mission: Lifeline Taskforce STEMI Hospital Advisory Committee
- Mission: Lifeline Taskforce STEMI Conference Planning Committee
Program Components

- EMS and Hospital Infrastructure
  - 12 L ECG Acquisition, Transmission, and Receiving Equipment
- EMS and Referring Hospital Education
  - Instructor Facilitated, On-line Self Directed, Webinar Opportunities
  - Stakeholder Committee and Taskforce Meetings
  - Regional Collaboration Opportunities
  - Statewide Conference
- Public Awareness
  - Earned and Paid Media Campaign
  - Community Event Toolkits
- Data Collection and Quality Improvement
- Model Sharing
EMS and Hospital Infrastructure

- All Counties in ND have at least 1 ground ambulance
- 125 Licensed GROUND AMBULANCE SERVICES 108 BLS, 17 ALS
- 44 Hospitals 6 PCI Receiving, 36 Community or Critical Access and 2 IHS hospitals

EMS Equipment

- 98.4% or 123 agencies have received at least 1 monitor through the grant program
- 28 monitors with placed with the 10 highest volume EMS services in ND, and the remainder was granted to the 110 agencies who each received at least one monitor allocation which in some cases was used to upgrade existing equipment.

Hospital Equipment

- 12 L receiving software or monitors capable of transmission to a PCI receiving facility were placed in 35 of 38 referring hospitals throughout the state. 3 Referring Hospitals declined the grant opportunity
- 12 L Receiving software is in place in all 6 PCI Receiving facilities with interoperability between the 3 vendors in place at 5 of the 6 facilities.
ND 12 Lead ECG Distribution

- Lifepak 60%
- Phillips 14%
- Zoll 26%
Training and Education

EMS Education

- Phase I, II, III Face to Face Classroom style and hands on 12 L Training
  - Adjunctive Materials including the EMS transport guideline and 12 L placement guides provided
  - Learn Rapid STEMI ID courses were provided to all paramedic level providers
  - 230 Peer to Peer training sessions were completed in 3 phases of in person facilitated training by a group of 12 educators from ND

Hospital Peer to Peer Education

- 40 sites were assigned and attempts were made to schedule an in person standardized Mission: Lifeline ND STEMI curriculum including one MN border hospital and the ND VA with a physician for 1 hr. and STEMI coordinator for 2 hr. 2 Sites declined the educational opportunity.
  - Adjunctive Materials including Interfacility Transport guideline posters and 12 L ECG placement guides provided
- 2000 STEMI provider Manuals were dispensed with the training to each EMS provider and to each ND Hospital

Phase II EMS/Hospital Regional Workshops

- 17 Cardiology Educators from EMS and Hospital (8 Physicians) presented to 80 Participants in 4 regional ½ day Events available by In Person, BTWAN and Webinar
- ND EMS Rendezvous ND M:L Update and Considerations for LVAD patients Mindy Cook and Dr. Bob Oatfield.
Learn:™ Rapid STEMI ID

Improving STEMI recognition and assessment through eLearning

Thousands of patients with ST-Elevation Myocardial Infarction (STEMI) fail to receive critical therapy in a timely fashion, and nearly 30 percent of patients with STEMI do not receive any reperfusion treatment at all. To help address these issues, the American Heart Association has created a dynamic eLearning program, Learn:™ Rapid STEMI ID.

This self-directed, eLearning course prepares healthcare professionals to evaluate and assess victims with potential symptoms of myocardial infarction, interpret ECGs for signs of STEMI, and activate a system of care for rapid reperfusion of an occluded coronary artery.

Learn:™ Rapid STEMI ID supports the efforts of the American Heart Association’s Mission: Lifeline®, a national initiative to improve quality of care and outcomes in heart attack patients by improving healthcare systems’ readiness and response to STEMI patients.

Who benefits from this product?

This course is designed for any healthcare professional involved in the hospital process who wants to improve their STEMI recognition and assessment skills, or for healthcare professionals seeking to obtain continuing education credits.

Non-CME CEUs available

Continuing Education Approval - Emergency Medical Services

This continuing education activity is approved by the American Heart Association in conjunction with the Continuing Education Coordinating Board for Emergency Medical Services (CECSRBM) for 4.01 Advanced EMTs, activity number 019202CR-00.

For more information, please visit the American Heart Association website at: http://www.aha.org

Learn:™ Rapid STEMI ID, visit: OnlineAMA.org

Learn Rapid STEMI ID keys still available through the ND M:L Grant

2500 provided over 3 years
Regional EMS/Hospital Education

- May 29 2014 **NE Region** 10:00 am – 1:00 pm CST
  Hilton Garden Inn Grand Forks, ND

- June 5 2014 **SE Region** 10:00 am-1:00 pm CST
  Sanford Health Auditorium Fargo, ND

- June 16 2014 **NW Region** 11:00 -2:00 CST
  Trinity Health Skyline Room Minot, ND

- June 30 2014 **SW Region** 11:00 – 2:00 CST
  St Alexius BTWAN Room Bismarck, ND

**Mission: Lifeline North Dakota**

**Regional EMS and Hospital STEMI Mini-Conferences**

May-June 2014

To attend any of these conferences, please RSVP to Ngia.Mua@heart.org

**Format:** In-Person with BTWAN and Webinar (Net-Meeting) connectivity

To connect to BTWAN, please contact Lori Schmautz lori@ndha.org

To Join Audio: Teleconference (877) 985-5153 Pass Code 7543907

Webinar Meeting number: SW474610

Meeting passcode: SW474561


**Target Audience:**
Emergency Medical Services, Nurses and administration, Nurse Practitioners, Physician Assistants, and Physicians involved in care of potential Acute Myocardial Infarction patients.

**Goals:**

- To allow an opportunity for regional provider collaboration in a flexible easy to attend format
- To educate attendees on 12 L ECG interpretation strategies
- Provide an overview ND regional and state aggregate data to encourage performance improvement for hospitals and EMS providers which support feedback and recognition.
- To share lessons learned through case review, border state program model sharing, and best practice definitions
- To share strategies to triage STEMI patients to the most appropriate reperfusion therapy utilizing the RUSH Interhospital Transfer Guideline by describing pharmacological reperfusion treatments options, and techniques for invasive treatment of the rural STEMI patients.
Transport time ≤ 75 minutes and total time from first medical contact (EMS at patient’s side) to PCI (Percutaneous Coronary Intervention) **FMC to PCI ≤ 120 minutes.** Notify medical control and consider transport directly to PCI Capable Receiving Hospital for Primary PCI. Activate STEMI Alert, transmit 12 L ECG as able, provide report to receiving hospital.

Transport time > 75 minutes and estimated time from first medical contact (EMS at patient’s side) **FMC to PCI ≥120 minutes.** Notify medical control and consider transport to the closest appropriate non-PCI capable referring hospital for possible fibrinolytic therapy and urgent transfer to a PCI Capable Receiving Facility for reperfusion.

Initiate fibrinolytic checklist per protocol

Activate STEMI Alert, transmit 12 L ECG as able, provide report to receiving hospital

Consider Air Transport.

**BLS & ALS**

- Administer **O2 starting at 2 L/Min per nasal cannula**, titrate as needed to maintain SpO2 > 92% (revised 3/2014)
- Obtain Systolic/Diastolic blood pressure (BP) in both arms
- Administer **Chewable Aspirin 324 mg** by mouth
- Administer **Nitroglycerin Sublingual 0.4 mg** every 5 minutes up to 3 doses if chest discomfort present and SBP > 100. Check BP prior to each administering dose. Hold if SBP < 100 mm HG. Hold All Nitrates if Erectile Dysfunction medication taken within 36 hours.
- BLS only: Request ALS Intercept per local protocol

**ALS Only**

Establish large bore IV access - Normal Saline 500ml KVO, Establish a second IV Line as time allows.

Clopidogrel (Plavix) 600 mg by mouth if transferring for PPCI at PCI Capable Receiving Facility

Heparin IV Bolus 70 Units/kg IV, max 5,000 Units if transferring for PPCI at PCI Capable Receiving Facility

Establish a **Nitroglycerine IV Drip** if chest discomfort is unrelieved. Initiate @ 5 mcg/min & titrate in increments of 5mcg/min to maintain a systolic BP of 100 mm/Hg or greater. Hold Nitrates if Erectile Dysfunction medication taken within 36 hours.

Administer analgesia as needed for discomfort per protocol

**Diversion Criteria:** If patient demonstrates Instability and/or has any one of the following Diversion Criteria requiring ED evaluation proceed to closest appropriate hospital:

- Possible need of head CT or neurological intervention / Confusion
- Emergent intubation Immediate circulatory stabilization
- Chest trauma or MVC victims
- DNR Status
- Left Bundle Branch Block

Consider Air Transport.
Educational Materials

NORTH DAKOTA MISSION: LIFELINE™
EMS TRAINING MATERIALS ORDER FORM

Place limbs leads on soft tissue surfaces & not the bone according to the diagram on the upper right:

White RA = Upper Right Arm
Black LA = Upper Left Arm
Red LL = Lower Left Leg
Green RL = Lower Right Leg

Apply the 12 Lead ECG per diagram on upper right:

V1 = Palpate the patient's clavist & locate the right 4th intercostal space below the 4th rib
V2 = Place directly across the sternum on the left 4th intercostal space below the 4th rib
V3 = Skip
V4 = Place on the left 5th intercostal space below the midclavicular line
V5 = Place right in the middle of the intercostal line between V2 & V4
V6 = Skip
V7 = Place on the mid-axillary line on the left 5th intercostal space keeping it in a horizontal line (do not curve upward)
V8 = Place directly in the middle of V4 & V6 keeping it in a horizontal line
Examine V6R
Statewide Guideline: Mission: Lifeline ND STEMI Inter-Hospital Transfer Guideline 2013 updated 2-2014
Mission: Lifeline ND STEMI (ST-Segment Elevation Myocardial Infarction) Guideline
R.U.S.H. (Rural Unified STEMI Hospitals) Inter-Hospital Transfer
NURSING DOCUMENTATION Tool (Page 2 of 3)

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ABSOLUTE CONTRAINDICATIONS FOR FIBRINOLYSIS (TNI) IN STEMI
1. Any prior International travel
2. Known structural mitral valve disease (e.g., stenosis, insufficiency)
3. Known malignant neoplastic disease (primary or metastatic)
4. Anaphylactic reaction(s) within 3 months except those treated with desensitization in a hospital setting
5. Significant internal bleeding within 3 months

RELATIVE CONTRAINDICATIONS FOR FIBRINOLYSIS (TNI) IN STEMI
1. History of chronic, severe poorly controlled hypertension
2. History of uncontrolled hypertension or hypertension on presentation
3. History of prior acute ischemic stroke, 30 days or less, or known hemorrhagic stroke
4. Traumatic or surgical 
5. Major surgery (within 30 days)
6. Recent internal bleeding or known bleeding diathesis
7. Nontherapeutic anticoagulation
8. Currently on aspirin or other platelet-activating agents
9. Age > 75 years (prior aspirin use or aspirin use within 30 days is not a contraindication)
10. Current use of anticoagulants (other than the TNI) or aspirin within 30 days

Please Document Times:
1. Initial Chest Pain or Rapid Pulse (CPR) Dated/Time
2. Pre-Hospital ECG Time (if available)
3. Referring Hospital Arrival (Door-In)
4. Referring Hospital ECG Time
5. Transport Activated
6. STEMI Alert Activation (STEMI Receiving hospital contacted)
7. EMS Transfer Time
8. Referring Hospital Departure (Door-Out)

NURSE DOCUMENTATION
Hospital
Patient Name:

Notes:
- [ ] Copy ECG, ED physician and Nurses documentation and send with patient – do not delay transport
- [ ] Fax All pertinent records to referring ED (ECG, Labs, Orders, Physician Orders, Notes, Medication administration records)

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American Heart Association
MISSION: LIFELINE

The ND Mission: Lifeline STEMI Hospital Advisory Committee is asking that you make this change to your institutional protocol and welcome any questions you might have. We appreciate your flexibility to allow this change, and uphold your institution’s version of the R.U.S.H. STEMI Transfer Protocol. Our goal will be to update the guideline annually with any new recommendations or changes that become available and are supported by clinicians.

Best regards,

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Florida Lelitch

ND Mission: Lifeline Co-Chair 2011-2014
Medical Director, Emergency Services
Trinity Health Systems, MD

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North Dakota Critical Access Hospitals & Referral Centers
ND Mission: Lifeline Q1 2013 - Q1 2014
Regional Meetings and Events
ND Mission: Lifeline Events

Taskforce Meetings:

Bi-Annual Face to Face (6) and Monthly Teleconferences (30)

3 Annual STEMI and Acute Stroke Conferences

- Approximately 650 health care personnel educated
- Free event with Continuing education credits for: Physicians, Nurse practitioners, Physician Assistants, Nurses, and EMS
- Statewide Project Update
- Highlight MN Successes and Lessons learned
- Hear from local and national clinical experts
- New science
- Network with peers to advance collaboration
- STEMI Survivor Celebration
- Recognize STEMI System excellence and award achievements
## ND M:L Publications and Model Sharing

**Statewide Collaboration in Rural STEMI System Development in Resource Limited Environments- Where You Live Shouldn't Determine If You Live: North Dakota Mission: Lifeline**

**Thomas Haldis, Sanford Health, Fargo, ND; Jeffrey Sather, Trinity Health System, Minot, ND; Karthik Reddy, Sanford Health, Bismarck, ND; Robert Oakfield, St Allexius Health System, Bismarck, ND; Yassar Almanaseer, Essentia Health System, Fargo, ND; Rabeea Aboufakhre, Altru Health System, Grand Forks, ND; Mindy Cook, American Heart Association, Jamestown, ND; Pamela Moe, American Heart Association, Sioux Falls, SD**

### Background

Mission: Lifeline is a strategic initiative to save lives and reduce disability by improving emergency readiness and response to heart attack patients. Heart disease is the number one killer in North Dakota and nationally. North Dakota consists of 53 counties over 69,001 square miles with a population of 688,000. Thirty-four entire counties are designated medically underserved areas and 13 counties have some part of them designated medically underserved. A large number of residents reside in the 36 frontier counties (142,800/680,000) with a population density of <6 people/mile, and 9 rural counties (102,000 of 680,000): <5000 residents. Population density of >6/mile together making up just over one third of the state population and 85% (45 of 53) of the physical territory. Eight urban counties with a city of at least 15,000 make up the remaining population at 63% (428,400 of 680,000). In 2011, ND M:L received a $7.1 million grant to bridge gaps in disparities in access to care by streamlining statewide STEMI systems.

### Methods

A statewide initiative was implemented for pre-hospital recognition, education, triage, and treatment of STEMI patients to the most appropriate reperfusion strategy. Ninety-eight percent of 123 EMS (123 of 125) licensed ground EMS received funding to enable pre-hospital 12 lead ECG acquisition and transmission to both referral and receiving hospitals. In person facilitated education was provided to each EMS agency in 3 rounds with focus on acquisition, recognition and triage of STEMI patients utilizing the ACC/AHA guidelines. PCI receiving hospital physician and nurse educator teams facilitated a standardized in person clinical STEMI education session at each of the 38 referring hospitals focused on utilizing a state recommended referring hospital STEMI protocol. EMS transport guideline, and a STEMI feedback process. Six of six PCI receiving hospitals collected data utilizing the ACTION GWTG Registry.

### Results

In ND, aggregate data from Q3 2012 to Q3 2013, there have been marked improvements in several measures. The ND Mission: Lifeline composite score increased from 93% (505/549) to 97% (471/482). This score measures adherence to 9 performance measures. Percentage of direct admit STEMI patients (Non EMS Arrival) with Door-to-device time ≤90 minutes, non-transfer, direct admit STEMI patients (arrival via EMS – Ambulance Only) with FMC-to-device time ≤90 minutes, reperfusion – eligible patients receiving any reperfusion therapy (PCI or thrombolysis), STEMI patients receiving aspirin within 24 hours of hospital arrival, STEMI patients on aspirin discharge, STEMI patients on beta blocker at discharge, 7. STEMI patients with LDL>100 who receive statins or lipid lowering drugs, STEMI patients with left ventricular systolic dysfunction on ACEI/ARB at discharge, STEMI patients that smoke with smoking cessation counseling at discharge. ST ECG obtained Pre-Hospital started at 46% (61/122) to 76% (92/121). ED Arrival to First In-Hospital ECG within 10 minutes increased from 68% (81/122) to 84% (103/122); Arrival to Primary PCI<90 minutes improved from 89% (32/37) to 100% (43/43).

### Conclusions

To sustain STEMI system of care for patients in ND, collaboration with regional partners, care standardization, aggregate data sharing and feedback have been identified as vital. Regional champions committed to systemization are central to EMS and referral hospital engagement and state level process improvement. PCI receiving hospitals lead the way in convening regional multidisciplinary teams meetings, and facilitating data feedback on STEMI systems at a state level to support a unified platform of sustainability.

### Limitations

Data was collected from ACTION Registry-GWTG™, which is the registry used by all PCI capable hospitals in ND. The results captured included patients that have presented directly to a PCI hospital via EMS or privately. Transfers from other acute facilities are not included in this data.

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**ND M:L Publications and Model Sharing**

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**Thomas Haldis, Sanford Health, Fargo, ND; Jeffrey Sather, Trinity Health System, Minot, ND; Karthik Reddy, Sanford Health, Bismarck, ND; Robert Oakfield, St Allexius Health System, Bismarck, ND; Yassar Almanaseer, Essentia Health System, Fargo, ND; Rabeea Aboufakhre, Altru Health System, Grand Forks, ND; Mindy Cook, American Heart Association, Jamestown, ND; Pamela Moe, American Heart Association, Sioux Falls, SD**

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A statewide initiative was implemented for pre-hospital recognition, education, triage, and treatment of STEMI patients to the most appropriate reperfusion strategy. Ninety-eight percent of 123 EMS (123 of 125) licensed ground EMS received funding to enable pre-hospital 12 lead ECG acquisition and transmission to both referral and receiving hospitals. In person facilitated education was provided to each EMS agency in 3 rounds with focus on acquisition, recognition and triage of STEMI patients utilizing the ACC/AHA guidelines. PCI receiving hospital physician and nurse educator teams facilitated a standardized in person clinical STEMI education session at each of the 38 referring hospitals focused on utilizing a state recommended referring hospital STEMI protocol. EMS transport guideline, and a STEMI feedback process. Six of six PCI receiving hospitals collected data utilizing the ACTION GWTG Registry.

**Results**

In ND, aggregate data from Q3 2012 to Q3 2013, there have been marked improvements in several measures. The ND Mission: Lifeline composite score increased from 93% (505/549) to 97% (471/482). This score measures adherence to 9 performance measures. Percentage of direct admit STEMI patients (Non EMS Arrival) with Door-to-device time ≤90 minutes, non-transfer, direct admit STEMI patients (arrival via EMS – Ambulance Only) with FMC-to-device time ≤90 minutes, reperfusion – eligible patients receiving any reperfusion therapy (PCI or thrombolysis), STEMI patients receiving aspirin within 24 hours of hospital arrival, STEMI patients on aspirin discharge, STEMI patients on beta blocker at discharge, 7. STEMI patients with LDL>100 who receive statins or lipid lowering drugs, STEMI patients with left ventricular systolic dysfunction on ACEI/ARB at discharge, STEMI patients that smoke with smoking cessation counseling at discharge. ST ECG obtained Pre-Hospital started at 46% (61/122) to 76% (92/121). ED Arrival to First In-Hospital ECG within 10 minutes increased from 68% (81/122) to 84% (103/122); Arrival to Primary PCI<90 minutes improved from 89% (32/37) to 100% (43/43).

**Conclusions**

To sustain STEMI system of care for patients in ND, collaboration with regional partners, care standardization, aggregate data sharing and feedback have been identified as vital. Regional champions committed to systemization are central to EMS and referral hospital engagement and state level process improvement. PCI receiving hospitals lead the way in convening regional multidisciplinary teams meetings, and facilitating data feedback on STEMI systems at a state level to support a unified platform of sustainability.

**Limitations**

Data was collected from ACTION Registry-GWTG™, which is the registry used by all PCI capable hospitals in ND. The results captured included patients that have presented directly to a PCI hospital via EMS or privately. Transfers from other acute facilities are not included in this data.
Improving Rural STEMI Care through Multi-State Sharing and Collaboration

Jeffrey Sather, MD Trinity Health, Tomasz Stys, MD Sanford Health, Richard Mullivain, RPH, BCPS Essentia Health, Gary Myers, MS, NREMT, Mindy Cook, RN, BSN, Pam Moe, RN, CPHQ, Michelle Gardner, MBA, American Heart Association, Midwest Affiliate

Background

Several factors can impede the timely delivery of optimal care to STEMI patients, particularly in rural states such as South Dakota, North Dakota, and Minnesota. South Dakota has 66 counties covering nearly 76,000 square miles. Five of the seven percutaneous coronary interventions (PCI)-capable facilities are located in two communities and travel distances between hospitals can exceed 200 miles. North Dakota consists of 53 counties over 65,001 square miles. Thirty-four counties are designated medically underserved areas and 13 counties have some part of them designated medically underserved. Similar distances between referring hospitals and PCI-capable facilities are also seen in the majority of the state of Minnesota. These rural areas are heavily dependent on volunteer ambulance services and the capabilities of the small referring (non-PCI or CAH) hospitals to receive the STEMI patient and transfer in a timely manner. Excluding the Twin Cities and Rochester, there are a total of 18 PCI-capable hospitals throughout rural Minnesota, South Dakota and North Dakota. Only two of these hospitals are Chest Pain Accredited, with one having Mission: Lifeline® Accreditation. There are 153 Critical Access Hospitals in this region, making them crucial to a STEMI system of care.

Methods

Mission: Lifeline® is a strategic initiative to save lives and reduce disability by improving emergency readiness and response to heart attack patients. With funding support, the American Heart Association, hospital, EMS and state stakeholders have worked together to improve each component of STEMI systems, including across state borders. The South Dakota project started in 2010 followed by North Dakota in 2011. Minnesota was launched in 2013. In each state, STEMI task forces and provider specific sub-committees were formed. Each PCI-capable hospital was asked to participate in data collection through ACTION Registry®-GWTG™. EMS agencies in North Dakota and South Dakota were granted funds to purchase 12-lead monitor/defibrillators. Minnesota is currently in the process of allocating these devises, based on funding availability. Critical Access Hospitals and other non-PCI-capable facilities participated in STEMI education which included ways to improve time critical processes and transfer protocols. An education plan was delivered to EMS agencies South Dakota and North Dakota as well, and this same plan is being adjusted to meet the needs in Minnesota.

2007-2010 Acute Myocardial Infarction (ICD10: I21 & I22)
35+ Age-Adjusted Mortality per 100,000 STEMI Receiving Center Drive Time

Results

A statewide STEMI protocol was adopted in 2012 in North Dakota. South Dakota used this to create their own guideline which was adopted in 2013. Both protocols will be shared with the Minnesota task force in 2014 by the South Dakota and North Dakota physician champions. The number of 12-lead ECG transmissions have more than tripled in South Dakota since the start of the project. In addition the time from First Medical Contact (FMC) to PCI was 77 minutes in South Dakota from Q4 2012-Q3 2013 beating the national average of 82 minutes. North Dakota is also beating the national average with a FMC to PCI time of 81 minutes during that same timeframe.

Conclusions

Although each state is very different, rural areas often have many of the same barriers for an effective state STEMI system. As the projects have moved forward, each state has approached each component a little differently and adjusted based on needs. The learning experience across state borders has been effective way to make progress. The hospital data and 12-lead ECG transmission increase has proven that there is better STEMI system awareness and competence throughout the states resulting in a faster time from first medical contact to device. The collaboration of EMS and hospitals around state borders will also help with the sustainability of the projects and most importantly, the ability for better outcomes for STEMI patients, regardless of their location.

Limitations

Data was collected from ACTION Registry®-GWTG™, which is the registry used by all PCI capable hospitals in SD, MN and ND. The first medical contact results captures patients that have presented directly to a PCI hospital via EMS or by walk-in. Transfers from other acute facilities are not included in this data. The ECG Transmissions were provided by LifeNet and includes the majority of transmissions.

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Webinar Series Invitation
Optimizing STEMI systems in Rural and Resource Limited Environments

Announcing a six part American Heart Association webinar series addressing STEMI system optimization in rural and resource limited states. Each webinar will be hosted by one state and specific topics will be discussed by state stakeholders, with a Q & A session for all at the end of each. We invite all STEMI system stakeholders across all rural states to participate in the entire series.

Each webinar will be facilitated by the hosting state’s Mission: Lifeline Director, volunteers, and Dr. David R. Burt. Dr. Burt, a veteran of the USC, practiced Emergency Medicine at the University of Virginia in Charlottesville. He is the creator of Project UPSTART - a quality improvement program focused on helping hospitals and systems improve care for STEMI patients. A native of Devils Lake, North Dakota, Dr. Burt attended medical school in Grand Forks. He is a current member of both the Mission: Lifeline ECC Taskforce and Advisory Working Group (AWG) and is a founding member of the Vergas Heart Attack Coalition. He has a particular interest in “Rural and Resource-Limited” STEMI care, and works with rural hospitals and systems throughout the country. He returns regularly to ND, where most of his family live.

Webinar series will be Noon-1 (CST or MT) on the 2nd Thursday of the month, April – Sept 2014
- April 10th, Noon-1 CST: South Dakota - Optimizing Performances in Rural STEMI Transfers: Calculation of SD Conduits
- May 8th, Noon-1 CST: North Dakota - Reperfusion decision making: Lytic vs PCI: ND Case Scenarios
- June 12th, Noon-1 MT: Wyoming - TBA
- July 10th, Noon-1 CST: Minnesota - TBA
- August 14th, Noon-1 CST: Nebraska - TBA
- September 11th, Noon-1 MT: Montana - TBA

RSVP Required – Log in info will be sent after RSVP
For South Dakota, North Dakota, Minnesota & Nebraska, RSVP to: ngia.masa@heart.org
For Wyoming and Montana, RSVP to your Mission: Lifeline Director

Mission: Lifeline Contact info:
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The American Heart Association
Mission: Lifeline® and the Midwest Affiliate presents:
Model Sharing: Developing and Implementing a STEMI EMS Education Curriculum in Frontier and Rural Regions

This free webinar will be held on Wednesday, July 23rd, 2014 at 12:00 noon CT.

Presenters Include:
- Jeffrey Sather, MD, FACEP, Chief Department of Medicine, Medical Director of Emergency Trauma Center, Trinity Hospital, Minot, North Dakota
- Travis Sper, MD BScMSc, PhD, Director of Simulation and Center for Pre-Hospital Care, Sanford Health, Sioux Falls, South Dakota
- Kathy Lomski, OJ Manager, FM Ambulance

US Canada Attendee Dial-in: (866) 575-9660
Conference ID: 4498516683
Attendees will be prompted to record Name and Phone Number

Amedeo Direct URL:

Let’s Get Started. Visit heart.org/missionlifeline
Importance is placed on immediately calling 911. Patient delay in reporting symptoms is one of the greatest obstacles to timely and successful care.
ND Public Awareness Campaign

**Know.**
Familiarize yourself with all the warning signs of a heart attack.

- Symptoms are not always severe—or limited to the typical chest pains you might expect.
  - Chest discomfort
  - Shortness of breath
  - Cold sweat
  - Upper body pain
  - Nausea
  - Lightheadedness

Not all of these signs occur in every heart attack. Sometimes they go away and return.

**Act.**
Dial 9-1-1 immediately at the first sign of a heart attack.

- A heart attack is a life or death emergency.
- Half of heart attack victims die within an hour of the first symptoms.
- Your heart can suffer permanent damage the longer you wait.
- 9-1-1 operators can provide instructions that can help save your life.

**Live.**
Don't waste precious minutes driving yourself to the hospital.

- EMS will monitor and transmit vital signs to the hospital so they are ready when you arrive.
- Ambulances are equipped to start treatment immediately.
- Your chance of survival is much greater when you dial 9-1-1.
- If you drive, you could injure yourself or others if your symptoms worsen while driving.

Your life is on the line. Dial 9-1-1.

[Link to website: www.heart.org/NorthDakota]
Program Evaluation and Quality Improvement
Data Collection and Analysis

ND Mission: Lifeline Qualitative Program Evaluation

RUPRI Center for Rural Health Policy Analysis
University of Iowa

ND Mission: Lifeline Blinded Regional Hospital Report
6 PCI Receiving Facilities Participating
AN ACT to create and enact a new chapter to title 23 of the North Dakota Century Code, relating to an acute cardiovascular emergency medical system.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. A new chapter to title 23 of the North Dakota Century Code is created and enacted as follows:

Definitions.
As used in this chapter:
1. "Department" means the state department of health.
2. "STEMI" means ST-elevation myocardial infarction.

Acute cardiovascular emergency medical system - duties of state department of health.
1. Reviewing consultation with, and approval of, a representation of the acute cardiovascular emergency medical system of care advisory committee, the department shall establish and maintain a comprehensive acute cardiovascular medical system for the state. The system must include standards for the following components:
2. A system plan
3. Prehospital emergency medical services
4. Hospitals, for which the standards must include:
   (1) Standards for designation, redesignation, and dedesignation of receiving and referring centers.
   (2) Standards for evaluation and quality improvement programs for designated centers.
   (3) Recognition of a hospital as a STEMI receiving center or as a STEMI referring center in making such designation, the standards must include consideration of whether the hospital:
      (a) Accredited as a mission: federal STEMI receiving center or mission: federal STEMI referring center by the society of cardiovascular patient care and the American heart association accreditation program, or
      (b) Accredited by a department-approved, nationally recognized organization that provides mission: federal STEMI receiving center and mission: federal STEMI referring center accreditation or a substantially equivalent.
2. System registries, for which the components must include a plan for achieving continuous quality improvement in the quality of care provided under the statewide system, including for STEMI response and treatment.
Facilitate and conduct North Dakota Cardiac System of Care Taskforce Meetings, including bi-annual conference calls, bi-annual in-person meetings, and annual conference.

Create and deliver statewide and regional education opportunities for hospital and EMS providers.
  - 4 regional trainings (EMS/Hospital BTWAN or in person)
    - On site EMS and Hospital education
    - Materials for the above education

Obtain ACTION Registry data for ongoing evaluation of the cardiac system of care, by executing appropriate agreement with ACC/NCDR prepared for: North Dakota Department of Health, Division of EMS and Trauma including Patient-level data access options: B. NCDR Registry quality checked data file reporting service, and NCDR Aggregated metrics access options, and D. Stakeholder letter of commitment for individual facility self-reporting.

Delivery Coordination for all of the above
Questions??

Mindy Cook, RN BSN
Director Mission: Lifeline North Dakota, Minnesota
American Heart Association, Midwest Affiliate

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