Surviving MI
AN ACC QUALITY INITIATIVE
<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00pm ET</td>
<td>Welcome and Introductions</td>
</tr>
<tr>
<td>1:05pm ET</td>
<td>Mississippi STEMI Network</td>
</tr>
<tr>
<td>1:20pm ET</td>
<td>Engaging executive leadership in culture change</td>
</tr>
<tr>
<td>1:35pm ET</td>
<td>Next Steps</td>
</tr>
<tr>
<td>1:40pm ET</td>
<td>Question-and-Answer</td>
</tr>
</tbody>
</table>
Lower 30-Day Mortality Rates with these Seven Strategies

1. Evidence-Based Protocols and Processes in Place
2. Nurse AND Physician Champions
3. Creative Problem Solving Culture
4. Regular Case Reviews with EMS Providers
5. Cardiologist Presence Around the Clock
6. Dedicated Nursing Staff Assigned to Cath Lab
7. Pharmacists Involved With Care
Surviving MI
AN ACC QUALITY INITIATIVE

Mississippi STEMI Network

Thad Waites, MD
Key Features of Top Performers

1. Organizational Values and Goals
2. Senior Management Involvement
3. Broad staff presence and expertise in AMI care
4. Communication and Coordination
5. Problem Solving and Learning

We are Number 1 in many things. Most, we don’t wanna be:

- Heart Disease
- Stroke
- Obesity, well maybe #2 now
- Infant Mortality
- Etc.
We are Number 1 in many things.

Stereotypes
Yes, we wear shoes.

Some of us even wear cleats.
Yes, we can read.
A few of us can even write.
The Social Determinants of Health Disproportionately Affect Mississippi’s Health
Representative Statewide Initiatives

Health
- Healthy Linkages
- Telemedicine
- FQHC
- MS Healthcare Alliance

Education
- MS Healthy Students Act
- Tupelo HealthWorks!
- Bower Learn to Move
- UMMC/MPB Southern Remedy Radio and Too Fat to Fight (Military)
- Let’s Move

Access to Care
- FQHC, MDH, Rural and Free Health Clinics
- Telemedicine
- School nurse programs
- Transportation systems

Poverty
- MS Center for Health Policy
- MSU Social Science Research Center

Race & Culture
- MSU PA Jackson Medical Corridor
- Telemedicine
- Expansion of medical specialty services (transplant, heart failure, congenital heart disease)

Systems of Care
- Jackson Medical Corridor
- Telemedicine
- Expansion of medical specialty services (transplant, heart failure, congenital heart disease)

Geography
- UMMC clinical pipeline
- UMMC Expansion of health professions’ and residency training
- William Carey D.O. School
- Mississippi College P.A.

• Jefferson County (Janelle Edwards)
• Holmes County (Detra Bishop)
• National Baptist Church (Michael Minor)
• Learn to Move (Larry Calhoun)
• Hernando (Mayor Chip Johnson)
• North MS Medical Foundation
• Bower Foundation (Anne Travis)
• UMMC/MUMC Community Health Advocate Training Partnerships

• Downstream health industry economic expansion
• Employer educational programs
• Barksdale, Hearin and MS Rural Physician Scholar Programs
• MS Center for Health Policy
• MSU Social Science Research Center
State Health Assessment

- MSDH chose to use the Mobilizing for Action through Partnerships and Planning (MAPP) process.
- 4 assessment tools
  - Forces of Change Assessment
  - Public Health System Assessment
  - Themes and Strengths Assessment
  - Health Status Assessment
All Mississippians living healthier, longer lives due to a thriving public health effort that is supported by active and committed citizens and organizations.

Address Social Determinants of Health

Reduce Poverty
Increase Educational Attainment

Improve Public Health Agenda
Improve Access to Care
Create a Culture of Health

Strengthen Public Health Infrastructure

Improve Infant Health
Improve Sexual Health
Reduce Rates of Chronic Disease

Improve Mental Health

Improve Health Status and Reduce Health Disparities
Three Statewide Systems of Care

- Trauma
- STEMI
- Stroke
How did we do it?

- Small state
- Well networked
- Involved
- American College of Cardiology Chapter
- Mississippi Healthcare Alliance
- Mission Lifeline
- Mississippi Department of Health
- Mississippi State Medical Association
Serve as 2013 State Capitol Doctor of the Day!

Sign up now to serve as Doctor of the Day for the 2015 legislative session any weekday from January to April. MSMA physicians who volunteer to serve as Doctor of the Day see patients, including legislators and their staff, for a variety of common ailments; the clinic is also staffed by the MSMA Capitol Nurse.

Doctors of the Day are granted floor privileges in both chambers of the State Legislature and are introduced in the House and the Senate at the opening of each day’s session. The experience offers physicians a close-up view of legislative action and the opportunity to promote the practice of medicine to our elected officials with a distinctive and personal approach.
Calcium Scoring of the Heart Mississippi State Legislature

The Mississippi Chapter of the American College of Cardiology has arranged for each legislator to have a calcium score test. This will be offered through the courtesy of several CT centers around the state. Calcium scoring is a screening procedure that identifies calcified plaque in coronary arteries. It is a very sensitive test and can answer a major health question, “Do I have coronary artery disease?” This is the disease that leads to heart attacks and the disease that remains the number one killer of Mississippians. If the calcium score is positive, then plaque is present in the coronary arteries. The amount of calcium (the score) is also predictive of risk. The higher the score the more the heart attack risk. Your calcium scoring test will be done by the CT scanner of your choice. It is a quick procedure and is done by x-ray. There is nothing invasive about it. No pre-tests are required and no needle sticks are involved. You will lie on an x-ray table and a scanner will rapidly scan your heart area. If you have a positive score, you should then seek the advice of a medical professional. This can, of course, be done with your own personal physician. Or, if you or your physician would like, we will have cardiologists available to answer your questions about your test result. The cardiologists are listed on the back of this page. We are pleased to be able to offer this study and we do hope you will have the opportunity to do this and to learn your calcium score. All you need to do is call one of the centers listed and schedule the study. The main contact person at each center is listed on the back of this page. If you have any questions about the project, itself, please call: Thad F. Waites, MD.
It was a pleasure to speak to you today and tell you about the **calcium score project of the MS. Chapter of the Am. Col. of Cardiology**. As I mentioned we have already presented this to the Mississippi Legislature and the two health committees approved us to proceed. I did speak to Mr. Price and he approved it.

The project will proceed as follows. Each legislator will be provided an information sheet. This will explain the calcium score test and will tell them about CT scanners. They will then be invited to call any CT scanner unit that is participating and **schedule a free calcium score**. Just by the timing of it, this will occur at the end of the regular session and I predict that most senators and representatives will have this done at the **scanner closest to their homes**. Each unit will then supply the legislator with their report. Afterwards, each individual will likely want to check with the doctor of his choice regarding the results. There are **cardiologists all over the state that have agreed to offer phone consultation** regarding the results to the doctors or the individuals.

I presume you are the contact person that I will need to list on the info sheet? If you would provide me the best contact number, I would appreciate it.

Please let me know if you need further information.

Thad F. Waites, MD, FACC
Governor for Mississippi in the American College of Cardiology.
We did a calcium score on Rep. >>>>>>> today. The score was 1668. I gave him a copy and he is going to take the results to his doctor at home.

Thanks,

K
Mississippi Healthcare Alliance

The History

www.mshealthcarealliance.org
Mississippi Healthcare Alliance

North Mississippi Medical Center
Mississippi Baptist Medical Center
St. Dominic Hospital
Forrest General Hospital
Singing River Health System
YOU CAN MAKE THE DIFFERENCE BETWEEN AN EVENT THAT KILLS AND ONE THAT DOESN’T. STEMI AND CARDIAC RESUSCITATION SYSTEMS OF CARE.
MHCA Partners of Care

- American College of Cardiology
- American Heart Association
- MS State Department of Health
- MS Hospital Association
- MS Division of Medicaid
- Wise Carter Child & Caraway, PA
- Matthews, Cutrer, & Lindsay, PA
Mississippi Healthcare Alliance Symposium

Saturday, August 28, 2010
7:00 a.m. – 3:30 p.m.
Butler Snow Building
1020 Highland Colony Parkway
Ridgeland, MS 39157

Systems of Care for Heart Attacks
TOP 10 LESSONS LEARNED!

1. *Do it the same way every time!* **STANDARDIZE**!
2. **KEEP IT SIMPLE**!
3. **TEAMWORK-LISTEN-TEAMWORK**
4. **MORE THAN D2B!!!!!!!!!!**
5. **FEEDBACK, FEEDBACK AND MORE FEEDBACK**!
6. Cardiologists need to get over it!
7. Now ED docs need to get over it!!
8. Key people with energy: CAN DO!!
9. There will be CHALLENGES!
   NO CHALLENGE is TOO BIG!!
10. Its more Important than I thought! JUST DO IT!!!!
EMS COMPONENTS OF A SYSTEM

1. PREHOSPITAL
2. TRIAGE
3. TRANSFER

50% use EMS
50% Pre-hosp ECG
Mississippi Healthcare Alliance

Baptist Memorial Hospital – Desoto
Baptist Memorial Hospital – Golden Triangle
Baptist Memorial Hospital – North Mississippi
Delta Regional Medical Center
North Mississippi Medical Center
Magnolia Regional Health Center
Central Mississippi Medical Center
Jeff Anderson Regional Medical Center
Mississippi Baptist Medical Center
River Region Medical Center
Rush Health Systems
St. Dominic Hospital
The University of Mississippi Medical Center
Forrest General Hospital
Gulfport Memorial Hospital
Singing River Health System
Southwest Mississippi Regional Medical Center
Wesley Medical Center
STEMI Care System

Mississippi State Board of Health
Approved Care Plan:

June 2011
STEMI

- Voluntary System
- STEMI Advisory Committee
- STEMI Performance Improvement Committee
- Developing Draft Rules/Regulations
Bureau of Acute Care Systems

- Trauma
- STEMI
- Stroke
  - Only State in United States with 3 Statewide Systems of Care
- Became an official bureau within Office of Health Protection – October 2014
Direct Presentation
POV

<table>
<thead>
<tr>
<th>Percentage</th>
<th>MS</th>
<th>Nation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2Q2012</td>
<td>49</td>
<td>37</td>
</tr>
<tr>
<td>3Q2012</td>
<td>46</td>
<td>37</td>
</tr>
<tr>
<td>4Q2012</td>
<td>46</td>
<td>37</td>
</tr>
<tr>
<td>1Q2013</td>
<td>46</td>
<td>37</td>
</tr>
<tr>
<td>2Q2013</td>
<td>46</td>
<td>36</td>
</tr>
<tr>
<td>3Q2013</td>
<td>43</td>
<td>36</td>
</tr>
<tr>
<td>4Q2013</td>
<td>44</td>
<td>36</td>
</tr>
<tr>
<td>1Q2014</td>
<td>39</td>
<td>36</td>
</tr>
</tbody>
</table>
Time Spent at Referral Facility

Minutes

- 2010: MS Average 89.5, Nation Average 66.5
- 2011: MS Average 79.2, Nation Average 64
- 2012: MS Average 70.6, Nation Average 60.5
- 1Q2013: MS Average 46, Nation Average 58
- 2Q2013: MS Average 59, Nation Average 60
- 3Q2013: MS Average 60, Nation Average 50
- 4Q2013: MS Average 63, Nation Average 60
- 1Q2014: MS Average 66, Nation Average 59

AMERICAN COLLEGE OF CARDIOLOGY
Time from Referral to Receiving Hospital (Transfer Time)

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>Q1 2013</th>
<th>Q2 2013</th>
<th>Q3 2013</th>
<th>Q4 2013</th>
<th>Q1 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS Average</td>
<td>41.2</td>
<td>37</td>
<td>35</td>
<td>34.2</td>
<td>35.5</td>
<td>34.5</td>
<td>34.2</td>
<td>33.5</td>
</tr>
<tr>
<td>Nation Average</td>
<td>40</td>
<td>36</td>
<td>35.5</td>
<td>35.5</td>
<td>34.5</td>
<td>34.5</td>
<td>33.5</td>
<td>33.5</td>
</tr>
</tbody>
</table>
Door to PCI
(Direct Presentation)
FMC to PCI (minutes)

Minutes

- 2010: MS Average 103, Nation Average 92
- 2011: MS Average 103, Nation Average 95
- 2012: MS Average 91, Nation Average 89
- 1Q2013: MS Average 86, Nation Average 86
- 2Q2013: MS Average 88, Nation Average 82
- 3Q2013: MS Average 79, Nation Average 82
- 4Q2013: MS Average 82, Nation Average 89
- 1Q2014: MS Average 81, Nation Average 81

MS Average

Nation Average
In-Hospital Mortality

<table>
<thead>
<tr>
<th>Year</th>
<th>MS Average</th>
<th>Nation Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>6.8</td>
<td>5.8</td>
</tr>
<tr>
<td>2011</td>
<td>6.7</td>
<td>5.9</td>
</tr>
<tr>
<td>2012</td>
<td>6.4</td>
<td>6.2</td>
</tr>
<tr>
<td>1Q2013</td>
<td>6.6</td>
<td>6.5</td>
</tr>
<tr>
<td>2Q2013</td>
<td>6.2</td>
<td>6.5</td>
</tr>
<tr>
<td>3Q2013</td>
<td>6.5</td>
<td>5.6</td>
</tr>
<tr>
<td>4Q2013</td>
<td>6.4</td>
<td>6.4</td>
</tr>
<tr>
<td>Strategy Associated With Lower RSMR</td>
<td>% Points RSMR Decrease (% implementing)</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Physician AND nurse champions for AMI care</td>
<td>0.92 (by 43%)</td>
<td></td>
</tr>
<tr>
<td>Organizational culture supports creative problem solving</td>
<td>0.66 (by 40%)</td>
<td></td>
</tr>
<tr>
<td>Monthly meetings with EMS to review AMI cases</td>
<td>0.61 (by 15%)</td>
<td></td>
</tr>
<tr>
<td>Nurses are not cross trained from ICU for the cardiac catheterization laboratory</td>
<td>0.41 (by 82%)</td>
<td></td>
</tr>
<tr>
<td>Pharmacists round on all patients with AMI</td>
<td>0.41 (by 35%)</td>
<td></td>
</tr>
<tr>
<td>Having a cardiologist onsite 24-7</td>
<td>0.54 (by 14%)</td>
<td></td>
</tr>
</tbody>
</table>

AMI 30-Day RSMR

2-fold variation in MI mortality rates:

Top decile: 10.1%
Lowest decile: 21.9%

Krumholz HM et al. Health Affairs 2007;26:75-85
Table 1. 30-Day Mortality Measure Results for the FY 2016 Hospital VBP Performance Period

<table>
<thead>
<tr>
<th>Measure [a]</th>
<th>Number of Eligible Discharges [b]</th>
<th>Performance Period Survival Rate [c]</th>
<th>Achievement Threshold [d]</th>
<th>Benchmark [e]</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMI 30D Mortality</td>
<td>254</td>
<td>0.868591</td>
<td>0.847472</td>
<td>0.862371</td>
</tr>
</tbody>
</table>
Arrival at First Facility to Device
Median Time (minutes)
Transfer In for Primary PCI

1. Arrival to Door Out at First Facility
2. Door Out at First Facility to PCI Door In
3. PCI Door In to Device

Sites labels and the corresponding number of patients eligible for at least one time interval are displayed on the x-axis.

Bars are not displayed when there are no patients eligible for at least one time interval. Additionally, specific time intervals without any eligible patients are not plotted.
2005: 2014 Q1
First Medical Contact to Device
Median Time (minutes)
Direct Presentation, Arriving via EMS

<table>
<thead>
<tr>
<th>1. FMC to Door</th>
<th>2. Door to Arrival at Cath Lab</th>
<th>3. Arrival at Cath Lab to Device Activation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYS (30)</td>
<td>20</td>
<td>33</td>
</tr>
<tr>
<td>A (3)</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>B (4)</td>
<td>34</td>
<td>34</td>
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<tr>
<td>C (1)</td>
<td>61</td>
<td>17</td>
</tr>
<tr>
<td>D (2)</td>
<td>14</td>
<td>24</td>
</tr>
<tr>
<td>E (10)</td>
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<td>23</td>
</tr>
<tr>
<td>F (4)</td>
<td>23</td>
<td>18</td>
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<tr>
<td>G (3)</td>
<td>76</td>
<td>32</td>
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<td>H (2)</td>
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<td>45</td>
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<tr>
<td>I (4)</td>
<td>39</td>
<td>34</td>
</tr>
<tr>
<td>J (6)</td>
<td>12</td>
<td>33</td>
</tr>
<tr>
<td>L (6)</td>
<td>70</td>
<td>46</td>
</tr>
<tr>
<td>M (3)</td>
<td>23</td>
<td>36</td>
</tr>
<tr>
<td>N (5)</td>
<td>67</td>
<td>44</td>
</tr>
<tr>
<td>O (7)</td>
<td>55</td>
<td>34</td>
</tr>
<tr>
<td>P (5)</td>
<td>32</td>
<td>27</td>
</tr>
<tr>
<td>Q (9)</td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td>S (6)</td>
<td>20</td>
<td>13</td>
</tr>
</tbody>
</table>

Note: Bars not displayed when there are no patients eligible for at least one time interval. Additionally, specific time intervals without any eligible patients are not plotted.
Mississippi working closely with ACC’s NCDR® to help achieve quality improvement
To Ultimately *Improve Care* in Mississippi STEMI Network

2013 Mississippi Code, Title 41, Chapter 63, § 41-63-9

NCDR®
NATIONAL CARDIOVASCULAR DATA REGISTRY

DATA

MISSISSIPPI STATE DEPARTMENT OF HEALTH

Mississippi Healthcare Alliance
Funding

• 2013 and 2014
  – $200,000 provided by Legislature from Tobacco Funds

• 2015
  – Additional $250,000 provided by Legislature in State General Funds

• Funds are provided through a contract with the Mississippi Health Care Alliance for development of the STEMI System of Care
MISSISSIPPI STATE DEPARTMENT OF HEALTH

ANNUAL REPORT 2013

- Infant mortality rate: down 6.4%
- TB cases: down 11%
- Vaccine coverage: up 14.3%
- Tuberculosis rates down 12.9%
- Current smoking prevalence rate: down 7.7%
- Obesity prevalence rate down by .9%
- Cardiovascular disease mortality rate: down 1.3%
- Teen pregnancy rate: down 10.3%
Engaging executive leadership in culture change

Eric Stecker MD, MPH
Discussants: Charles Kilo MD, MPH & Dana Bjarnason RN, PhD
Introductions

Eric Stecker
• Medical director for inpatient cardiology at OHSU
• Clinical electrophysiologist and researcher

Dana Bjarnason
• Chief Nursing Officer and EVP at OHSU
• Leading a culture change effort (patient safety)

Chuck Kilo
• Chief Medical Officer and EVP at OHSU
• Leading a culture and systems change effort (continuous quality improvement)
Goal for this talk

A conversation that will provoke:

• Reflection on your own organization
• Discussion with colleagues and superiors
• Roughing out a “next step” to improve the care of your patients
Thoughts on organizational culture
Organizational culture

“Culture eats strategy for breakfast”

- Peter Drucker (attributed)
Organizational culture

• What is it?
  The values and behaviors of people within an organization that create its unique environment and define its performance

• So far, limited evidence on the impact of culture change efforts

• But it is widely accepted as critical
Two paths to culture change

1. Leader-driven
2. Organic (like a social movement)

Both require executive leadership involvement
Different roles in culture change

Front-line champions
• Close to where care is delivered
• Respect of and access to patients, providers and others involved in front line patient care

Middle-level champions
• Control some budget and personnel
• Have a network that can get things done
• Tuned in to both patient care and ROI’s

Executive champions
• Influence tough or big budget decisions
• Remove barriers across larger swaths of organization
Importance of executive leadership

- Depends on how big the change is (degree of change × scope of change = bigness)
- Big change →
  - get a C-suite champion
  - get all hands on deck
  - (but be realistic)
- Focused change →
  - find a like-minded, dedicated group
  - (but try something ambitious)
Understanding and managing resistance

Gleicher's Formula
Formula for Change

D * V * F > R

The following factors are critical for organizational change:
- Dissatisfaction with AS-IS state
- Vision of possible TO-BE state
- First steps (the plan)

The change is possible if the product is greater than R:
- Resistance to change

http://www.comindwork.com/images/weekly/gleichers-formula-for-organizational-change.png
Engaging critical stakeholders

• All levels need to be engaged (front-line, middle and executive) for a successful program

• Executive level champions want to see a number of things, including:
  • An effective pitch about the need for change
  • Alignment with existing, high-priority organizational goals
  • Leadership by people with record of performance
  • A realistic plan
How you can use Surviving MI to help?
A great way to get the ball rolling

- Provides an opportunity for cardiologists and cardiac service line directors to sit down and talk about the big picture
- Requires consideration of key, evidence-based elements of systems of care
- Can provoke both culture change and process improvement projects
Monitoring progress and outcomes

Structure and processes of care

1. Use SAMI survey and ACTION Registry to evaluate current state and assess progress.

Outcomes

2. Monitor in-hospital AMI mortality with ACTION.
3. Monitor 30-day AMI mortality for Medicare patients (http://www.medicare.gov/hospitalcompare/)
Examples from our organization
What is OHSU doing?

CV institute established a quality steering committee

• Reviews and directs work of quality subcommittees
• Promotes regular review of outcome / process metrics by individual clinicians
• Promotes engagement in high priority focuses from executive leadership (and communicates to executive leadership)
What is OHSU doing?

Ischemic heart disease quality subcommittee

- Regular review of process and outcome metrics (UHC, NCDR, CMS)
- Regular reassessments of barriers and “wins” in systems of care
- Representatives from across the institute
- Achieves change using members’ networks, steering committee and line management
What is OHSU doing?

Two big system-wide culture change efforts (top-down model)

- Continuous improvement culture (lean management)
- Safety culture

CV Institute is engaging these efforts and often is a testing venue for them.
Discussion by Drs. Kilo and Bjarnason
Thanks!

Eric Stecker
steckere@ohsu.edu
Next Steps

1. Have a quality improvement team available
2. Complete online self-assessment at CVQuality.ACC.org/SurvivingMI
3. Use the Assessment results to identify success metrics to improve
4. Implement at least 2 strategies or tools
5. Share your story online
6. Post to the listserv
Surviving MI

AN ACC QUALITY INITIATIVE

Please submit your questions for the moderated question and answer session.

SurvivingMI@acc.org
CVQuality.ACC.org/SurvivingMI
The Quality Improvement for Institutions program combines the ACC’s NCDR data registries with toolkits and proven hospital-based quality improvement initiatives like Hospital to Home, the D2B Alliance and Surviving MI.