Surviving MI
AN ACC QUALITY INITIATIVE

June 26, 2014

Speaker Bio

Henry H. Ting, MD, MBA, FACC
• Professor of Medicine
• Associate Dean, Mayo Clinic College of Medicine
• Director, Mayo Clinic Quality Academy
Effective July 2014
• Senior Vice President and Chief Quality Officer, New York-Presbyterian Hospital, The University Hospital of Columbia and Cornell
**Speaker Bio**

**MaryAnne Elma, MPH**  
**Director, Quality Improvement Solutions**  
**American College of Cardiology**

In her 15 years at the ACC, MaryAnne has led efforts that bring evidence-based medicine into the field with practical solutions using social marketing practices and information design. She oversees a portfolio of QI implementation programs, including the Hospital-to-Home (H2H) Initiative, Surviving MI Initiative, Clinical Tools – and the ACC’s new Quality Improvement for Institutions program.

MaryAnne received her BA from Bucknell University and Masters in Public Health at the Johns Hopkins University School of Public Health.

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**MI Statistics**


- **New MI**: 635,000
- **Recurrent**: 280,000
- **Silent**: 150,000
MI Statistics

- Total MI: ~3,000,000
- Recurrent: 280,000
- Silent: 150,000

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AMI 30-Day RSMR

2-fold variation in MI mortality rates:
- Top decile: 10.1%
- Lowest decile: 21.9%

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Surviving MI Initiative

15% 

\[ \Delta 20\% \]

30,000 lives / yr

12%

Value Based Purchasing

**FY 2013 Program Measures**

<table>
<thead>
<tr>
<th>Domain</th>
<th>Included Measures</th>
<th>Domain Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Process of Care</td>
<td>• AMI—a. Miroscopy therapy note within 24 hrs of hospital admission</td>
<td>70%</td>
</tr>
<tr>
<td></td>
<td>• AMI-b. Primary PCI note within 90 Mins of Hospital Arrival</td>
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<tr>
<td></td>
<td>• HF-1. Discharge Instructions</td>
<td></td>
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<tr>
<td></td>
<td>• PI-3b. Blood Cultures Performed in ED Prior to Initial Antibiotic in Hospital</td>
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<td></td>
<td>• PH-2. Initial Antibiotic Selection for CAP in Immunocompetent Patient</td>
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<tr>
<td></td>
<td>• SCP-inf-1. Prophylactic Antibotic note within 1 hr Prior to Surgical Incision</td>
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<tr>
<td></td>
<td>• SCP-inf-2. Prophylactic Antibiotic Selection for Surgical Patients</td>
<td></td>
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<tr>
<td></td>
<td>• SCP-inf-3. Prophylactic Antibiotics Discontinued within 24 hrs After Surgery End Time</td>
<td></td>
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<tr>
<td></td>
<td>• SCP-inf-4. Cardiac Surgery Patients with Controlled HBP Postoperative Serum Glucose</td>
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<tr>
<td></td>
<td>• SCP-Card-2. Surgery Patients on a Beta Blocker Prior to Arrival that Received a Beta Blocker during the Perioperative Period</td>
<td></td>
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<tr>
<td></td>
<td>• SCP-VTE-1. Surgery Patients with Recommended Venous Thromboembolism Prophylaxis Ordered</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• SCP-VTE-2. Surgery Patients who Received Appropriate Venous Thromboembolism Prophylaxis within 24 hrs Prior to Surgery or 24 hrs After Surgery</td>
<td></td>
</tr>
<tr>
<td>Patient Experience</td>
<td>8 NCAMPS Items:</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>• Communication with Nurses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Communication with Doctors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Responsiveness of Hospital Staff</td>
<td></td>
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<tr>
<td></td>
<td>• Pain Management</td>
<td></td>
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<tr>
<td></td>
<td>• Communication about Medicines</td>
<td></td>
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<tr>
<td></td>
<td>• Cleanliness and Quietness of the Hospital Environment</td>
<td></td>
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<tr>
<td></td>
<td>• Discharge Information</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Overall Rating of Hospital</td>
<td></td>
</tr>
</tbody>
</table>

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Value Based Purchasing

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<th>Domain Weight</th>
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<tr>
<td>Clinical Process of Care</td>
<td>Same as FY 2013 with one addition:</td>
<td>45%</td>
</tr>
<tr>
<td></td>
<td>SCP-Inf-3. Postoperative Urinary Catheter Removal on Post-Operative Day 1 or 2</td>
<td></td>
</tr>
<tr>
<td>Patient experience</td>
<td>SAME AS FY 2013</td>
<td>55%</td>
</tr>
<tr>
<td>Outcomes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AMI 30-day Mortality Rate</td>
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<td></td>
<td>AMI 30-day Readmission Rate</td>
<td></td>
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<tr>
<td></td>
<td>Primary PCI within 90 minutes of Onset of Symptoms</td>
<td>25%</td>
</tr>
</tbody>
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**Background**

What Distinguishes Top-Performing Hospitals in Acute Myocardial Infarction Mortality Rates?

A Qualitative Study

Elizabeth H. Bradley, PhD; DeLisa A. Corry, PhD; Enza S. Spota, MD; W. Wehrtman, MD

Background: Mortality following acute myocardial infarction (AMI) is a vital measure of patient safety. The study aimed to identify factors that contributed to lower AMI mortality rates.

Methods: A qualitative study was conducted using in-depth interviews with hospital staff to gather insights.

Findings: Key factors included hospital culture, leadership commitment, and multidisciplinary teamwork.

Objective: To identify strategies that can improve AMI outcomes in hospitals.

Hospital Strategies for Reducing Risk-Standardized Mortality Rates in Acute Myocardial Infarction

Elizabeth H. Bradley, PhD; DeLisa A. Corry, PhD; Enza S. Spota, MD; W. Wehrtman, MD

Background: Despite recent improvements in survival after acute myocardial infarction (AMI), U.S. hospitals vary 2-fold in their 30-day risk-standardized mortality rates (RSARs). This variability affects patient outcomes and hospital reputations.

Methods: A cross-sectional survey of 937 hospitals was conducted to assess strategies for reducing RSARs.

Findings: Strategies included enhancing emergency care, improving discharge processes, and implementing multidisciplinary rounds.

Objective: To identify effective strategies that can reduce RSARs in hospitals.
AMI 30-Day RSMR

- Hospital volume
- Urban or rural location
- Hospital teaching status
- Geographic region
- Safety net status
- Socioeconomic status of patients
Key Themes of Top Performers

1. Organizational values and goals
2. Senior management involvement
3. Broad staff engagement & expertise in AMI care
4. Communication & coordination among groups
5. Problem solving and learning

2. Senior management involvement
   - “this is not acceptable and this is where we need to go, what do you need to get this done”
   - “we use quality data to make strategic planning and resource allocation decisions”
   - “accountability for low performers and recognition for high performers”

✗ “I have been here 7 years, and this is the third CEO, the second medical director, and third VP of nursing”
Key Themes of Top Performers

3. Broad staff engagement & expertise in AMI care
   • “empowered physician and nurse champions”
   • “a nurse started writing notes in physician progress note section – this is my assessment...I want you to read it, it’s not in the nurse’s section...I have some ideas and am open to talk about it”

✗ “there are no physicians on the committee...and they try to implement changes...and get it wrong”

✗ “cardiologists are little bit like bears and not the kindest, if a nurse calls about meds, they say I gave you orders, why are you calling me again?”

Strategies Associated with Lower MI Mortality

<table>
<thead>
<tr>
<th>Strategy associated with lower RSMR</th>
<th>% Points Decrease in RSMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician AND nurse champions for AMI care</td>
<td>0.88</td>
</tr>
<tr>
<td>Organizational culture that supports creative problem solving</td>
<td>0.84</td>
</tr>
<tr>
<td>Monthly meetings with EMS to review AMI cases</td>
<td>0.70</td>
</tr>
<tr>
<td>Cardiologists on site 24/7 (including fellows)</td>
<td>0.54</td>
</tr>
<tr>
<td>Nurses are not cross trained from ICU for the cardiac catheterization laboratory</td>
<td>0.44</td>
</tr>
<tr>
<td>Pharmacists round on all patients with AMI</td>
<td>0.41</td>
</tr>
</tbody>
</table>

Bradley EA, Ting HH. Annals Intern Med. 2012; 156:618-626
Strategies Associated with Lower MI Mortality

<table>
<thead>
<tr>
<th>Strategy associated with lower RSMR</th>
<th>% Points Decrease in RSMR</th>
<th>% Hospitals Using Each Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician AND nurse champions for AMI care</td>
<td>0.88</td>
<td>43</td>
</tr>
<tr>
<td>Organizational culture that supports creative problem solving</td>
<td>0.84</td>
<td>40</td>
</tr>
<tr>
<td>Monthly meetings with EMS to review AMI cases</td>
<td>0.70</td>
<td>15</td>
</tr>
<tr>
<td>Cardiologists on site 24/7 (including fellows)</td>
<td>0.54</td>
<td>14</td>
</tr>
<tr>
<td>Nurses are not cross trained from ICU for the cardiac catheterization laboratory</td>
<td>0.44</td>
<td>82</td>
</tr>
<tr>
<td>Pharmacists round on all patients with AMI</td>
<td>0.41</td>
<td>35</td>
</tr>
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</table>

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These strategies work!

Key strategies affect the whole hospital and different members of the care team including physicians, nurses, pharmacists and hospital administrators.
Our Goal

Disseminate and implement strategies of top performers

Increase adoption of evidence-based strategies linked with lower 30-day RSMR

Improve hospital organizational culture

Create lasting change...

How We’ll Measure Success

- At least 350 ARG hospitals by June 2016
- Adoption of at least 2 implementation strategies by 80% of all participants
- 100% of total hospitals monitoring 30-day RSMR for AMI patients
- Reduction in 30-day RSMR for AMI patients over time
What “Participate” Means

1. Ability to collect and report in-hospital MI mortality
2. Active with Quality Improvement for Institutions
3. Has quality improvement team available
4. Participate in webinars and community calls
5. Complete online self-assessments
6. Implement at least 2 strategies or tools
7. Share your story online
8. Post to the listserv
What “Participate” Means

1. Ability to collect and report in-hospital MI mortality
   • Quarterly
   • Using any data source
     o ACTION-Get With the Guidelines Registry
     o Health system reports
     o Hospital self-reported report

2. Activate with Quality Improvement for Institutions
   • ACC program integrating registries, initiatives, and toolkits under one umbrella
   • Website to access Surviving MI Initiative resources
   • Free for NCDR hospitals
   • Non-NCDR hospital have a $5K fee

Program Website: CVQuality.acc.org/SurvivingMI
What “Participate” Means

3. Has a quality improvement team available
   - Clinical and administrative cardiovascular and quality organizational leadership
4. Participate in webinars and community calls
5. Complete online self-assessments
6. Implement at least 2 strategies or tools
7. Share your story online
8. Post to the listserv
Participation Activities
Implement a structured improvement project...

Approximately 6 webinars (30 minutes each with 15 minutes Q&A) and 3 community calls (30-45 minutes each).

Self-Assessment Surveys

- Helps hospitals prioritize QI efforts
- Identify tools for improvement
- Enables hospital to monitor progress quarterly
- Compares hospitals that have completed the assessment

<table>
<thead>
<tr>
<th>Overall Score</th>
<th>54%</th>
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</thead>
<tbody>
<tr>
<td>Organizational Priority</td>
<td>(7 possible points)</td>
</tr>
<tr>
<td>Success Metric 1: HF and MI patients are identified prior to discharge and risk of readmission is determined</td>
<td>(15 possible points)</td>
</tr>
<tr>
<td>Success Metric 2: Follow-up after cardiac rehab appointment within seven days is scheduled and documented in the medical record</td>
<td>(11 possible points)</td>
</tr>
<tr>
<td>Success Metric 3: Patient is provided with documentation of the scheduled appointment</td>
<td></td>
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</tbody>
</table>

Tools to help meet this metric:
1a. Strategies to identifying HF patients in the hospital
1b. Readmission Risk Calculator and Information: www.readmissionscore.org
1c. LACE Index Tool: HF readmission risk calculator
Change Culture to Change Care

Today

- **Improvement is possible:**
  There are known evidence-based strategies you can adopt

Tomorrow

- **Sustainable change:**
  Changing culture will improve other patient outcomes

Your Next Steps

1. Have your baseline in-hospital MI mortality
2. Activate your ACC Quality Improvement for Institutions account
3. Confirm your quality improvement team
4. Tune in for the next webinar in Fall 2014: “Introduction to Evidence”
5. Visit [CVQuality.acc.org/SurvivingMI](http://CVQuality.acc.org/SurvivingMI) for more resources on Getting Started
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.

Release the power of your data at CVQuality.acc.org.