NCDR 13 Annual Conference

ACTION Registry-GWTG Workshop #1
Disclosures

• Dr. Fonarow, MD, FACC, FAHA
  – Boston Scientific, Takeda, Amgen, Johnson&Johnson, Medtronic, Gambro, NIH/NIAID, Novartis, NHLBI

• Kim Hustler RN
  No Disclosures

• Susan Rogers RN, MSN, NE-BC
  No Disclosures
Objectives

- Discuss the registry updates for ACTION Registry-GWTG
- Verbalize ACTION Registry-GWTG recognition criteria
ARS Question # 1
How Long Have YOU Been Participating In THE ACTION Registry-GWTG Data Collection Process?

1. Less than 1 year
2. 1-3 Years
3. 4-7 years
4. Not applicable
Registry Updates

![Graph showing the number of enrolled participants from 2007 to 2013.](image)

- 2007: 175 participants
- 2008: 300 participants
- 2009: 575 participants
- 2010: 640 participants
- 2011: 656 participants
- 2012: 680 participants
- 2013: 800 participants

Legend: Enrolled Participants

Source: NCDR®
# Recognition Levels

<table>
<thead>
<tr>
<th>Award Levels</th>
<th>Must meet compliance on composite measures</th>
<th>Participate in</th>
</tr>
</thead>
</table>
| **Platinum** | 90% compliance  
> = 8 consecutive quarters entering data | Premier |
| **Gold**     | 90% compliance  
> = 8 consecutive quarters entering data | Premier or Limited |
| **Silver**   | 90% compliance  
> = 4 consecutive quarters entering data | Premier or Limited |
Recognition

2012
• 164 hospitals met the Platinum level
• 20 hospitals met the Gold level
• 73 hospitals met the Silver level

2011
• 171 hospitals met Gold level
• 88 hospitals met Silver level
Reducing 30 Readmission
Using
ACTION Registry-GWTG Data

Workshop 7
Objectives

• Discuss the changes CMS has made to reimbursement for avoidable readmissions.

• Discuss challenges to collecting 30 day readmission data.

• Discuss what the H2H initiative offers hospitals.
What you need to know

• Effective 2012 Medicare is reduced reimbursement for avoidable re-admissions

  Patient Protection and Affordable Care Act (PPAC)

• Not all readmissions are avoidable
  – Not all readmissions are avoidable, some are
Legend:

- Better than U.S. National Rate
- No different than U.S. National Rate
- Worse than U.S. National Rate

Range of uncertainty around estimate death rate

Interval Estimate

Estimated Risk adjusted death rate

Hover over the carrot to view interval estimate range
Rate of readmission for heart attack patients

Lower the percent the better
Challenges to capturing the data

• No resources available to follow up after D/C

• Hospitals that attempt to do 30 day follow up
  – Not reliable data, not collected consistently
  – Data not accurate, not reliable for research
Figure 1. Thirty-Day Readmissions by Day (0-30) Following Hospitalization

Acute myocardial infarction hospitalization

- Days 0-3: Percentage of all readmissions, 19.1
- Days 0-7: Percentage of all readmissions, 40.1
- Days 0-15: Percentage of all readmissions, 67.6

Days Following Hospital Discharge:

- Days 0-30

Percentage of 30-Day Readmissions:

- Days 0-30
What Needs to be in Place to ↓
30 Day Re-admissions?

• Implementation of a hospital re-admission program
  - To include quality data reporting measures
• Case Management: Assess readiness for D/C
• Patient Communication: A level of understanding & adherence after D/C
• Follow up Care: Assure patients understand and follow through with D/C medications and rehab
Why Report Outcomes?

• Readmissions are costly, and often preventable

• Measuring & reporting readmission rates will create incentives for hospitals and health systems to:
  
  • Evaluate the spectrum of care to patients
  • Identify systemic or condition-specific changes that will make care safer & more effective
  • Assess the readiness of patients for discharge
  • Improve discharge instructions
  • Reconcile medications
  • Transition patients to outpatient care or other institutional care more toughly
## Baseline Characteristics

### STEMI vs. NSTEMI

<table>
<thead>
<tr>
<th>Variable</th>
<th>STEMI (n= 50,604 )</th>
<th>NSTEMI (n= 79,520 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (yrs)</td>
<td>62</td>
<td>67</td>
</tr>
<tr>
<td>Female sex</td>
<td>29%</td>
<td>39%</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>25%</td>
<td>38%</td>
</tr>
<tr>
<td>Prior MI</td>
<td>19%</td>
<td>30%</td>
</tr>
<tr>
<td>Prior HF</td>
<td>5%</td>
<td>18%</td>
</tr>
<tr>
<td>Prior PCI</td>
<td>20%</td>
<td>28%</td>
</tr>
<tr>
<td>Prior CABG</td>
<td>6%</td>
<td>19%</td>
</tr>
<tr>
<td>Prior stroke</td>
<td>5%</td>
<td>10%</td>
</tr>
</tbody>
</table>

ACTION Registry-GWTG DATA: July 01, 2011 - June 30, 2012
**In-Hospital Outcomes**
**STEMI vs. NSTEMI**

<table>
<thead>
<tr>
<th>Variable</th>
<th>STEMI (n = 50,604)</th>
<th>NSTEMI (n = 79,520)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median hospital LOS</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Death*</td>
<td>6.2%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Re-infarction</td>
<td>0.8%</td>
<td>0.6%</td>
</tr>
<tr>
<td>HF</td>
<td>5.2%</td>
<td>5.2%</td>
</tr>
<tr>
<td>Cardiogenic Shock</td>
<td>4.5%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Stroke</td>
<td>0.5%</td>
<td>0.6%</td>
</tr>
<tr>
<td>RBC Transfusion**</td>
<td>3.7%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Suspected Bleeding Event**</td>
<td>3.2%</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

*Unadjusted mortality
** Among non-CABG patients

ACTION Registry-GWTG DATA: July 01, 2011 - June 30, 2012
How Does ACTION Fit In?

Uses established guidelines of care

Performance Measures:

**Acute/In-hospital Measures**

- Aspirin Arrival
- STEMI - Any reperfusion
- STEMI - Lytic - Door to Needle
- STEMI - PCI – D2B
- STEMI - D2B Transfer in
- LVSD Evaluation
Performance Measures

Discharge Performance Measures

- Aspirin
- B-blocker
- ACE or ARB
- Statin for LDL \( \geq 100 \text{mg/dL} \)
- Smoking cessation
- Cardiac rehabilitation
Performance Measures

Discharge Performance Measures

- Aspirin
- B-blocker
- ACE or ARB
- Statin for LDL ≥100mg/dL
- Smoking cessation
- Cardiac rehabilitation
Performance Measures

Discharge Performance Measures

Aspirin
B-blocker
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Smoking cessation
Cardiac rehabilitation
Performance Measures

Discharge Performance Measures

Aspirin
B-blocker
ACE or ARB
Statin for \( \text{LDL} \geq 100\text{mg/dL} \)
Smoking cessation
Cardiac rehabilitation
Cardiac Rehabilitation

Team members who assist patients with recognition of signs and symptoms:

- Physician
- Nurse
- Social worker
- Occupational therapist
- Pharmacist

» Exercise safely.
» Eat a heart-healthy diet.
» Quit smoking.
» Reduce stress and depression.
» Get back to work sooner
Reduce Risk and Cost

- In a study where a nurse educator provided cardiovascular patients with a pharmacological plan (a description of the reason for drug use, mechanism of action, possible drug interactions, and symptom management) in addition to providing a list of medications, dosage, and instructions, participating patients had a 35% lower risk of readmission or death.

- Discharge planning and home follow-up including medication management has been shown to reduce readmissions and reduce length of hospital stay. In a study of elderly patients who received medication management discharge planning and follow-up, total Medicare reimbursements for health services in the control group were approximately 1.2 million and only 600,000 in the intervention group.

- It is estimated that issues with medication use and poor medication adherence in cardiovascular treatment costs the U.S. $100 billion annually.\(^{23}\)
Medication Use Correlates with a Decrease in Patient Mortality

Medication use has been proven to reduce morbidity and mortality in patients with Heart failure and AMI. Using medication as a tx continues to increase.

The increase in cardiovascular medication

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Continued</th>
</tr>
</thead>
<tbody>
<tr>
<td>p Value for Trend</td>
<td>All Years</td>
</tr>
<tr>
<td>Post-MI statin</td>
<td>7.6</td>
</tr>
<tr>
<td>Post-MI BB</td>
<td>41.5</td>
</tr>
<tr>
<td>Post-MI ACE/ARB</td>
<td>39.2</td>
</tr>
<tr>
<td>Post-MI antiplatelet</td>
<td>2.6</td>
</tr>
</tbody>
</table>
Quality Metrics

- Door to EKG (within 10 min)
- **STEMI- Acute ADP Receptor Inhibitor Therapy**
  - Vascularized Patients Discharged on ADP Receptor Inhibitors
  - ADP Receptor Inhibitors Prescribed at Discharge for medically treated patients
  - LDL assessment (in-hospital)
  - NSTEMI - Excessive Initial UFH Dosing
  - Excessive Initial Enoxaparin Dosing
  - Excessive Initial GP IIb/IIIa Dosing
  - STEMI - Anticoagulant
  - Aldosterone Blocking Agents at Discharge
Quality Metrics

- Door to EKG (within 10 min)
- STEMI - Acute ADP Receptor Inhibitor Therapy

**Vascularized Patients Discharged on ADP Receptor Inhibitors**

- ADP Receptor Inhibitors Prescribed at Discharge for medically treated patients
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- Aldosterone Blocking Agents at Discharge
Discharge Medications
STE MI vs. NSTEMI

* P2Y12’s may overlap

ACTION Registry-GWTG DATA: July 01, 2011 - June 30, 2012
Discharge Interventions
STEMI vs. NSTEMI

% Use

STEMI  NSTEMI

ACTION Registry-GWTG DATA: July 01, 2011 - June 30, 2012
Goal
To reduce 30 day, all-cause, risk standardized readmission rates for patients discharged with cardiac conditions by 20%

Core Concept Areas
• Follow-up within 1 week of discharge
• Post-discharge medication management
• Patient recognition of signs and symptoms

Components Include:
• 1 topic focus
• 1 tool kit
• 3 webinars
• 1 survey

Community call-to-action to help build tools and strategies to reduce readmissions
Success Metrics and Tools

Reducing readmissions is possible if-

- The clinician does…
- The patient does…

To help the clinician and patient be successful, H2H provides *tools* for each metric.
Welcome to the H2H National Quality Improvement Initiative

Health care practitioners face a major challenge: how to reduce 30-day readmissions for heart failure and acute myocardial infarction—or risk losing Medicare reimbursement for these admissions.

The Hospital to Home (H2H) initiative, led by the American College of Cardiology and the Institute for Healthcare Improvement (IHI), is a national quality improvement campaign to reduce cardiovascular-related hospital readmissions and improve the transition from inpatient to outpatient status for individuals hospitalized with cardiovascular disease.
H2H Challenges

“See You in 7” Challenge
Goal: All patients discharged with a diagnosis of HF and MI have a scheduled follow-up appointment /cardiac rehab referral made within 7 days of discharge

“Mind Your Meds” Challenge
Goal: Clinicians and patients discharged with a diagnosis of HF/MI work together and ensure optimal medication management.

“Signs and Symptoms” Challenge
Goal: Activate patients to recognize early warning signs and have a plan to address them.
New to H2H?
Register on the H2H Website

Enrolled in H2H and don’t know how to get started?
Review the “Getting Ready Checklist”
Outcomes Report Metric #21
Cardiac rehabilitation patient referral from an inpatient setting

Documentation:

- 35 yo presented to ED 3 hours of “burning” chest pain- radiating to arms & back- diaphoresis & nausea
- Risk factors- dyslipidemia, obesity
- ECG- STEMI
- Positive Troponin
- Angiography results: Normal coronary arteries, normal systolic function, mild elevated end-diastolic pressure, EF 55%
ARS Question #10

Would this patient be included in the metric cardiac rehabilitation at discharge?

1. No
2. Yes

<table>
<thead>
<tr>
<th>Cardiac rehabilitation patient referral from an inpatient setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>My Hospital</td>
</tr>
<tr>
<td>91.3%</td>
</tr>
</tbody>
</table>

Proportion of patients that received a cardiac rehab referral. [Detail Line: 1023]
Cardiac rehabilitation patient referral from an inpatient setting

Documentation:

• 35 yo presented to ED 3 hours of “burning” chest pain-radiating to arms & back- diaphoresis & nausea
• Risk factors- dyslipidemia, obesity
• ECG- STEMI
• Positive Troponin
• Angiography results: Normal coronary arteries, normal systolic function, mild elevated end-diastolic pressure, EF 55%

Would this patient be included in the metric cardiac rehabilitation at discharge?

1. No
2. Yes
Answer: #2 Yes

- All STEMI and NSTEMI patients are recommended for out-patient cardiac rehab
- If you have Physician/ NP documentation that cardiac rehab is not indicated for this patient, you can select “ineligible”.

### Table: Cardiac rehabilitation patient referral from an inpatient setting

<table>
<thead>
<tr>
<th>Description: Proportion of patients that received a cardiac rehab referral.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
</tr>
<tr>
<td><strong>Inclusion Criteria</strong></td>
</tr>
<tr>
<td><strong>Exclusion Criteria</strong></td>
</tr>
</tbody>
</table>
NCDR. 13 Case Scenario Presentation
ACTION Registry-GWTG

Kim Hustler, RN
Clinical Quality Consultant
Case Scenarios

• Unique sessions for beginners to experts

• Real case scenarios

• Utilizing data definitions, performance measures & quality metrics

• Utilizing dashboard drill downs & data extract

• ARS participation
Objectives for the ACTION Registry-GWTG Case Scenario Presentation

Demonstrate knowledge of dashboard function through participation with ARS

Demonstrate knowledge of data drill down through participation with ARS

Discuss the relationships between data definitions and performance measures/quality metrics
Dashboard drilldown
Metric #12 ACE/ ARB at Discharge

Documentation:

• The dashboard score is 90%, you were certain you were at 100%

• You click on the bar to drill down
Metric #12 ACE/ARB at Discharge

- You identify the patient that was “no” in the numerator

<table>
<thead>
<tr>
<th>Patient ID</th>
<th>Incl. in Numerator</th>
<th>STEMI/ NSTEMI</th>
<th>LVEF %</th>
<th>Discharge Status</th>
<th>Discharge Location</th>
<th>ACE Inhibitor - Discharge</th>
<th>ARB - Discharge</th>
<th>Comfort Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>2270771</td>
<td>Yes</td>
<td>STEMI</td>
<td>25</td>
<td>Alive</td>
<td>Home</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2323491</td>
<td>Yes</td>
<td>STEMI</td>
<td>20</td>
<td>Alive</td>
<td>Extended care/TC</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2326821</td>
<td>Yes</td>
<td>STEMI</td>
<td>25</td>
<td>Alive</td>
<td>Home</td>
<td>Yes</td>
<td>No</td>
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<td>2326907</td>
<td>Yes</td>
<td>STEMI</td>
<td>20</td>
<td>Alive</td>
<td>Home</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2326925</td>
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<td>STEMI</td>
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<td>Alive</td>
<td>Home</td>
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<td>No</td>
<td>No</td>
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<tr>
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<td>STEMI</td>
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<td>Home</td>
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<td>No</td>
<td>No</td>
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<tr>
<td>2346679</td>
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<td>STEMI</td>
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<td>Home</td>
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<td>No</td>
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<td>No</td>
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<td>Home</td>
<td>Contraindicated</td>
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<td>No</td>
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<tr>
<td>2348142</td>
<td>Yes</td>
<td>STEMI</td>
<td>35</td>
<td>Alive</td>
<td>Home</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
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<tr>
<td>2348348</td>
<td>Yes</td>
<td>STEMI</td>
<td>30</td>
<td>Alive</td>
<td>Home</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
ARS Question #1

Why is this patient a miss for this metric?

1. Ejection Fraction was too low
2. The site resubmitted to DQR over riding this submission
3. ACE is answered as “contraindicated”
4. ARB is answered as “no”
Metric #12 ACE/ ARB at Discharge

Documentation:

• The dashboard score is 90%, you were certain you were at 100%- You click on the bar to drill down

<table>
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<tr>
<th>Patient ID</th>
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<td>Home</td>
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<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Why is this patient a miss for this metric?

1. Ejection Fraction was too low
2. The site resubmitted to DQR over riding this submission
3. ACE is answered as “contraindicated”
4. ARB is answered as “no”
Dashboard drilldown
Metric #27- Excessive GP IIb/IIIa

Documentation:

- Presents with symptoms of ACS
- ECG- STEMI- positive Troponin
- To cath lab for primary PCI
- GP IIb/IIIa administered- Eptifibatide 2mcg/kg/min
- Outcomes Report- 25% Excessive dosing GP IIb/IIIa
Metric #27 Drill Down

<table>
<thead>
<tr>
<th>Date</th>
<th>Discharge</th>
<th>MI/NST</th>
<th>Sex</th>
<th>Administered</th>
<th>Medication</th>
<th>GP Dose</th>
<th>GP Start Date/Time</th>
<th>Creatinine</th>
<th>Cr Cl</th>
<th>Dialysis</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>04/04/2012</td>
<td>No</td>
<td>STEMI</td>
<td>Male</td>
<td>Yes</td>
<td>Eptifibatide</td>
<td>1</td>
<td>0.9</td>
<td>132.7</td>
<td>No</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>04/25/2012</td>
<td>No</td>
<td>STEMI</td>
<td>Male</td>
<td>Yes</td>
<td>Eptifibatide</td>
<td>1</td>
<td>1.4</td>
<td>98.3</td>
<td>No</td>
<td>90.9</td>
<td></td>
</tr>
<tr>
<td>05/16/2012</td>
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<td>STEMI</td>
<td>Male</td>
<td>Yes</td>
<td>Eptifibatide</td>
<td>1</td>
<td>1.3</td>
<td>84.4</td>
<td>No</td>
<td>78.2</td>
<td></td>
</tr>
<tr>
<td>05/24/2012</td>
<td>Yes</td>
<td>STEMI</td>
<td>Female</td>
<td>Yes</td>
<td>Eptifibatide</td>
<td>1</td>
<td>0.9</td>
<td>46.2</td>
<td>No</td>
<td>48.2</td>
<td></td>
</tr>
</tbody>
</table>
ARS Question #2

What specifically should this site look for to determine why this patient is included in the excessive dosing metric?

1. Creatinine value
2. Weight
3. Creatinine clearance
4. Sex
Metric #27- Excessive GP IIb/IIIa

Documentation:
• ECG- STEMI- positive Troponin- primary PCI
• GP IIb/IIIa administered- Eptifibatide 2mcg/kg/min
• Outcomes Report- 25% for Metric #27

What specifically should this site look for to determine why a patient is included in the excessive dosing metric?
1. Creatinine value
2. Weight
3. Creatinine clearance
4. Sex
Dashboard drilldown
Metric #17- Reperfusion Therapy

Documentation:

- Presents with symptoms of ACS- STEMI
- To cath lab for primary PCI
- Diagnostic cath only due to coronary anatomy
- Consulted for CABG- denied- poor candidate
- Returned to cath lab for successful PCI
Metric #17 Drill Down

<table>
<thead>
<tr>
<th>Detail Line #</th>
<th>Den</th>
<th>Num</th>
<th>Den</th>
<th>%</th>
<th>Den</th>
<th>%</th>
<th>Num</th>
<th>Den</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1019</td>
<td>23</td>
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<td>24</td>
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<td></td>
<td>91</td>
<td>99</td>
<td>91.9</td>
<td></td>
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</tbody>
</table>

Sort By:

<table>
<thead>
<tr>
<th>Year/Quarter</th>
<th>Arrival Date/Time</th>
<th>Incl. in Numerator</th>
<th>STEMI/ NSTEMI</th>
<th>Throm Therapy</th>
<th>Subs ECG Date/Time</th>
<th>First Device Date/Time</th>
<th>PCI Indication</th>
<th>Reperfusion Candi</th>
<th>PCI Delay Reason</th>
<th>Primary PCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012Q3</td>
<td>09/27/2012 07:15</td>
<td>Yes</td>
<td>STEMI</td>
<td>No</td>
<td></td>
<td></td>
<td>Immediate primary PCI for STEMI</td>
<td>Yes</td>
<td>None</td>
<td>Yes</td>
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<td>2012Q3</td>
<td>07/30/2012 14:53</td>
<td>Yes</td>
<td>STEMI</td>
<td>No</td>
<td></td>
<td></td>
<td>Immediate primary PCI for STEMI</td>
<td>Yes</td>
<td>None</td>
<td>Yes</td>
</tr>
<tr>
<td>2012Q3</td>
<td>09/25/2012 17:46</td>
<td>No</td>
<td>STEMI</td>
<td>No</td>
<td></td>
<td>Sep 28, 2012 8:38:00 AM</td>
<td>PCI for NSTEMI</td>
<td>Yes</td>
<td>Not Specified</td>
<td>Yes</td>
</tr>
</tbody>
</table>
ARS Question #3

There are several issues with this case. Which issue caused this patient to not meet the Reperfusion metric?

1. PCI Indication
2. Primary PCI
3. Arrival to First Device time
4. PCI reason for delay
Metric #17- Reperfusion Therapy

Documentation:

- To cath lab for primary PCI
- Diagnostic cath only- Consulted for CABG- denied
- To cath lab for PCI- “Stable, successful reperfusion for STEMI, or completed infarction post-STEMI”

There are several issues with this case. Which issue caused this patient to not meet the Reperfusion metric?

1. PCI Indication
2. Primary PCI
3. Arrival to First Device time  PCI reason for delay

<table>
<thead>
<tr>
<th>Year/Quarter</th>
<th>Arrival Date/Time</th>
<th>Incl. in Numerator</th>
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<th>Reperfusion Candi</th>
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<th>Primary PCI</th>
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<td>2012Q3</td>
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<td>STEMI</td>
<td>No</td>
<td></td>
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<td>Not Specified</td>
<td>Yes</td>
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</tbody>
</table>
Dashboard drilldown
Metric #15- Time to Primary PCI Compare

Documentation:

- Facility enters data- ACTION Registry-GWTG & CathPCI
- Cardiologists are asking why the two registries have different times for the D2B metric
- The metrics appear to measure in the same manner
  - arrival time or subsequent ECG time as “door” time
  - first device activation time as the “device” time
  - non-system reasons for delay
ARS Question #4

Do these registries calculate the D2B time in different manners?

1. No
2. Yes
Metric #15- Time to Primary PCI Compare

Documentation:

- Facility enters data- ACTION Registry-GWTG & CathPCI
- Cardiologists are asking why the two registries have different times for the D2B metric
- The metrics appear to measure in the same manner
  – arrival time or subsequent ECG time as “door” time
  – first device activation time as the “device” time
  – non-system reasons for delay

Do these registries calculate the D2B time in different manners?

1. No
2. Yes
Dashboard drilldown
Metric #15 & #19- Time to Primary PCI/transfer

Documentation:

• Reviewing your data & noted a patient missing from both D2B metrics
• Metric #15 Proportion of STEMI patients receiving primary PCI <90 minutes & Metric #19 Time from ED arrival at STEMI referral facility to Primary PCI at STEMI receiving facility among transferred patients
• Patient transferred in- ECG negative - positive Troponin
• STEMI ECG 15 min. after arrival to your facility
• To cath lab for primary PCI
ARS Question #5

Which door to balloon metric should this patient be included in?

1. Metric #15 Proportion of STEMI patients receiving primary PCI <90 minutes (D2B)
2. Metric #19 Time from ED arrival at STEMI referral facility to Primary PCI at STEMI receiving facility among transferred patients (D2B transfer in)
3. Neither
Metric #15 & 19

Documentation:
• Patient transferred in- ECG negative - positive Troponin
• STEMI ECG 15 min. after arrival to your facility
• To cath lab for primary PCI

Which door to balloon metric should this patient be included in?
1. Metric #15 Proportion of STEMI patients receiving primary PCI <90 minutes (D2B)
2. Metric #19 Time from ED arrival at STEMI referral facility to Primary PCI at STEMI receiving facility among transferred patients (D2B transfer in)
3. Neither
Dashboard drill down
Metric #18 Door in Door out

Documentation:

• DIDO Metric #18- R4Q 61-67 min. (median)
• Primary PCI <90 min transfer in #19- R4Q 119-136 min.
• Both are higher than the registry median
ARS Question #6

How would you interpret the breakdown in times?

1. DIDO is too long
2. Transport time is too long
3. Arrival to device time is too long
Metric #15 & 19

Documentation:
- DIDO Metric #18- 61-67 min. (median)
- Primary PCI <90 min transfer in- 119-136 min.
- Both are higher than the registry median

How would you interpret the breakdown in times?
1. DIDO is too long
2. Transport time is too long
3. Arrival to device time is too long
Outcomes Report
US Benchmarking in report

Documentation:

Outcomes Report:

• Executive Summary-R4Q- ASA at arrival
  – My hospital 100%
  – US hospital median is 99.4%
  – US Hospital 90th Pctl 100%

• Detail line 1009-
  – My hospital 100%
  – US hospital R4Q 98.2%
  – US Comparison R4Q 98.2%
ARS Question #7

What has caused the discrepancy?

1. The 2 values are not both median
2. One aggregates by hospital the other by patient
3. There is no discrepancy
4. The discrepancy falls within acceptable statistical variance
US Benchmarking in report

Documentation:

• Executive Summary-R4Q- ASA at arrival
  – My hospital 100%
  – US hospital median is 99.4%
  – US Hospital 90th Pctl 100%

• Detail line 1009-
  – My hospital 100%
  – US hospital R4Q 98.2%
  – US Comparison R4Q 98.2%

What has caused the discrepancy?

1. The 2 values are not both median
2. One aggregates by hospital the other by patient
3. There is no discrepancy
4. The discrepancy falls within acceptable statistical variance
Dashboard drill down
Metric #28 Revascularized patients discharged on ADP receptor inhibitors

Documentation:

- In reviewing your Outcomes report
- Q1 2012 noted drop to 79.5%
- 58/73 received ADP
- 15 did not receive ADP

<table>
<thead>
<tr>
<th>Num</th>
<th>Den</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>58</td>
<td>73</td>
<td>79.5</td>
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</table>

28 - AMI revascularized patients discharged on ADP receptor inhibitors
Metric #28 Revascularized patients discharged on ADP receptor inhibitors

- Opened drill down, exported into Excel spreadsheet
- Filtered for Numerator column- No’s
- Noted all CABG- none received ADP

<table>
<thead>
<tr>
<th>Patient ID</th>
<th>Incl. in Numerator</th>
<th>STEMI/NSTEMI</th>
<th>PCI</th>
<th>CABG</th>
<th>Discharge Status</th>
<th>Discharge Location</th>
<th>Clopidogrel Prescribed at Discharge</th>
<th>Ticlopidine Prescribed at Discharge</th>
<th>Prasugrel Prescribed at Discharge</th>
<th>Comfort Measures</th>
<th>Warfarin at Discharge</th>
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<tbody>
<tr>
<td>122280</td>
<td>No</td>
<td>NSTEMI</td>
<td>No</td>
<td>Yes</td>
<td>Alive</td>
<td>Home</td>
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<td>No</td>
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<td>122291</td>
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<td>NSTEMI</td>
<td>No</td>
<td>Yes</td>
<td>Alive</td>
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<td>No</td>
<td>No</td>
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<td>124289</td>
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<td>NSTEMI</td>
<td>No</td>
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<td>Alive</td>
<td>Home</td>
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<td>124417</td>
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<td>NSTEMI</td>
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<td>Alive</td>
<td>Home</td>
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<td>No</td>
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<tr>
<td>131296</td>
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<td>NSTEMI</td>
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<td>Alive</td>
<td>Home</td>
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<td>131864</td>
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<td>Alive</td>
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<td>Alive</td>
<td>Home</td>
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<td>135599</td>
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<td>Alive</td>
<td>Home</td>
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<td>151057</td>
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<td>Alive</td>
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<td>151217</td>
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<td>152416</td>
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<td>Yes</td>
<td>Alive</td>
<td>Home</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
ARS Question #8

Should these patients be included in the denominator for ADP receptor inhibitor at discharge for revascularized patients?

1. No
2. Yes
Metric #28 Revascularized patients discharged on ADP receptor inhibitors

Documentation:
• In reviewing your Outcomes report
• Q1 2012 noted drop to 79.5%
• 58/73 received ADP
• 15 did not receive ADP
• Noted all CABG- none received ADP

Should these patients be included in the denominator for ADP receptor inhibitor at discharge for revascularized patients?
1. No
2. Yes
Dashboard drill down
Metric #22 Door to ECG

Documentation:

• In reviewing your Outcomes report:
  • Q3 2012 noted 56.5%
  • 26/46 ECG within 10 minutes
  • 20 did not meet the timeline

<table>
<thead>
<tr>
<th>Num</th>
<th>Den</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>46</td>
<td>56.5</td>
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</tbody>
</table>

22 - Door to 1st ECG in minutes
ARS Question #9

The R4Q is 51.8%. Should this site be concerned about these values?

1. No
2. Yes

<table>
<thead>
<tr>
<th>Door to 1st ECG in minutes</th>
<th>My Hospital</th>
<th>US Hospitals 50th Pctl</th>
<th>US Hospitals 90th Pctl</th>
</tr>
</thead>
<tbody>
<tr>
<td>51.8%</td>
<td>66.7%</td>
<td>84.4%</td>
<td></td>
</tr>
</tbody>
</table>

Proportion of AMI patients that received an ECG within 10 minute of arrival at participating hospital. [Detail Line:1025]
Dashboard drill down
Metric #22 Door to ECG

Documentation:
• Q3 2012 noted 56.5%
• 26/46 ECG within 10 minutes
• 20 did not meet the timeline

<table>
<thead>
<tr>
<th>Door to 1st ECG in minutes</th>
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<tbody>
<tr>
<td>My Hospital</td>
</tr>
<tr>
<td>51.8%</td>
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Proportion of AMI patients that received an ECG within 10 minute of arrival at participating hospital. [Detail Line:1025]

The R4Q is 51.8%. Should this site be concerned about these values?
1. No
2. Yes