Start Measuring. Start Improving. Webinar Series

Measuring and Communicating Resuscitation Quality Improvement

Wednesday April 26, 2017
12:00pm – 1:00pm CT

Presenter: Ronald R. Galfione, MD
Measuring and Communicating Resuscitation Quality Improvement

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Learn more at heart.org/resuscitation
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Disclosure

• Neither I nor any member of my immediate family has a financial relationship or interest with any proprietary entity producing health care goods, commercial products or services related to the content of this presentation

• I do not intend to discuss an unapproved/investigative use of commercial products/devices
Learning Objectives

• Discuss data collection and dissemination process
• Review how opportunities for improvement drive process and performance initiatives
• Explain benefits of effective and standardized communication processes
• Describe future initiatives and sustainability of performance outcomes
Overview

• About Houston Methodist Hospital
• About Code Blue/CERT Subcommittee
• Comparative measure outcomes data (2013-2015)
• Current initiatives
  – Drill downs on opportunities for improvement
  – Closed loop communication
  – Technology innovation
  – Policy review
• Future initiatives
  – EMR system Code Navigator/Narrator enhancements
  – Policy updates
• Summary
Houston Methodist System: Leading Medicine™

- 7 hospitals
- A research institute
- A comprehensive residency program
- 2,043 operating beds
- 814,309 outpatient visits
- 101,508 admissions
- 20,000 employees
- More than 4,500 physicians
- Physician organization with 572 physicians
- Affiliated with the Weill Cornell Medicine, New York Presbyterian Hospital, Texas A&M University and Texas Annual Conference of the United Methodist
Houston Methodist Hospital (HMH)
Houston, TX (Texas Medical Center)

- 830 operating beds
- 78 operating rooms
- 1,479 affiliated physicians
- 7,395 employees
- 36,720 admissions
- 326,534 outpatient visits
- 72,399 emergency room visits
- 1,026 births
- More than 12,406 international encounters from 84 countries
- 36 ACGME-accredited (plus 7 non-ACGME) residency programs with 262 ACGME residents and 6 non-ACGME residents
Code Blue/CERT - Subcommittee
Structure

Quality and Patient Safety Steering Committee

Critical Care CMPI*

Code Blue/CERT* Subcommittee

*Note: CMPI: Care Management Performance Improvement; CERT: Clinical Emergency Rapid Response Team
Membership

- Associate Quality Officer (AQO)
- Vice President Sponsorship
- Code Blue Responders
  - Resident Physicians
  - Nurse Practitioners
  - Respiratory Therapy
  - Anesthesia
- Pharmacy
- Supply Chain
- Nursing Leadership
- Quality Specialists
Subcommittee Activities

- Monthly meetings
- Facilitated by AQO
- Coordinated by Performance Improvement Specialist
- Utilization of PDCA (Plan-Do-Check-Act) Process
  - Disseminate and review of relevant data
  - Review & drill down opportunities for improvement
  - Brainstorm and identify action plans/initiatives
  - Implement & track outcomes of action plans/initiatives
  - Continue PDCA cycle
Data-Driven Performance Improvement
Designated quality specialists for Resuscitation Registry

Before 2013
- Abstractor not under Quality
- Had other job functions

2013
- Designated abstractor under Quality

2014 - Present
- Abstractor
- Performance Improvement (PI) Specialist
Utilized PDCA cycle to guide continuous performance improvement

- **PLAN**
  - Review data, practice, process, policies
  - Identify & discuss: trends, issues/OFIs* barriers, solutions, action plan

- **DO**
  - Implement or execute action plan
  - Reinforce best practice
  - Educate
  - Escalate

- **CHECK**
  - Review & analyze data
  - Identify effectiveness of action plan

- **ACT**
  - Implement or continue effective practice &/or process change
  - Repeat cycle

*OFIs: Opportunities for improvement
Advantages

• Quality department leadership oversight
• Dedicated abstractor
  ✓ Reviewed medical records & submitted registry data
  ✓ Educated staff when OFIs occur
• Dedicated Performance Improvement (PI) Specialist
  ✓ Liaison between abstractor & clinical staff/leadership/code blue subcommittee
• Performance Improvement (PI) Specialist or Abstractor
  ✓ Clarified & verified accuracy & completeness of documentation (phone, email, face-to-face)
  ✓ Provided more timely feedback & education to unit staff/leadership/Code Blue team
What did 2013 data say?

Recognition Measures Performance CY 2013

- % Pulseless Cardiac Events Monitored or Witnessed
- Time to First Chest Compression <= 1 min
- Device Confirmation of Correct ET Tube Placement
- Time to 1st Shock <= 2 min for VF/Pulseless VT
- Goal

Opportunity for Improvement (OFI)
Data Analysis

Is this an old or new OFI*?

Time to 1st Shock <= 2 Min for VF/Pulseless VT

*OFI: opportunity for improvement
Barriers

- Mean turn around time (TAT) of code record to Quality > 3 days from date of code event

  - Code Blue announced
  - CPR Initiated
  - Staff completes code record
    - Copy of code record should be sent to Quality (w/in 3 days of code)
  - Verificed & signed-off by unit manager
  - Data abstracted & entered in database

- No opportunity to address documentation issues timely
- Lack of buy-in and engagement from front-line staff
- Lack of knowledge regarding resuscitation best practices and registry measures
Initiatives

• Tracked code sheet turnaround time
• Presented data regularly to Code Blue/CERT Subcommittee
  – Holds people more accountable
  – Underpins transparency
• Drilled-down, discussed, and learned from OFI
• Communication loop process
• Presented to Nursing Leadership Council, Unit Nursing Leadership and Chief Nursing Officer
Initiatives (con’t): Communication Feedback Loop

- Code Blue documentation received by abstractor
- Identify OFIs with outcome measures
- Communication with unit leadership – electronic and in person; escalation to upper leadership if needed - accountability
- Enact action plans to address fallouts (PDCA** process)
- Monitoring and measuring success of action plans – sustainability and hardwiring

*OFI: opportunity for improvement; **PDCA: Plan-Do-Check-Act
**Data Trend**

### What changed in 2014 & 2015?

**Time to 1st Shock <= 2 Min for VF/Pulseless VT**

- **Before 2013**
  - Abstractor not under Quality
  - Had other job functions

- **2013**
  - Designated abstractor under Quality

- **2014 - Present**
  - Abstractor
  - Performance Improvement (PI) Specialist
  - Initiatives implemented
Measure of Success

**How did the data look when changes were implemented?**

![Recognition Measures Performance: 2013 - 2016](chart)

- % Pulseless Cardiac Events Monitored or Witnessed
- Time to First Chest Compression <= 1 min
- Device Confirmation of Correct ET Tube Placement
- Time to 1st Shock <= 2 min for VF/Pulseless VT
- Goal (85%)

Legend:
- SILVER
- GOLD

Year:
- 2013
- 2014
- 2015
- 2016
Sustainability – Current Initiatives

• Hardwire communication feedback loop
  – Timeliness of communication
  – Accountability
  – Collaboration with unit leadership & staff
  – Timely identification of OFIs
  – Code Blue Debriefing
    • ‘Hot’ and ‘Cold’ processes
  – Development & implementation of process improvement initiatives at point of care
    • Process ownership of frontline staff
Sustainability (cont.)

- Innovation – Integration of Technology
  - EMR* system Narrator/Navigator Project (capability to provide real time feedback)
  - Collaboration with end users, upper leadership, education, quality and code responders
  - Mock codes/training before implementation
  - Stepwise Rollout:

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<tr>
<th>Phase I: Emergency Department</th>
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<tr>
<td>Delineate roles</td>
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<tr>
<td>Implement</td>
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<td>Improve tool</td>
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<th>Phase II: Intensive Care Units</th>
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<td>Simulation Lab</td>
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<tr>
<td>training video</td>
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<tr>
<td>Super User Training</td>
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<td>Computer-based training module for all RN staff</td>
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<th>Phase III: Acute Care Units</th>
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<tr>
<td>Training</td>
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<td>Implement</td>
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*EMR: Electronic Medical Record
Sustainability (cont.)

• Code Blue Debriefing
  – Collaborative discussions regarding successes and barriers after code blue event
  – ‘Hot’ and ‘Cold’ processes

• Frequent policy review
  – Addressed geographical barriers
    > Possible delay in code team arrival > poor outcomes
  – Align with practice
  – Integration with electronic medical record system
Sustainability - Future

• Clinical decision support in EMR system Code Narrator/Navigator
  – Standardize & hardwire EMR system solutions
  – Complete & accurate documentation in real time
  – Comply with quality and outcome measure requirements
• Investigate new technology in driving efficiency and effectiveness of care
Recognize & Celebrate

American Heart Association Quality Achievement Awards

House of Blues New Orleans

November 14th, 2016
Summary

- Assign dedicated quality specialists to registry
- Standardize processes
- Provide timely feedback
- Be transparent with data
- Utilize PDCA Process for continuous process improvement
- Engage leadership & clinicians
- Learn from opportunities for improvement
- Align best practices with policies, practice, EMR* system
- Leverage technology to improve process, practice, & outcomes
- Recognize & celebrate successes
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Thank You for Joining!

We welcome your questions on Get With The Guidelines-Resuscitation

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