Regions Emergency Medicine Residency & Quality Improvement

8/23/12

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Overview

• Hospital QI
• Resident Projects
• Barriers
• Next Steps
• Conclusion
2011 Regions Hospital Emergency Department Quality of Care Measures

**Pneumonia**
- Antibiotic Within 6 hours: 98% (↑ from 96% in 2010)
- Antibiotic Selection for Admitted Patients: 97% (was 99% in 2010)
- Blood Culture prior to antibiotic: 96% (↑ from 94% in 2010)

**STEMI**
- Average Door to EKG: 8:13 (↓ from 11:06 in 2010)
- Average EKG to STEMI Page: 9:31 (↓ from 11:08 in 2010)
- Average Door to Vessel Open: 60:30 (↓ from 63:11 in 2010)

**Stroke**
- Thrombolytic Administered within 180 minutes of onset: 70% (was 84% in 2010)
- Hospital Dysphagia Screening: 79% (↑ from 76% 3Q09)
- ED Specific Dysphagia Screening: 82.5% (was 92% 3Q09)

**Universal Protocols**
- 90% (↑ from 81% in 2010)

**Pain and Vital Signs Assessments**
- Assess at Triage: 98% (2011)
- Reassess after 2 hours: 56%

**Other**
- Hand Hygiene: 84.4% (↑ from 83.5% in 2010)
- Behavioral Restraints 15 Minute Checks: 93% q4 (↑ from 85% in 2010)
- Behavioral Order Within 1 Hour: 93% q4 (↑ from 84% in 2010)
Our Residency
Resident Projects

- DKA
- Vital Signs
- Stroke
- Pain Management
- Other Projects
- Sepsis
DKA

- Epic Orderset with improved lab, fluid and insulin ordering

- RN orders for continued lab monitoring, fluid, insulin and glucose management
Pain Management

- EPIC Initial & Re-evaluation Nursing Alerts
- “Code Red” for pain control
- Goal: <10 minutes for long bone fractures
Vital Signs

• EPIC alert and discharge reminder

• Alert goal: Full vitals w/in 60 minutes

• Discharge reminder → Improved provider re-evaluation of vitals prior to discharge
Stroke

- Protocol to expedite appropriate patient care with goal door to IV TPA <60 minutes
- “Code Grey” & “Code CVA”
- Expedite lab & RN orders, prioritizes CT, alerts pharmacy, CT, Neurology to coordinate care
- Door to CT completion <25 minutes
Other Resident Projects

- Universal Protocol
- ED Lean Project
- Code EKG
- Code Blue
- TIA
- ED LEAN Projects
- PECARN Head CT Use
Sepsis

• 5 Million Lives (Hearts and Minds Campaign)

• Surviving Sepsis Campaign

• Healthpartners
Sepsis

• Implemented an ED sepsis alert system
• Collaborative effort to update sepsis labs, imaging, resuscitation & antibiotic ordering in the ED
• Invasive vs. non-invasive strategies
• Real-time monitoring of ED sepsis cases
Some Sepsis Results

• Decreased alert to Abx: 117 to 81 minutes
• Door to Abx: 149 to 139 minutes
• Compared to other systems, Regions ED has comparable 1 hr lactate to abx percentage (70-80%) since implementation
• 2012 HealthGrades Survival Rates (725 cases):
  – In-hospital: 90.6% (81% predicted)
  – 1 month: 83% (75% predicted)
  – 6 month: 69% (59% predicted)
Sepsis

- **Regions Hospital reduces sepsis mortality by more than 60 percent**

- *New rapid intervention program designed to further prevent deaths from sepsis*

- **ST. PAUL, Minn. – Feb. 16, 2011** – Regions Hospital, which already has one of the lowest mortality rates for sepsis in the nation, is implementing a new rapid intervention program to further increase the number of lives saved. Sepsis is a serious infection that can, within a few hours or even minutes, become life-threatening. It is among the top 10 leading causes of death in the U.S. An estimated 30-50 percent of patients with severe sepsis die.

- Regions Hospital has been implementing initiatives since 2005 to prevent death from sepsis as part of the Five Million Lives Campaign, an initiative from the Institute for Healthcare Improvement to significantly reduce death from illness and medical errors. As a result of these efforts, the number of deaths among patients with sepsis has decreased by more than 60 percent; falling from 33 percent to 12 percent.

- “Hospitals can save more lives if we have the same sense of urgency to identify and treat patients with sepsis as we do with patients who have heart attacks or traumatic injuries,” said HealthPartners physician Dr. Richard Mahr, who is the medical director for quality and safety at Regions.
Sepsis Next Steps

- Plan to implement throughout hospital (and potentially other HP hospital systems)
- POC Lactate
- Continue feedback (increase use of orderset, alert awareness, appropriate documentation)
- Improve MD to RN communication re: abx timing, urine, CXR
Quality Barriers

- “Where to Start?”
- “Who can help me?”
- “How can I get this done?”
- How can we see if this helped?”
Next Steps

• New ED Quality Director
• New Quality Chief Resident Role
• Resident Quality Policy
• IHI Introductory Open Course
• Improve Staff Participation
Quality Education and Quality Improvement Project Policy

Purpose

To define the process and responsibilities required for completion of the residency quality education and quality improvement project requirement.

Responsibilities

Quality Education
All residents will be required to complete the Institute for Healthcare Improvement (IHI) Open School Basic Training Certificate by the end of residency; the coursework is available online and free of charge at http://www.ihi.org/offerings/IHIOpenSchool/Courses/Pages/default.aspx.
The QI series of courses, QI 101 – QI 106, are required to be completed in the first three months of the intern year in preparation for choosing and starting your project. The rest of the coursework should be completed according to the schedule below:

<table>
<thead>
<tr>
<th>Required Coursework</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>QI 101 – QI 106</td>
<td>September 1 of intern year</td>
</tr>
<tr>
<td>PS 100 – PS 106</td>
<td>July 1 of second year</td>
</tr>
<tr>
<td>MHO 101, PFC 101, L 101, E PS1</td>
<td>July 1 of third year</td>
</tr>
</tbody>
</table>

In addition, residents will be required to complete the online coursework available on the ROD website under the Quality heading concurrently with their project.

Quality Improvement Project

All residents will be required to complete a quality improvement project by the end of their residency. This will be done in groups of 3-4 residents within your class. The intent of the project is to give you a better understanding of how quality improvement works from a hands on approach. The goal of the project should align with the internal and strategic goals of the emergency department. Faculty guidance will be provided, but the intent is for the residents to lead the project. Resources to guide you through this process, including project worksheets and pertinent articles are available on the ROD website and the quality wiki: https://sites.google.com/site/regionsemlongitudinalprogram/quality. This site is accessible through the following:
Username: residentoftheday
Password: resotheday
Spread the word of the IHI Open School!

Do you have 3 minutes? Check out our new video that highlights the value of the IHI Open School. And don’t forget to share the link with friends, classmates, and colleagues!

Chapter Spotlight

A feature highlighting innovative Chapters in the IHI Open School network
Chapter: UMC St. Radboud University
Location: Nijmegen, The Netherlands  Founded: October 2009
Spotlight: Leading a vibrant IHI Open School Chapter

What We’re Reading

- WGBH Podcast: Innovation In The Health Care System
- Washington Post blog: Does medical school pay off for women?
- KevinMD: How to train more physician leaders
- Wing of Zock: Developing Faculty: The Responsibility of the Office of Graduate Medical Education
Conclusion

• Quality Emphasis in the Hospital, ED and Residency

• Multitude of Resident-led Projects

• Still have barriers, but on the right course
Questions?