Academic Clinician Portfolio

JONATHAN M. RUBIN, M.D.
Associate Professor
Department of Emergency Medicine

CONTENTS

Evidence of:
1. Informatics Leadership
2. Quality Improvement Leadership
3. Clinical Administration Leadership
4. Teaching Excellence
1. INFORMATICS LEADERSHIP

A. Development of Care Coordination Note

**Problem**  
With the expanded roll-out of Epic, the need for a method of communication between multiple disciplines about specific patient management plans was identified. Prior to the implementation of Epic in the Froedtert Hospital Emergency Department (ED), this information was kept in binders that were accessed by clinicians during a patient’s ED visit. These documents needed to be replaced with an electronic tool that could be accessed not only by ED clinicians but also by other providers across the patient care continuum.

**Methods**  
- Led multidisciplinary workgroup that identified specific clinical conditions where the Epic Care Coordination Note functionality would be used and developed usage guidelines.
- Created SmartText that is used to enter pertinent information in a standardized, templated format.

**Results/Evidence of effectiveness**  
- Since implementation in October, 2010, Care Coordination Notes have been created by multiple disciplines campus-wide for over 1,800 patients. This has resulted in improved communication between providers across the continuum of patient care.
- Selected for presentation at Epic’s annual User Group Meeting that is attended by Epic customers worldwide.
Number of Care Coordination Notes added by month in 2012:

**B. Creation of Intranet Web Pages**

*Problem* ED clinicians of all types have difficulty finding relevant information at the point of care. The usual approach has been searching for printed messages posted in the ED or referring to personal archives. These methods lead to problems such as version control and timeliness of retrieval.

*Methods*  
- Collaborated with ED nursing leadership to create organizational structure for ED Intranet site.  
- Created structure and process for posting clinical pathways and resources so they can be accessed during patient care.  
- Created web page for ED that includes sub-pages for Clinical Resources, Administrative Resources, Epic ASAP, Education, Research and EMS/Disaster Preparedness.  
- Created web page for clinical pathways that includes sub-pages for Emergency Medicine, Internal Medicine and Neurosciences.
Results/Evidence of effectiveness  • These web pages are accessed by both ED providers and nursing for streamlined access to clinical reference information and departmental policies.

• Providers from multiple disciplines refer to and utilize the clinical pathways.

• Web page data for the period 9/19/12 - 12/17/12 (source: Froedtert Health Information Technology):

<table>
<thead>
<tr>
<th>Web page</th>
<th>Number of visits to page</th>
<th>Ranking out of 4000 Froedtert Hospital web pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Pathways (Emergency Medicine)</td>
<td>421</td>
<td>120</td>
</tr>
<tr>
<td>ED Intranet home page</td>
<td>340</td>
<td>161</td>
</tr>
<tr>
<td>ED Clinical Resources</td>
<td>162</td>
<td>423</td>
</tr>
</tbody>
</table>

2. QUALITY IMPROVEMENT LEADERSHIP

A. Creation of Emergency Department Joint Quality Review Committee

Problem  Quality issues reported to ED leaders were not being tracked, investigated or responded to in a coherent manner.

Methods  • Formed ED Joint Quality Review Committee in 2010, comprising ED physician and nursing leaders, to adjudicate cases.

• Established case tracking, review and feedback process.

• Added features to ED Quality Improvement Database to enable case tracking, provider notification, recording of findings and feedback to originator of issue and clinicians involved.

Results/Evidence of effectiveness  • Since 2010, 274 cases have been reviewed.
- Monthly summary report of cases reviewed is provided to Joint Quality Office and Risk Management for Froedtert Hospital and MCW.
- Reports are generated on a regular basis to track review findings, error classification and actions taken.
- Example report of actions taken for 274 cases reviewed:

<table>
<thead>
<tr>
<th>Cases Closed by ED Joint Quality Review Committee:</th>
<th>N = 466</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action Taken</td>
<td></td>
</tr>
</tbody>
</table>

**B. Emergency Department Patient Safety Conference**

**Problem** Morbidity and Mortality Conference had been scheduled sporadically and needed a broader focus on patient safety and adverse events.
Methods

▪ Cases for presentation are identified during the quality review process and tracked in the Quality Improvement database.

▪ Developed presenter packet of background materials to provide instruction in the principles of quality improvement and case analysis.

▪ Renamed session “Patient Safety Conference” to highlight broader approach to adverse events with a focus on cognitive bias.

Results/Evidence of effectiveness

▪ Monthly presentations of 2-3 cases per month are well-attended and highly rated.

▪ Focus on cognitive bias allows for deeper understanding and more robust mitigation strategies.

C. Emergency Medicine Patient Safety and Quality Officer

Results/Evidence of effectiveness

▪ Emergency Medicine’s comprehensive QI program is a leader among Froedtert Hospital clinical departments.

▪ Only department with a formalized review process for all adverse events.

▪ One of 3 departments with a quality committee structure.

▪ Performs regular reviews of:
  - ED deaths
  - Admissions within 72 hours of a prior ED visit
  - Inpatient deaths within 24 hours of admission via the ED
  - Radiology discrepancies
  - Adverse events

▪ Implemented educational process to provide feedback to Emergency Medicine attendings, residents and advanced practice providers (APPs).
• Created information flow process for Joint Quality Office and Risk Management for Froedtert Hospital and MCW.

3. CLINICAL ADMINISTRATION LEADERSHIP

A. Performance Review Process for Advanced Practice Providers

Problem
Annual performance evaluations of Emergency Medicine APPs were being conducted sporadically. In addition, designated supervising physicians needed to become more closely integrated in the review process.

Methods
• Developed an Emergency Medicine APP evaluation tool that is completed annually by all EM faculty.
• Developed a standardized template for annual performance reviews conducted by each supervising physician.

Results/Evidence of effectiveness
• Performance evaluation tool was modified and adopted by the MCW APP Councils for use by all APPs in the practice.

B. Improvement in Time to Note Completion by Residents

Problem
Clinical leadership of the ED established a goal of decreasing the amount of time that resident notes are incomplete. This would facilitate faculty feedback, allow other providers to see complete information about the ED visit and prepare residents for independent practice.

Methods
• Worked with Froedtert Clinical Informatics to develop Epic report to extract ED note data.
• Created database that imported note data and generated resident-level reporting and feedback.
Since 2011 residents have received a monthly report displaying unblinded data.

**Results/Evidence of effectiveness**  
Since reporting began, the average number of hours elapsed between residents creating and signing their notes has declined by 3.6:

<table>
<thead>
<tr>
<th>Year</th>
<th>Period</th>
<th>N</th>
<th>Average Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011 - 12</td>
<td>July - November</td>
<td>35,954</td>
<td>20.8</td>
</tr>
<tr>
<td>Jul - Nov 2012</td>
<td>N = 12,851</td>
<td></td>
<td>17.2</td>
</tr>
</tbody>
</table>

**C. Improvement in Pneumonia Core Measure**

**Problem**  
The Centers for Medicare and Medicaid Services (CMS) established the Hospital Value-Based Purchasing Program to reward hospitals that achieve benchmarks on a number of clinical process of care measures. One of these measures is the percentage of patients with pneumonia who had blood cultures drawn prior to administration of antibiotics. During a baseline monitoring period, the percentage for the Froedtert ED was below target and put the organization at risk for loss of incentive payments.

**Methods**  
- Collaborated with Dynacare Information Services and Froedtert Clinical Informatics to create reports to retrieve blood culture orders and antibiotic administration times for patients admitted with a diagnosis of pneumonia.
- Created database that merged separate lab and Epic reports and allowed analysis and comparison of time-points.
- Distributed weekly reports to ED leadership and Quality Management highlighting patients where desired outcomes were not being achieved.

**Results/Evidence of effectiveness**  
After initiating weekly reporting – and in conjunction with messaging to ED clinicians – the percentage of patients who had blood
cultures drawn prior to initiation of antibiotics improved from a mean of 93.8% to 99.5%:

- Project was adopted as departmental activity to satisfy the American Board of Emergency Medicine Patient Care Practice Improvement Activity requirement for Maintenance of Certification.

4. TEACHING EXCELLENCE

A. Emergency Medicine Grand Rounds Lecturer

Overall evaluation score for Emergency Medicine Grand Rounds Presentations for academic years 2009-2012:

<table>
<thead>
<tr>
<th></th>
<th>Rubin (N = 390)</th>
<th>All other lectures (N = 14151)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scored from</td>
<td>6.3</td>
<td>6.2</td>
</tr>
</tbody>
</table>

(B) Resident Bedside Teaching

- One of two recipients of teaching award given by graduating class of Emergency Medicine residents.

- Residents’ rating of overall reaching effectiveness - scored from 1 (poor) to 6 (outstanding):

\[\begin{array}{c|c|c|c}
\hline
\text{Academic Year} & \text{Rubin} & \text{Faculty mean} \\
\hline
2009-10 & 5.5 & 5.39 \\
2010-11 & 5.46 & 5.4 \\
2011-12 & 5.35 & 5.3 \\
\hline
\end{array}\]

Representative comments:

“Knows the literature really well. Careful listener – always feel like he is actually hearing my presentations.”

“Listens attentively; explains thought process. Very patient.”

“Loves to teach, much appreciated – excellent with Epic training as well.”

“Great knowledge of systems and department flow!”

“Values resident opinion in assessment and medical decision making for patient. Gives enough guidance but also allows resident to have autonomy.”

“Has reasonable realistic patient work ups. He does an excellent job of explaining his thought process to residents. He models excellent resource utilization and is clearly an Epic whiz.”

“Approachable and willing to teach. Good balance between supervision and independence.”

“Listening to him take a history is a great learning experience on its own. He also is very good with the computers to teaching us how to be efficient can be more helpful than any piece of medical knowledge.”

“A pleasure to work with, allows for resident autonomy with proper amount of supervision.”