TOOLS TO IMPLEMENT A QUALITY & SAFETY CURRICULUM FOR HEALTH SCIENCE TRAINEES

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Assistant Professor of Emergency Medicine

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Associate Professor of General Surgery
Introductions

• Brigitte Smith, M.D.
  • Assistant Professor of Vascular Surgery
  • Associate PD, Vascular Surgery Fellowship

• Megan Fix, M.D.
  • Assistant Professor of Emergency Medicine
  • Associate PD, Emergency Medicine Residency

• Amalia Cochran, M.D.
  • Associate Professor of General Surgery
  • Vice Chair of Education & Professionalism, Dept of Surgery
Curriculum Development

- 6-step Approach (Kern)

1. Problem identification and general needs assessment
2. Needs assessment for targeted learners
3. Goals and objectives
4. Educational strategy
5. Implementation
6. Assessment or evaluation

Session Outline

1) Problem Identification & General Needs Assessment
2) Needs Assessment for Targeted Learners
3) Goals & Objectives
   • Milestones
   • CLEB
4) Educational Strategies
   • Discuss!
5) Implementation
   • Anticipated barriers?
6) Assessment or Evaluation
   • Next year…
Needs Assessment: General

• ACGME Core Competencies
  • Systems-Based Practice
  • Practice-Based Learning and Improvement

• Milestones
  • Dependent on individual specialties
ACGME Core Competencies

- Practice-based Learning & Improvement
- Systems-based Practice
- Medical Knowledge
- Developing competence as a physician
- Professionalism
- Interpersonal & Communication Skills
- Patient Care
Milestones

Milestones are **competency-based** developmental outcomes (e.g., knowledge, skills, attitudes and performance) that can be **demonstrated progressively** by residents and fellows from the beginning of their education through graduation to the unsupervised practice of their specialties.

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<tbody>
<tr>
<td><strong>Has not</strong> Achieved Level 1</td>
<td><strong>Level 1</strong></td>
<td><strong>Level 2</strong></td>
<td><strong>Level 3</strong></td>
<td><strong>Level 4</strong></td>
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<tr>
<td>Adheres to standards for maintenance of a safe working environment</td>
<td>Routinely uses basic patient safety practices, such as time-outs and ‘calls for help’</td>
<td>Describes patient safety concepts</td>
<td>Participates in an institutional process improvement plan to optimize ED practice and patient safety</td>
<td>Uses analytical tools to assess healthcare quality and safety and reassess quality improvement programs for effectiveness for patients and for populations</td>
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<td>Describes medical errors and adverse events</td>
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<td>Employs processes (e.g., checklists, SBAR), personnel, and technologies that optimize patient safety (SBAR= Situation – Background – Assessment – Recommendation)</td>
<td>Leads team reflection such as code debriefings, root cause analysis, or M&amp;M to improve ED performance</td>
<td>Develops and evaluates measures of professional performance and process improvement and implements them to improve departmental practice</td>
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<td></td>
<td>Appendix 6 – 7 for detailed description of patient safety concepts and processes.</td>
<td>Appropriately uses system resources to improve both patient care and medical knowledge</td>
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| **Level 5** |
| Uses analytical tools to assess healthcare quality and safety and reassess quality improvement programs for effectiveness for patients and for populations |
| Develops and evaluates measures of professional performance and process improvement and implements them to improve departmental practice |

**Comments:**
Needs Assessment: Targeted

- Clinical Learning Environment Review (CLER)
- How did the University of Utah do?
• **Patient Safety** – including opportunities for residents to report errors, unsafe conditions, and near misses, and to participate in inter-professional teams to promote and enhance safe care.

• **Quality Improvement** – including how sponsoring institutions engage residents in the use of data to improve systems of care, reduce health care disparities and improve patient outcomes.

• Transitions in Care
• Supervision
• Duty Hours Oversight, Fatigue Management and Mitigation
• Professionalism
Utah CLER Site Visit: May 10-12, 2016

- Patient Safety
  - Relatively new reporting system (RL); few residents use it
  - Nurses report residents don’t time out before procedures
  - Residents don’t know safety concepts and terminology and don’t know what should be reported
  - Residents participated in about ½ of hospital root cause analyses (38 total last year)
Priorities for Improvement

• Patient Safety

1. Train residents and faculty in use of RL system and what is appropriate to report; increase entries and provide follow-up
2. Spread lessons learned from RCAs
3. Increase resident participation in department and interdisciplinary QI and PS meetings
Utah CLER - Health Care Quality

- Wide variation among groups in understanding hospital strategic priorities (Operational Plan)
- Few residents familiar with QI methodology, terminology, processes
- Central monitoring of QI projects through Value Summary Portal if entered by program or residents
- Most faculty said they have participated in planning and implementing a team QI project
Utah CLER - Health Care Quality

- 2/3 residents said had been in a QI project, 1/6 said project linked to hospital goals
- Few residents completed a QI cycle
- Few nurses said they had worked with residents in a team-based QI project
- Most PDs thought residents had good access to data for QI, but less than a third of residents said they periodically get QI data on own patients or patients in their area
Priorities for Improvement

• Health Care Quality
  1. Increase resident and program use of Value Summary Portal
  2. Allow residents time for QI activities; build QI education into curriculum and daily work
  3. Provide access to meaningful data for resident QI work
  4. Increase inter-departmental QI
  5. Provide faculty development in QI
University of Utah Focus on Value

Catalyst
What can other States Learn from Utah about Delivering Great Health Care?

The New York Times
Utah Health System Leads in Asking: What Does it Cost?

Harvard Business Review
Could Peer Pressure Improve Care?

Putting It All Out There: How Utah Health System Uses Online Patient Reviews (Gulp) to Get Better — And Why There’s No Need to Fear

NIGHTLY NEWS
A Utah Hospital Cracks the Code on Better, More Affordable Care
Value Leadership Group

Bob Pendleton – CMQO
Chrissy Daniels – Director Strategic Initiatives
Lorie Gillette – Director Value Management
Pam Proctor – Director Patient Safety
Ryan Murphy – Value Fellow
Sandi Gulbransen – Director Quality
Yoshimi Anzai – Associate CMQO

This group works closely together to plan for, and advance value enhancement initiatives.
JOIN THE REVOLUTION
UTAH VALUE REVOLUTION
Hard Work of VALUE Transformation

1. VISION: set of unified values/norms/broad goals
2. CLINICIAN LED TEAMS: empowered to redesign care
3. MEASURES: use of “good enough” data resources
4. ROUTINIZED PROCESS: common process problem solving language/approach
5. RESOURCES: to enable locally driven, aligned efforts
Aligned Annual Operational Goals


Exceptional Patient Experience
Quality & Safety
Financial Strength
## ROUTINIZED PROCESS FOR IMPROVEMENT

### TAVR Patient Post-Op Recovery

**Scope:** Patients receiving TAVR in Hybrid OR or Cath Labs: Admission to D/C
- CVS Service Line: Jim Fang, CVG-Inpatient
- CVG Service Line: Tracey Niven
- Team Leader: Tracey Niven

**Measures & Impact**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Base</th>
<th>Goal</th>
<th>Cycle 1 FY2016Q1</th>
<th>Cycle 2 FY2016Q3</th>
<th>Cycle 3 FY2016Q3</th>
<th>Cycle 4 FY2016Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Post-op LOS</td>
<td>7</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Facility and Staff Costs</td>
<td>$15,700</td>
<td>$12,000</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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**Problem & Goal Statements**

1. Length of stay for TAVR patients ranges from 0 to 37 days with a median, average, and IQR of 7, 8.6, and 7 days during FYs 2012-2015. Standard Deviation is 6.38 days.
2. Facility and staff costs for a TAVR procedure costs on average $15,700 during FY2016. Supply costs are $60,000.
3. The goal is to reduce the median length of stay to 0 to 20 days with a median, average, and IQR of 5, 7, and 3 days by 03/31/16. Reduce Standard Deviation to 4.5 days.
4. Maintain or reduce facility and staff costs to an average of $12,000 by 12/11/2015.

**Impact**

**Analysis & Investigation**
- Process Map TAVR - Completed TAVR
- Adapt and Implement best practices
  - Team working with Nursing and Anesthesiology practices developing protocols for care
  - Selection criteria for patients to the Cath vs. Hybrid
- Design Protocols for intubation and care
- Vist Emyey

**Improvement Design & Implementation**
- Length of stay reduction:
  - Increase mobility post surgery
  - Extubation pathway/protocol
  - Flowing patient to recovery based on health

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https://pulse.utah.edu/site/VSum/Pages/Home.aspx
Supporting clinician led teams

- Chief Medical Quality Officer - Bob Pendleton MD FACP
  - Associate CMQO – Yoshimi Anzai MD
  - Medical Director, Value Engineering – Frank Thomas MD
  - Value Management System – Lorie Gillette, Director
  - System Quality – Sandi Gulbransen, Director
  - Patient Safety – Pam Proctor, Director
  - Strategic Initiatives (EPE, Value Engineering)- Chrissy Daniels, Director

- SOM Department Chief Value Officers
- Nursing Quality Director and CNVOs
- Pharmacy Quality Director
- Service Line Administrative leaders
- GME Value Committee
- SOM Value Committee
Educational Strategies
Educational Strategies

- Maintain congruence between objectives & methods
- Use multiple educational methods
  - Lecture / didactic
  - Readings
  - Online modules
  - Value improvement projects
- Choose methods that are feasible
  - What is happening now that you can take advantage of?
Educational Strategies

• What are the key things that you need to determine?
  • Who will teach the content? How? When?
  • What level of learner?
  • Who will advise/ guide trainees through their project?
  • Who are your helpers?
• Experiential learning (IHI Framework)
  • Team-based
  • Unit-based
  • System-based
### Educational Strategies

<table>
<thead>
<tr>
<th>Team-Based Model</th>
<th>Unit-Based Model</th>
<th>Systems-Based Model</th>
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<tbody>
<tr>
<td>Focused on behavior change and limited process change to improve a workflow that is within the control of the interdisciplinary medical team</td>
<td>Focused on a workflow in a particular unit or clinic with aims that are tied to institutional priorities</td>
<td>Focused on a workflow that crosses multiple units/clinics with an aim to improve systems at the departmental or institutional level</td>
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- Team-based model often most realistic / achievable
Small Group #1: Educational Strategies
Educational Strategies: Debrief

• Discussion

• Tool
  • Value Summary Portal on Pulse
  • https://pulse.utah.edu/SitePages/Pulse.aspx
Implementation

- Identify resources
- Obtain support
- Develop administrative mechanisms
- Identify anticipated barriers
- Introduction of the curriculum
Group Activity: Barriers to Implementation

Ishikawa Steps

<table>
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<tr>
<th>Cause Categories</th>
<th>Effect</th>
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<tbody>
<tr>
<td>Equipment</td>
<td>Problem</td>
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<tr>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>People</td>
<td></td>
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<td>Materials</td>
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<td>Environment</td>
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<td>Management</td>
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2nd: Cause Categories
3rd: Details
First
Barriers to Implementation: Debrief

- Understand the stakeholders and their needs
  - Be able to articulate the value of your curriculum
  - Be able to define the resources you need
- Seek out hospital champion(s) with expertise
- Find interested parties in other programs
  - Inter-professional education is ideal
  - Collaborate! The principles are the same across disciplines
Resources

• People
  • Brigitte Smith, brigitte.smith@hsc.utah.edu
  • GME Value Council
    • Ryan Murphy, ryan.murphy@hsc.utah.edu
  • Departmental Chief Value Officer
  • Value Engineers

• Tools
  • Value Portal on Pulse website
  • Value University modules
Professional Development Opportunities

• Pulse -> search “ValueU”
  • Options for “health professional value training”

• Value Improvement Leaders (VIL) Course
  • 13 week course taught by UU Value Engineers

• Lean Six Sigma Green Belt
  • UU David Eccles School of Business
  • 4 day course; $2400
Summary

- Trainee education in Value Improvement aligns with the University of Utah mission
- Value Improvement curricula will be most effective if the trainee is able to “see the change”
  - Alignment with institutional language and priorities
- Consider educational strategies best suited to your learners
  - Most commonly “team-based” model
- Anticipate barriers
  - We can help you address these!
Questions?