Quality Improvement/Systems-based Practice
This report says medical errors such as indecipherable prescriptions cause the deaths of 98 patients a year, or is that 98,000? It's hard to read this. In any case, we're supposed to report them, or is that repeat them?
Objectives

Define and understand the importance of Systems Based Practice (SBP) at it relates to Clinical Learning Environment Review (CLER) and surgical training

Provide an example of a relevant, achievable, and non didactic Quality Improvement (QI) program that creates a learning culture of quality
An awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care
An awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care

**SBP**

- Work effectively in various healthcare delivery settings and systems relevant to their clinical specialty
- **Coordinate patient care** within the health care system relevant to their clinical specialty
- Incorporate considerations of **cost awareness and risk-benefit analysis** in patient and/or population based care as appropriate
- Advocate for **quality patient care** and optimal patient care systems
- Work in **inter-professional teams** to enhance patient safety and improve patient quality care
- Participate in **identifying system errors and implementing potential systems solutions**

**CLER**

- **Patient Safety** - including opportunities for residents to report errors, unsafe conditions, and near misses
- **Quality of Care** engage residents in the use of data to improve systems of care, reduce health care disparities and improve patient outcomes
- **Care Transitions (hand-offs)** - effective standardization and oversight of transitions
- **Supervision**
- **Duty Hours/Fatigue**
- **Professionalism**
  - Educate for professionalism
  - Monitor behavior
  - Accurate reporting of program information
  - Integrity in fulfilling educational and professional responsibilities
  - Veracity in scholarly pursuits

**Oregon Health & Science University**
# Systems Based Practice

## Systems Based Practice for Vascular Surgical Training

<table>
<thead>
<tr>
<th>SBP2: Coordination of Care</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Demonstrates a basic understanding of the resources available for coordinating patient care, including social workers, visiting nurses, and physical and occupational therapists</td>
<td>Knows the necessary resources to provide optimal coordination of care and how to access them</td>
<td>Efficiently and responsibly arranges patient disposition planning in preparing all materials necessary for discharge or transfer of their patients</td>
<td>Coordinates the activities of residents, nurses, social workers, and other health care professionals to provide optimal care to the patient at the time of discharge or transfer, and to provide post-discharge ambulatory care that is appropriate for the patient’s particular needs</td>
<td>Completes a performance improvement project for coordination of care</td>
</tr>
</tbody>
</table>

**Comments:** Not yet achieved Level 1
# Systems Based Practice

## Systems Based Practice for Vascular Surgical Training

<table>
<thead>
<tr>
<th>SBP3: Improvement of Care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>Demonstrates basic knowledge of how health systems operate</td>
</tr>
<tr>
<td>Demonstrates knowledge of system factors that contribute to medical errors, and is aware that variations in care occur</td>
</tr>
</tbody>
</table>

**Comments:** Not yet achieved Level 1
Goals of QI Program

• Understand principles of quality and safety improvement
• Discuss safety issues in the framework of case-based reviews
• Describe opportunities for improving reliability of care following audit, AEs or ‘near misses’
• Describe root-cause analysis
• Demonstrate understanding of importance of reporting, discussing and learning from AEs
• Contribute to discussions of improving clinical practice
• Carry out a QI project and show ability to understand the QI process
QI Program

• Should be
  – Relevant
  – Achievable
  – Measurable results
  – Improve quality

• “Systematically analyze practice using quality improvement methods and implement changes with the goal of practice improvement”
The Morbidity and Mortality Conference: The Delicate Nature of Learning from Error

Jay D. Orlander, MD, MPH, Thomas W. Barber, MD, and B. Graeme Fincke, MD

Despite being universally familiar ... the M and M Conference lack a precise definition, a standard format, and identified goals.

Dual nature of the meeting: forum for education and system improvement.

Orlander, Acad Med 2002
Morbidity and Mortality Conference

Standardization of Case Reviews (Morbidity and Mortality Rounds) Promotes Patient Safety

Jayant K. Deshpande, MD, MPH\textsuperscript{a,\textast}, Patricia G. Throop, BSN, CPHQ\textsuperscript{b}, Jennifer M. Slayton, RN, MSN\textsuperscript{b}

- Standardized, consistent approach to case reviews enhances patient safety and quality improvement
  - Better understanding of factors contributing to adverse events
  - Formulate plans for improvement and track impact of practice or process improvements
  - Fosters non-judgmental case discussion

Deshpande, Pediatr Clin N Amer 2012
Improving the Quality of the Surgical Morbidity and Mortality Conference: A Prospective Intervention Study

Erica L. Mitchell, MD, Dae Y. Lee, MD, Sonal Arora, MBBS, PhD, Pat Kenney-Moore, MS, PA-C, Timothy K. Liem, MD, Gregory J. Landry, MD, Gregory L. Moneta, MD, and Nick Sevdalis, PhD

- Prospective intervention study – SBAR communication tool
  - Improved quality of resident presentations
  - Improved attendee’s educational outcomes

<table>
<thead>
<tr>
<th>S</th>
<th>Situation</th>
<th>Brief description of the case</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Background</td>
<td>Description of the events pertinent to the adverse event</td>
</tr>
<tr>
<td>A</td>
<td>Assessment &amp; Analysis</td>
<td>Focused error analysis - incl contributing factors (patient, team, environment, etc)</td>
</tr>
<tr>
<td>R</td>
<td>Recommendations</td>
<td>Propose actions for future clinical care improvement</td>
</tr>
</tbody>
</table>

Mitchell, Acad Med 2013
Royal College of Anaesthesia

- Structured M and M presentations help trainees to:
  - Communicate adverse events
  - Analyze adverse events
  - Discuss learning points to prevent future events

Mitchell, Acad Med 2013
**SBAR Format For MMC Presentations**

| **SITUATION** | Admitting diagnosis  
Statement of procedure or operation  
Statement of adverse outcome |
|----------------|--------------------------------------------------|
| **BACKGROUND** | **PATIENT HISTORY:**  
Present pertinent HPI/PMH/PSH/Meds |
| Clinical information pertinent to adverse outcome | **INDICATION FOR INTERVENTION:**  
Describe reason for intervention |
| | **LABS AND IMAGING STUDIES:**  
Present studies relevant to outcome |
| | **PROCEDURAL DETAILS:**  
Describe technical or physiologic details related to outcome |
| | **HOSPITAL COURSE:**  
Present non-procedural events related to outcome |
| | **RECOGNITION OF THE COMPLICATION:**  
State how/when complication was recognised |
| | **MANAGEMENT OF THE COMPLICATION:**  
Describe how the complication was managed |

Mitchell, Acad Med 2013
### SBAR Format For MMC Presentations

<table>
<thead>
<tr>
<th>Assessment and Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation of what happened and why it happened</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What happened? Error analysis:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe sequence of events leading to adverse outcome</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Why did it occur? Root Cause Analysis:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide description of fundamental cause(s) of the adverse outcome in relationship to:</td>
</tr>
</tbody>
</table>

1. **Human Errors**  
   Error in diagnosis, technique, judgment, communication

2. **Systems Errors**  
   Error(s)/problems in care system/organisation (e.g., poor supervision, low staffing, inadequate co-ordination of care, etc)

3. **Patient related factors**  
   Patient disease or non-compliance

<table>
<thead>
<tr>
<th>Review of Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence-Based Practice</td>
</tr>
</tbody>
</table>

| Present literature pertinent to the complication |

<table>
<thead>
<tr>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed actions to prevent future similar problem</td>
</tr>
</tbody>
</table>

| Identify how problem could have been prevented or better managed |
| Identify learning point(s) from case |

Mitchell, Acad Med 2013
“Lessons learnt” QI Program

**Structure of training**

**MMC**
- Case Presentation
- Group Discussion and structured analysis

**QIP**
- Lesson learnt and next steps
- Analysis driven QI project

**Sustainability**
- Lessons Learnt weaved into practice
- Process change (policy standards)
3 Patients
1 Common Problem
1 Common Outcome/Morbidity
Situation

- Admission diagnosis:
- Consultation diagnosis:
- Procedure:
- Complication:

Situation = the statement of the problem.
It allows the audience to focus their attention to the pertinent points in the case related to the complications.
Background

Background = clinical information pertinent to adverse outcome
Pertinent patient history: Only provide pertinent HPI / PMH / PSH / meds
Indication for Intervention or care: It is important to know the thought process behind the decision to operate or provide the care resulting in the complication
Labs and imaging studies: Only show pertinent labs and images
Procedural or medical management details: Describe technical or physiologic details related to outcome
Hospital course: Present non-procedural events related to outcome (be brief i.e. no need to list when patient passed flatus)
Recognition of the complication: State how/when the complication was recognized
Management of complication: Describe the steps taken to manage the complication

2 slide limit
Error Analysis
What happened?
Describe the sequence of events leading to adverse outcome

“When error occurs, the customary focus on blaming the individual care-giver overlooks the conditions in which the error occurred.”

What were the underlying factors that created the conditions for the error to occur?
Identify all of the factors that contributed to the error(s).
Think of the factors that will allow for changes to be made to the system or process of care (through either re-design or development of new processes, equipment or approaches that will reduce the risk of the event or close call recurrence).
The following are examples. Please FILL in the BOXES provided in the fishbone template. Discuss these factors and how they contributed to/allowed the complication.

- **Individual factors:** errors in diagnosis, technique, judgment, communication between health-care workers and patient
- **Team factors:** hierarchy issues, understanding roles & responsibilities, roles and responsibilities, communication between health-care workers
- **Environment, Equipment & Resources:** Location/physical layout/visibility, building safety, communication or hand off environment, poor working conditions, non-function/unavailable equipment, resources lacking
- **Rules/Policy/Procedures:** Standards or compliance w/standards, documentation issues, trainee fatigue, inadequate training, lack of documentation, inadequate education & training, unfamiliarity with protocol(s), skills unconfirmed
- **Organization/system:** insufficient training, scheduling errors, lack of supervision /staffing, lack of knowledge/information, overworked staff, handoff process, inadequate coordination of care, equipment, scheduling problems, delayed record, language barriers, no interpreter available
- **Patient related factors:** Patient disease, inability to understand instructions, non-compliance (intentional or non-intentional), patient stressed or late, limitation in resources

- **FOCUS on prevention, NOT blame**
Analysis

<table>
<thead>
<tr>
<th>Cause</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual factors</td>
<td></td>
</tr>
<tr>
<td>Team factors</td>
<td></td>
</tr>
<tr>
<td>Patient factors</td>
<td></td>
</tr>
</tbody>
</table>

- Environment
- Rules/Policy
- Organization

Adverse outcome
Only present appropriate literature pertinent to the complication: Identification of complication/Management of complication/Prevention of complication

2 slide limit
Identify the learning points from case
Identify how to prevent the problem in the future

2 slide limit
"Lessons learnt" QI Program

Structured Incident or root cause analysis
Prospective intervention study – Qualitative observations and interviews

- Pre-intervention considerable variation in reviewing mortalities and no integration with hospital governance
- Structured mortality review process for 3 clinical services/ 12 months
- Improved participant satisfaction and integration with hospital governance

Higginson, BMJ Qual Saf 2012
MMC and Quality Improvement

- All complications > Clavien-Dindo 3b require discussion and recommendations
- Divisions report to QI Committee
- Complications and recommendations reviewed quarterly
- Appropriate institutional process changes are made (policies/procedures)
- Close-loop
“Lessons learnt” QI Program

Questions?

...AND THAT IS WHY WE LIFT ON THREE...

COMMUNICATION