Surgery Grand Rounds

Building Teamwork to Improve Patient Outcomes: TRANSFORM Patient Safety Program

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ACS-EI Postgraduate Course
13 November 2015
Most frequently identified root causes of sentinel events reviewed by The Joint Commission are related to teamwork.

<table>
<thead>
<tr>
<th></th>
<th>2012 (N=901)</th>
<th>2013 (N=887)</th>
<th>Jan to Jun 2014 (N=394)</th>
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</thead>
<tbody>
<tr>
<td>Human Factors</td>
<td>614</td>
<td>Human Factors</td>
<td>635</td>
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<td>Leadership</td>
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<td>Communication</td>
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<tr>
<td>Communication</td>
<td>532</td>
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<td>Assessment</td>
<td>505</td>
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<td>Information Management</td>
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<td>Information Management</td>
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<td>Physical Environment</td>
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<td>Care Planning</td>
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<td>Operative Care</td>
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<td>Continuum of Care</td>
<td>97</td>
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<tr>
<td>Medication Use</td>
<td>91</td>
<td>Medication Use</td>
<td>77</td>
</tr>
<tr>
<td>Care Planning</td>
<td>81</td>
<td>Operative Care</td>
<td>76</td>
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</tbody>
</table>

Uncoordinated care & ineffective team communication can lead to:
- Adverse drug events
- Missed and/or delayed diagnoses
- Delayed therapy
- Delayed hospital stay
- Hospital complications
- Unnecessary ICU admission & LOS
- Hospital readmissions
- Unexpected death
Complexity of Healthcare Teams

Surgery Resident

- 7 patients
- 5 different nurses
- 7 different physicians

= patient
Barriers to Effective Clinical Teamwork

**MICROSYSTEM WORK CONDITIONS**
- Safety culture
- Distractions
- Patient caseloads (workload)
- Rework (inefficient & effective care processes)
- System factors (co-location, diagnostic time delays, down times, inadequate supplies, lack of ICU beds)

**TEAM CONDITIONS**
- Lack of team training
- Unstable team membership
- Lack of effective leadership
- Lack of role clarity
- Inefficient & incomplete communication
- Inability to resolve conflict
- Lack of face-to-face interaction (mobile teams)
- Presence of authority gradients

**INDIVIDUAL TEAM MEMBER**
- Inadequate clinical knowledge
- Inadequate critical thinking & decision-making skills
- Lack of assertion
- Fatigue
- Complacency
- Work attitude
- Suboptimal socialization skills
Project TRANSFORM (2010-2011)

Study Objective:
To improve clinical outcomes and safety culture through implementation of a multifaceted patient safety program

Methods
• 1-year prospective interventional study conducted, followed by 6-month sustainability phase
• Study participants: Nurses and residents practicing on four inpatient units
• Primary intervention: In situ simulation training

Primary Outcomes:
• Incidence of hospital-acquired complications
  • severe sepsis/septic shock
  • acute respiratory failure
• O:E mortality ratio
• Safety culture
Simulation Team Training

- Learning method amplifies real-world experiences to improve KSAs and teamwork performance
- In situ” simulation training conducted on hospital units
  - Clinicians able to practice with their real-world team in real work environment
  - Allows opportunity to discover latent safety threats in workplace
- Improves:
  - Teamwork performance & efficiency
  - Clinical knowledge & competencies
  - Safety culture
- Few studies have shown improvement in clinical outcomes

Arch Intern Med 2008;168:1063
Arch Surg 2009;144:107
Crit Care Med 2006;34:151
Jt Comm J Qual Patient Saf 2010;36:133
Qual Saf Health Care 2005;14:326
TRANSFORM Patient Safety Program

Goal: To mitigate risk and improve organizational value through a multifaceted patient safety program that invests in unit leaders & frontline staff/physicians to advance outcomes on individual clinical microsystems (units)

Program Objectives:
To promote effective & efficient care by improving:
• Interdisciplinary teamwork and communication
• Evidence-based care

FY15 Program Outcomes
PRIMARY
• Mortality of hospital-acquired severe sepsis
• Mortality of hospital-acquired septic shock
• Incidence of hospital-acquired acute resp failure
• Discharge survival post cardiopulmonary arrest

SECONDARY
• Observed interdisciplinary teamwork
• Safety culture
• SAFE reporting rates
Patient-Centric Model of Healthcare Teamwork

- **Communication**: Exchange and confirm information among team members effectively.
- **Leadership**: Direct & coordinate activities of members to ensure optimal team performance.
- **Situation Monitoring**: Develop and sustain a common understanding of the patient's plan of care among the team.
- **Mutual Support**: Optimize team performance by anticipating and supporting team members' needs and managing conflict.

**Patient**: Safe, Quality and Coordinated Care and Service.
## Team Competencies

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Abbreviations</th>
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</thead>
<tbody>
<tr>
<td><strong>Communication</strong></td>
<td>- Communicates effectively by using appropriate tools.</td>
<td>• SBAR</td>
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<td></td>
<td></td>
<td>• Call out</td>
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<td></td>
<td></td>
<td>• Check back</td>
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<tr>
<td><strong>Situation Monitoring</strong></td>
<td>- Maintains situational awareness and a shared mental model among the team by asking questions, listening actively and providing periodic recap of current status.</td>
<td>• Call out</td>
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<td></td>
<td></td>
<td>• Briefings</td>
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<tr>
<td></td>
<td></td>
<td>• Debriefings</td>
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<td></td>
<td></td>
<td>• Huddle</td>
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<td></td>
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<td>• Cognitive aids</td>
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<tr>
<td><strong>Mutual Support</strong></td>
<td>- Speaks up to advocate for patient when safety concern exists.</td>
<td>• 2-challenge rule</td>
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<td></td>
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<td>• C-U-S words</td>
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<td></td>
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<td>• Chain-of-command</td>
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<tr>
<td></td>
<td></td>
<td>• Check back</td>
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<tr>
<td></td>
<td>- Resolves conflict effectively by focusing on “what’s right for the patient”, rather than “who is right”.</td>
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<td>- Anticipates and supports member’s needs by knowing the team’s capabilities and limitations.</td>
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<tr>
<td><strong>Leadership</strong></td>
<td>- Establishes role clarity among team members.</td>
<td>• Huddle</td>
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<tr>
<td></td>
<td>- Ensures that a shared mental model of the situation and plan of care exists among team members.</td>
<td>• Briefings</td>
</tr>
<tr>
<td></td>
<td>- Establishes an atmosphere of open communication to</td>
<td>• Debriefings</td>
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</tbody>
</table>
Teamwork during Acute Medical Emergencies

• Effective leadership
  - role clarity
  - open communication

• Frequent situation monitoring
  - situational awareness
  - shared mental model

• Effective communication

• Mutual support
  - speaking up
  - manage conflict
STANDARD WORK

EDUCATION & TRAINING
• Team Training Course
• In Situ Simulation Training
• Guided Reflection Sessions
• Quarterly Patient Safety Conference

CLINICAL MICROSYSTEM IMPROVEMENT
• Debriefing of Medical Emergencies
• Patient Safety Champion Role
• Monthly Unit Patient Safety Team Meetings

RESPECT FOR PEOPLE
• Monthly Recognition for Exemplary Teamwork

“Tell me, and I will forget. Show me and I may remember. Involve me, and I will understand.”
- Confucius, 450 BC
### In Situ Simulation Training

#### Medical-Surgical Inpatient Units

<table>
<thead>
<tr>
<th>Weight</th>
<th>Focus</th>
<th>Skills</th>
<th>Involved Team(s)</th>
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</thead>
<tbody>
<tr>
<td>75%</td>
<td>Early detection &amp; treatment of hospital-acquired complications:</td>
<td><strong>Nontechnical</strong></td>
<td>• Unit staff</td>
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<td></td>
<td>• Sepsis</td>
<td>- Interdisciplinary team competencies</td>
<td>• Residents</td>
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<tr>
<td></td>
<td>• Acute respiratory insufficiency (ARI)</td>
<td>• Technical</td>
<td>• APPs</td>
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<tr>
<td></td>
<td>• Other complications after initial evaluation of sepsis and ARI</td>
<td>- Sepsis guidelines</td>
<td>• Attending MDs</td>
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<tr>
<td></td>
<td></td>
<td>- Early detection &amp; treatment of ARI</td>
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<tr>
<td></td>
<td></td>
<td>- BLS/ACLS guidelines</td>
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<td>25%</td>
<td>“First 5 Minutes” (of CP arrest)</td>
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<td>One exercise monthly on one inpatient unit</td>
<td>Cardiopulmonary Resuscitation</td>
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Specific Comments from Residents:

- “Extremely valuable to have RNs & respiratory therapists in training. Usually we have sim sessions with only docs, and I found this MUCH more valuable!”
- “Great practice for potential real patient situations in a safe learning environment”
- “Really helpful to find out how I would react in urgent situation and get feedback from an attending!”
- “Really valuable since training occurred in an actual ICU room!”
- “I felt more prepared to work with a team to treat unstable pts after this training.”
- “Brief time commitment”
THANK YOU’S

- Hospital Leadership
  - Dan Rubin
  - James Hereford
  - Norm Rizk
  - Raj Behal
  - Joe Hopkins
  - Nancy Lee
  - Larry Katznelson
  - Ann Dohn
  - Sam Wald
  - Wendy Yick
  - Lisa Shieh

- David Gaba
- Sandi Feaster
- Susan Eller
- Units!
  - UBMD/CNS/Managers
  - Patient Safety Champions
  - Nurses
  - Residents
  - RTs/Pharmacists/PT/OT
  - Social Work/Discharge Planning

- Program Directors
- SCeMERI
TRANSFORM TEAM

John Kugler, MD
Associate Medical Director
TRANSFORM Program

Paul Mohabir, MD
Associate Medical Director
TRANSFORM Program

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