Failure to Rescue: How to Proactively Identify Patients at Risk

June 23, 2014
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WebEx Introduction and Tutorial
WebEx Quick Reference

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   - Your attendee ID #
WebEx Quick Reference

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Polling Question 1: Who is participating today?
Polling Question 2: Time Zone?
Polling Question 3: What size is your facility?
Today’s Objectives

• Participants will gain an understanding of the main causes of FTR in hospital organizations
• Participants will be able to determine proactive methods to prevent FTR in hospital organizations
• Participants will be able to apply lessons learned from high performing organizations to align strategies and prevent FTR.
What Is Failure to Rescue?
# Conditions That Could Contribute to Failure to Rescue

<table>
<thead>
<tr>
<th>Condition</th>
<th>How Condition Might Contribute to Failure to Rescue</th>
<th>Ideas for Nursing/RRT/MET to Test</th>
</tr>
</thead>
</table>
| ADE        | Over sedation from opioids is one of the most common adverse drug events. This is frequently seen post-operatively and in patients who are prescribed multiple pain meds.                                                                                                                                                                                                                                     | ✓ Use sedation assessment scales regularly  
✓ Proactive rounding on recent post-op patients                                                                                                                                                                                                                                                      |
| Sepsis     | Severe sepsis is not just a condition that develops in the ICU, or is only diagnosed in the ED. Sepsis can develop from any number of hospital-acquired infections. Sepsis screening assessments are incredibly valuable to catch symptoms in the early stages.                                                                                                         | ✓ Do sepsis screening assessments on all appropriate patients  
✓ Ensure bundles of care are reliably followed for sepsis, CAUTI, CLABSI, and VAP                                                                                                                                                                                                              |
| Iatrogenic | Delirium is a condition that can occur within a very short period of time in the hospital, usually within the ICU. Delirium is related to sedation, weakness and losses that could be permanent if not caught early.                                                                                                                                                                                      | ✓ Complete sedation assessment screening on all patients in ICU  
✓ Wean patients from ventilators as quickly as possible  
✓ Follow evidence based protocols from the ABCDE bundle/PAD guidelines                                                                                                                                                                                                                       |
| Delirium   |                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                       |
| OB Harm    | Death from stroke due to severe preeclampsia and shock due to post-partum hemorrhage are two of the most common causes of maternal death.                                                                                                                                                                                                                                              | ✓ Do risk screening assessments on all mothers to determine risk for hemorrhage                                                                                                                                                                                                                          |
THANK YOU!
ANY QUESTIONS?
Failure to Rescue: How can we prevent it?

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Disclosures

- Consultant-Michigan Hospital Association Keystone Center
- Consultant-Missouri Center for Patient Safety
- Consultant/Faculty for CUSP for MVP—AHRQ funded national study
- Faculty for SSC Phase IV Collaborative-funded by Gordon and Betty Moore Foundation
- Contracted consultant for Advancing Nursing, LLC
  - Consulting services:
    - Sage Products
    - Excelsior Medical
Session Objectives

• Define Failure to Rescue as a measure of quality of care
• Discuss various causes for Failure to Rescue
• Discuss 2 strategies to decrease Failure to Rescue mortality
• Understand the impact of rapid response systems and a prospective risk scoring program with associated risk stratified bundles of interventions, on Failure to Rescue
Failure to Rescue (FTR): Definition

Mortality rate following the onset of a condition ("complication") that the patient did not have at the time of admission

– Concept from Silber, Medical Care 1992;30:615-29.

Used as measure of hospital quality of care
Assumptions of FTR Theory

• Complications are undesirable outcome measures because they reflect underlying patient severity and diagnosis coding more than they reflect hospital care.

• A hospital’s quality is put to the test when a patient develops a complication, and whether a patient is salvaged after a complication will be a function of care delivered by the hospital and its knowledge base, depth and facilities.

Silber, JH et.al. Medical Care 45(10), Oct 2007
Failure To Rescue as a Quality Measure

- Adopted as a patient safety indicator by the Agency for Healthcare Research and Quality (AHRQ)
- Used by various hospital groups performing hospital quality rating—such as health grades
- Original definition has been modified and several different versions are currently in use—resulting in some confusion and problems with interpretation
Complications used in traditional FTR definition

- Cardiac: arrhythmias, arrest, infarction, CHF
- Pulmonary: pneumonia, pneumothorax, bronchospasm, respiratory compromise, aspiration pneumonia
- Hypotension, shock, hypovolemic
- Neurologic: stroke, transient ischemic attack, seizure, psychosis, coma
- Deep vein thrombosis, pulmonary embolus, arterial clot, phlebitis
- Internal organ damage, return to surgery
- Infection: deep wound infection, sepsis
- Gangrene, amputation
- Peritonitis, intestinal obstruction
- Renal dysfunction
- Gastrointestinal bleeding, blood loss
- Hepatitis, pancreatitis, decubitus ulcers and orthopedic complications and compartment syndrome
Causes of FTR

• Failure to recognize and/or respond to clinically unstable or deteriorating patient
• Failure to escalate care

Johnston, M et.al Annal of Surg, 2014
How to prevent a FTR?

• Apply interventions that deal with reasons for failure at each of the steps required in escalation of care.
Strategies to Prevent FTR

- Rapid Response Systems
- Risk Prediction Model: PRISM
- Routine severe sepsis screening
- Hourly Rounding—add 2 more P’s—perfusion and pulmonary
- Placement criteria: general floor vs intermediate vs ICU (so patient is placed in area of hospital with appropriate nurse to patient ratio)
- Learning from Defect: understanding FTR patients and patients with an unplanned transfer to the ICU
- Early warning systems: IE-MEWS
- Clear communication: SBAR
- Chain of command process
Rapid Response Systems

• Attempt to prevent failures in:
  – Recognition
  – Communication
  – Response
Rapid Response Systems

- Various composition
  - RN, RN + RT, Physician + RN + RT
- One specific composition has not proven superior to another---best composition is based on the hospital’s culture and processes
- Activation of RRT varies:
  - Clinician judgment
  - Vital sign changes
  - Family member has a concern
Recent Systematic Review: Adult Non-ICU Cardiac Arrest (CA)
## Adult Total Mortality

<table>
<thead>
<tr>
<th>Author(s) and Year</th>
<th>Risk Ratio [95% CI]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobin (2012) (adjust)</td>
<td>0.90 [0.88, 0.92]</td>
</tr>
<tr>
<td>Howell (2012) (adjust)</td>
<td>0.91 [0.82, 1.01]</td>
</tr>
<tr>
<td>Beittler (2011) (adjust)</td>
<td>0.89 [0.82, 0.97]</td>
</tr>
<tr>
<td>Shah (2011)</td>
<td>0.89 [0.79, 1.00]</td>
</tr>
<tr>
<td>Sarani (2011) (Medicine)</td>
<td>0.74 [0.68, 0.80]</td>
</tr>
<tr>
<td>Sarani (2011) (Surgery)</td>
<td>0.92 [0.80, 1.05]</td>
</tr>
<tr>
<td>Laurens (2011)</td>
<td>0.76 [0.66, 0.87]</td>
</tr>
<tr>
<td>Santamaria (2010)</td>
<td>0.48 [0.41, 0.56]</td>
</tr>
<tr>
<td>Lighthall (2010)</td>
<td>0.82 [0.62, 1.09]</td>
</tr>
<tr>
<td>Konrad (2009) (adjust)</td>
<td>0.90 [0.84, 0.97]</td>
</tr>
<tr>
<td>Campello (adjust)</td>
<td>0.83 [0.64, 1.07]</td>
</tr>
<tr>
<td>Chan (2008) (adjust)</td>
<td>0.95 [0.81, 1.11]</td>
</tr>
<tr>
<td>Baxter (2008)</td>
<td>0.99 [0.85, 1.15]</td>
</tr>
<tr>
<td>Jolley (2007)</td>
<td>1.00 [0.74, 1.36]</td>
</tr>
<tr>
<td>Dacey (2007)</td>
<td>1.07 [0.87, 1.31]</td>
</tr>
<tr>
<td>Hillman (2005)</td>
<td>1.03 [0.83, 1.27]</td>
</tr>
<tr>
<td>Jones (2005)</td>
<td>1.18 [1.10, 1.27]</td>
</tr>
<tr>
<td>Kenward (2004)</td>
<td>0.99 [0.91, 1.07]</td>
</tr>
<tr>
<td>Priestley (2004)</td>
<td>0.52 [0.32, 0.85]</td>
</tr>
<tr>
<td>Bellomo (2003)</td>
<td>0.74 [0.70, 0.79]</td>
</tr>
<tr>
<td>Buist (2002)</td>
<td>0.87 [0.76, 1.01]</td>
</tr>
<tr>
<td>Bristow (2000) (1st hosp)</td>
<td>0.93 [0.77, 1.12]</td>
</tr>
<tr>
<td>Bristow (2000) (2nd hosp)</td>
<td>1.20 [1.00, 1.43]</td>
</tr>
</tbody>
</table>

**RE Model**

0.88 [0.82, 0.96]
Other recent data

• Al-Qahtani et al. (2013)
  – significant reduction not only of the non-ICU CA (1.4 to 0.9 per 1,000 admits; RR= 0.68, 95% CI 0.53–0.86, p = 0.001), but also of hospital mortality (22.5 to 20.2 per 1,000 admits; RR= 0.90, 95% CI 0.85–0.95, p < 0.0001).

• Simmes et al. (2012) RRS resulted in a 50% reduction in cardiac arrest rates and/or unexpected death.
  – However, this decrease was not statistically significant partly due to the low base-line incidence.
Other Recent Data

• Karvellas et al. (2012) no significant differences in LOS or mortality though there was a non-significant trend towards decreased mortality (OR 0.73, 95% CI 0.51-1.03, p.0.08).

• Rothberg et al. (2012) Code calls declined significantly from 4.70 (95% CI 3.92, 5.63) before to 3.11 (95% CI 2.44, 3.97) after.

• Leach et al. (2011) Adult mort dropped from 18% to 15%/1000 discharges over the first two years. CA trended down but did not reach significance.
What does this show?

- These numbers have changed little since the first systematic review (there are now seven published).
- Point estimates have shifted slightly:
  - CA reduced by about 40% for Peds and Adults
  - Mortality reduced by about 12-18%
- Confidence intervals have tightened.
- Our current model seems to have reached a limit.
Where do we go from here?

• Focus on further improvements:
  – Why does the afferent limb fail?
  – Optimize Team composition and performance
  – Change culture from provider centric to patient centric

• Explore other roles and benefits
  – EOLC
  – Patient satisfaction
Afferent Limb Failure

- Utilization and timely activation are widely recognized to be sub-optimal
  - Frydshou and Gillesberg (2013) found calls were much lower than predicted; only 1/2 of ICU admits from the ward went through the RRT.
  - Guinane et al. (2013) 14% of a patient sample had MET criteria but only 4% of those had activations.
    - Those who had MET criteria had 2x the LOS of those who didn’t.
    - Escalation of care for those meeting criteria varied widely (nurses intervened, consult called, direct call to ICU).
Afferent Limb Failure

- Boniatti et al. (2013) delayed calls occurred 21.4% of the time (documented instability with > then 30 minute delay in calling).
  - Physicians activators were more prone to this
  - Higher mortality in delayed calls then timely calls (61.8 vs. 41.9%) p<0.001 before/after adjustment.

- Simmes et al. (2012) found 16% of activations were delayed for one to two days though dose was good (56/1000 admit).
Afferent Limb Failure

- Vetro et al. (2011) found ½ of arrest patients may have been unsuitable for resuscitation and 20% had objective warning signs with no MET call.
- Shearer et al. (2012) Incidence of instability in the adult population was 4.04%. 42% did not receive an appropriate clinical response from the staff, despite 69.2% recognizing their patient met criteria for calling the RRS.
  - Structured interviews with 91 identified predominantly sociocultural reasons for failure to activate the RRS.
• Bucknall (2013) found that most patients meeting MET criteria never have a call made and having fulfilled MET criteria was associated with increased in-hospital mortality and at 30 and 60 days.

• Oglesby et al (2011) found using a “Score to Door Time” for ICU admission that 71% were delayed.

• Adelstein et al. (2011) implemented policy changes to their RRS to improve on this yet found that still 26% of episodes of deterioration were delayed (30% before changes).
Improving the Afferent Limb

- Won Huh (2014) found that using an electronic medical record-based screening criteria to activate team resulted in lower ICU admission and in surgical patients a lower 28 day mortality.

- Alvarez (2013) found that admission prediction and EMR data could effectively flag ward patients at higher risk of CA and unexpected mortality.

- Bellomo et al (2012) and Tanzear (2012) published pilot studies of continuous monitoring of general ward patients that were encouraging

Combine these? Add automated alerts?
Kansal and Havill (2012) Implementation of a two-tiered rapid-response system and new observation charts and calling criteria increased the number of rapid-response calls with a nonsignificant trend towards a decreased incidence of serious adverse events.
Improving the Afferent Limb

• Proactively finding the patients
  – Rounding on patients that have been transferred from the ICU in the past 24 hours
  – Rounding on patients who have had a lactic acid drawn in the previous 24 hours
  – Alerted when a patient screens positive for severe sepsis or rounding on all patients with a positive screen for severe sepsis
  – Rounding on patients with a high 30 day predicted mortality (talk about this in more detail)

• Alerted by early warning systems
Implementing a Risk Prediction Model

Attempt to prevent failures in:

– Recognition
– Communication
– Response
Implementing a Risk Prediction Model: PRISM
(Placement, Resource Indicator for Systems Management)

• Began planning in 2011
• Prospectively scoring ED and elective surgical admission in July 2012
• Risk stratified care bundles implemented in March 2013
How is the Landscape Changing?

• Current state
  – Focus on optimizing the number of visits
  – Incentive to use high acuity services
  – Limited pay for performance opportunities
  – Fee for service reimbursement
  – No financial penalties for readmission

• Future State
  – Focus on covering lives, not optimizing visits
  – Incentive to provide care in the least intensive environment appropriate
  – More robust pay for performance
  – Financial penalties for elevated readmission rates
How Can We Do Better?

• How can we design a delivery system to provide optimal care from multiple individuals and health care disciplines in an efficient, consistent and patient centered way?

• If we could predict a patient’s risk before they are admitted, could we improve their outcome and our work environment?
Project Vision

• Transform our care delivery so that care outcomes are optimized;
• Care delivery is consistent and standardized to meet the needs of the patients served;
• The care experience is compassionate and exceeds patient expectations;
• Communication is clear and inclusive;
• Our care processes reflect continuous learning and improvement grounded in evidence, data and information.

Right Patient, Right Bed, Right Providers, Right Care
Redesigning Care Task Force

- Chartered in 2011
  - Ensure that our care processes consistently lead to value for our patients
- Executive Sponsors
  - Lakshmi Halasyamani, MD, VPMA
  - Joyce Young, RN, CNO
- Steering Committee
  - Mark Cowen, MD, Medical Director Quality Institute
  - Mohammad Salameh, MD, Director of Hospital Medicine
  - Denise Harrison, RN, Director of Critical Care
  - Dave Vandenberg, MD, Medical Director Clinical Outcomes Management
  - Pat Posa, RN, System Performance Improvement Leader
  - Liz Van Hoek, System Performance Improvement Leader
Redesigning Care Goals

• Implement PRISM (Risk Tool)
  – Identify high-risk patients prior to bed placement
  – Reduce unplanned transfers to higher levels of care
  – Create common awareness of patient risk within the care team

• Create Care Bundles & Additional Clinical Pathways
  – Standardized, evidence based, multidisciplinary
  – Match resources and team processes with patient needs (PRISM risk, acute needs, etc)
  – Bundles applied across diagnoses throughout the care continuum
    • Admission
    • Progressing Care
    • Discharge/Transition
  – Clinical Pathways for key care categories or diagnosis
PRISM for Risk Stratification & Patient Placement

• Generate PRISM scores prior to admission
  – 1 = Highest Risk, 5 = Lowest Risk
• Create and Test Placement guidelines based on PRISM
• Reduce the heightened risk patients face in the first few hours/days of their stay
PRISM (Pareto Principle)

- A small proportion of patients experiences a disproportionate number of events
  - high/low subsets of patients can be identified at $t = 0$
  - PRISM bundles deploy resources and work processes in proportion to the level of risk
Pareto Principle
Few Have Many Events

Proportion of Risk Categories Of Those With Outcomes of Interest

Volume          Days                    Costs      New         Code Blue Deaths
Prism 5          Prism 4                    Prism 3      Prism 2          Prism 1

0%  20%  40%  60%  80%  100%
PRISM Components

- Provided By Clinician
  - Current or past history of
    - Respiratory failure
    - Injury
    - Heart Failure
    - Sepsis
    - Cognitive Defect
    - Other Neurological
    - Atrial Fibrillation
    - Cancer
    - Metastatic Cancer
    - Leukemia
    - Medical vs Surgical Admission

- Provided Electronically
  - Age
  - Gender
  - BUN
  - WBC
  - Platelet Count
  - Lactate
  - Hemoglobin
  - Albumin
  - Arterial pH
  - Arterial pO₂
  - Troponin
  - Hospitalized at SJMHS within past year
  - Discharged from SJMHS to ECF within past year
  - Emergent Admission

Cowen, Journal of Hosp Medicine, 2012
Derivation and Validation of Mortality Prediction Rule

- Outcome of interest – death within 30 days of the beginning of the hospitalization
- Developed using AA data 2008-2009, validated on 2010 data from AA, and separately for St. Mary’s, all adult hospitalizations
- Excellent Discrimination (AROC)
  - Death within 30 days (0.88)
  - Unplanned transfer to ICU (0.71 – 0.74)
  - Code blue (0.71 – 0.74)
  - ICU utilization (0.66 – 0.70)
  - Palliative care by end of hospitalization (0.88 – 0.90)
  - Death within hospitalization (0.86 – 0.88)
  - 30 day readmission (0.68 – 0.69)
  - Death within 180 days (0.87 – 0.89)
PRISM Implementation

• PRISM Application - Live July 11, 2012
  – Stand alone application, PRISM score documented in EMR
  – Scores generated by ED physician & Surgical Prep Center Nurses
  – Scores are seen by Patient Resource Managers and PACU for consideration in bed assignment

• Focus on PRISM 1 Patients
  – Not placed in general medical/surgical beds unless comfort care
  – Advanced Directive needs considered

• Intent of Initial Phase
  – Testing the application & our processes
  – Creating an understanding how to use PRISM to align resources to patients needs (i.e. Social Work)
  – Building consensus through analysis & conversation on how to integrate PRISM into our placement criteria & care planning
Implication for PRISM bundles

- Mortality risk informs initial placement of patient into the appropriate nursing unit
- Mortality risk informs transitions of care
- Failure to rescue data informs surveillance and response activities of the clinical team
### Patient Questions

**Does patient have current or past one year history of:**

- Atrial Fibrillation? [Click for details]
- Solid-tumor Cancer (answer No if metastatic cancer or lymphoma, leukemia also present)? [Click for details]
- Metastatic Cancer (regardless whether or not leukemia or lymphoma also present)? [Click for details]
- Cognitive Defect? [Click for details]
- Other Neurological conditions? [Click for details]
- Leukolymphoma? [Click for details]

**Indicates User-Entered**
- Yes  No  Unknown

### Does patient CURRENTLY have any of the conditions or receiving treatment for:

- Respiratory Failure? [Click for details]
- Heart Failure? [Click for details]
- Injury? [Click for details]
- Sepsis? [Click for details]

- Yes  No  Unknown

**Will the patient be admitted to an Internal Medicine service?**
- Yes  No

**Since the patient has been in the Emergency Department, has his or her condition:**
- Deteriorated  Stayed the same  Improved

**Has the patient had any of the following vitals during this admission?**
1. Blood pressure systolic < 80
2. Pulse rate > 140
3. Respiratory rate > 30

- Yes  No

**Comments:**

**Generate Score  Cancel**

Disclaimer: The predictive models provided in this application are intended only as an aid to medical decision making. The final determination as to disposition of the patient rests with the physician.
Care Bundles

Standardization of Key Behaviors Across the Episode
Customization Based on PRISM Score

Goals:
- Create common understanding for multidisciplinary team
- Call out vital few items (based on evidence) to be create standard, reliable processes
- Customize level/intensity of support based on PRISM score

Assign PRISM Score & Admit Patient

Initiate Bundles & Care

Discharge

Reducing Mortality
Reducing Complication
Improving Evidence Based Care
Reducing Readmissions

Placement & Admission
- Admission Med Rec
- Team communication
- Advanced care plan

Progressing Care
- Physician & team rounding and/or communication
- Case Manager involvement
- Falls/Skin/VTE interventions

Discharge & Transition
- TeachBack
- Discharge med rec
- Enhanced discharge summary/communication
- Support for f/u appointment and/or care
Medicine Patient Status 30-day Post Discharge

- PRISM 1 (N=951)
- PRISM 2 (N=4301)
- PRISM 3 (N=6269)
- PRISM 4 (N=5170)
- PRISM 5 (N=4276)

<table>
<thead>
<tr>
<th>Status</th>
<th>PRISM 1</th>
<th>PRISM 2</th>
<th>PRISM 3</th>
<th>PRISM 4</th>
<th>PRISM 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Death in Hospital</td>
<td>215</td>
<td>256</td>
<td>80</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Death, no Readmission</td>
<td>112</td>
<td>295</td>
<td>90</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Death, w/ Readmission</td>
<td>82</td>
<td>219</td>
<td>80</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Alive, w/ Readmission</td>
<td>153</td>
<td>785</td>
<td>923</td>
<td>452</td>
<td>171</td>
</tr>
<tr>
<td>Alive, no Readmission</td>
<td>389</td>
<td>2746</td>
<td>5096</td>
<td>4694</td>
<td>4099</td>
</tr>
</tbody>
</table>

Retrospective Data for FY 2012
Surgical Patient Status 30-day Post Discharge

Retrospective Data for FY 2012
## Chance of Developing a New Condition by PRISM Level

<table>
<thead>
<tr>
<th>Chance of Developing a New Condition</th>
<th>New Conditions with highest risk of death</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medicine Patients</strong></td>
<td></td>
</tr>
<tr>
<td>PRISM 1 = 13.1%</td>
<td>Shock, sepsis, respiratory failure, renal, pneumonia, liver, GI bleed, dysrhythmia, atrial fibrillation, AMI, CVA, other neurological, (seizure disorder, coma, stupor, and brain damage)</td>
</tr>
<tr>
<td>PRISM 2 = 10.4%</td>
<td></td>
</tr>
<tr>
<td>PRISM 3 = 7.2%</td>
<td></td>
</tr>
<tr>
<td>PRISM 4 = 4.0%</td>
<td></td>
</tr>
<tr>
<td>PRISM 5 = 0.8%</td>
<td></td>
</tr>
<tr>
<td><strong>Surgery Patients</strong></td>
<td></td>
</tr>
<tr>
<td>PRISM 1 = 30.7%</td>
<td>Shock, sepsis, respiratory failure, pneumonia, paralysis, liver, AMI</td>
</tr>
<tr>
<td>PRISM 2 = 19.9%</td>
<td></td>
</tr>
<tr>
<td>PRISM 3 = 15.0%</td>
<td></td>
</tr>
<tr>
<td>PRISM 4 = 9.9%</td>
<td></td>
</tr>
<tr>
<td>PRISM 5 = 7.0%</td>
<td></td>
</tr>
</tbody>
</table>
Acquired conditions impact the Surgical mortality rate more than the Medical rate

• **Medicine**
  – 27.4% of in-hospital medical deaths occur in those developing a new condition (conversely, 72.6% of decedents did not develop a new condition prior to death)
  – **Demonstrates the importance of establishing early diagnosis and treatment plan**

• **Surgery**
  – 64.2% of in-hospital surgical deaths occur in those developing a new condition (conversely 35.8% of decedents did not develop a new condition)
  – **Demonstrates the importance of prompt recognition and treatment of new condition**
PRISM 1 Care Bundle - Ann Arbor Updated 6/3/14

PRISM Scores: Identify the risk of patient death in the first 30 days of admission. Care Bundle Goal: Initiate specific interventions & levels of care that will reduce a patient’s risk of mortality, readmissions, & unplanned transfers to a higher level of care.

- PRISM scores are to be included in all Handoffs and Interdisciplinary or Team Rounds
- This Bundle doesn’t apply to Comfort Care, Hospice patients

Placement & Admission:
- Nursing: Vitals within 1 hour prior to transport to inpatient Bed, Verbal Nurse to Nurse Handoff and ED RN Transport. (also applies to all ICU admissions)
- Bed Manager: Placement in ICU or IMC bed for non-comfort care. ICU Placement for any occurrence of confirmed SBP<80 or HR>140
- Inpatient Physician assesses patients and enters admission orders while patient is in ED
- Bedside RN greets patient upon arrival and reviews orders. If change in condition, questions or clarifications: Bedside RN calls the attending physician or APP

Rounding & Team Communication:
- TEAM: PRISM Score (1 and 2) included in pages to physician
- TEAM: PRISM scores are to be included in all Handoffs and Interdisciplinary or Team Rounds
- Hospitalist: Shift sign out for PRISM 1 patients

30 day Outcome-CY 2013

Care Coordination & Goals of Care:
- Case Manager/Social Work: Completes Initial Screen. Care Coordination and Psychosocial needs determined. PRISM 1 screens completed within 24 hrs (M-F)
- ACP Program Leader: Review and address status of Advance Directives and ACP. Status indicated in Depart Summary
- Transition Coach: Screens for TC program (M-F) *May vary for HF & MI patients

Interventions to Prevent Complications:
- Bedside RN: Greets patient upon arrival after any transfer
- Bedside RN: Schedule patient testing to be done bedside in first 24 hrs. If unable to do so must be accompanied by a STAT RN/Unit RN
- Bedside RN: Schedule Hemodialysis to be done bedside in first 24 hrs unless cleared by Physician
- For Acute Condition Changes
  - Bedside RN: Notify Physician & VS q30min x 4, q1hr x 2, q2hr x 4, then q4hr
  - Physician: Evaluate patient in person
- Physician: Low threshold for transfer to higher level of care if patient condition changes or becomes unstable
- Physician: Consider Internal Medicine consult for surgical PRISM 1 patients

Discharge & Transition: *May vary for HF & MI patients
- Bedside RN: Patient’s primary caregiver or partner is identified at first IDR, noted on care board & included in education
- TEAM: Med changes/High Risk Meds reviewed by RN, Physician/APP prior to discharge
- Physician/APP: Discharge Summary completed and verified day of discharge. Verbal IP Provider to PCP handoff attempted
- Case Manager/ Social Worker
  - Ensure Patient has PCP identified for follow up care & communicates status in IDR
  - Ensure follow up appointment is scheduled to occur with PCP within 3-7 days of discharge (or other appropriate physician) & communicates status is IDR
Please Note:
- PRISM scores are to be included in all Handoffs and Interdisciplinary or Team Rounds
- Patients without a PRISM score should be included in the strategies that the team identifies as appropriate
- This Bundle doesn’t apply to Comfort Care, Hospice patients

<table>
<thead>
<tr>
<th>Care Bundle</th>
<th>Key Behaviors/Strategies</th>
<th>PRISM 1</th>
<th>PRISM 2</th>
<th>PRISM 3</th>
<th>PRISM 4/5</th>
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</thead>
<tbody>
<tr>
<td>Placement &amp; Admission</td>
<td>Pre-Admission: Verbal Nurse to Nurse Handoff and ED RN Transport. (also applies to all ICU admissions)</td>
<td>Vitals repeated in ED within one hour prior to transport to inpatient bed or calling report</td>
<td>Handoff and Transport at the discretion of the ED RN based on the acuity and resources needed for the patient.</td>
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<td>Initial Placement</td>
<td>Placement in ICU or IMC bed for non-comfort care. ICU Placement for any occurrence of confirmed SBP&lt;80 or HR&gt;140</td>
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<td>Initial Team Communication</td>
<td>Inpatient Physician assesses patients and enters admission orders while patient is in ED</td>
<td></td>
<td>Inpatient Physician assesses patients and enters admission orders within 1 hour of admission to unit</td>
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<tr>
<td>Interdisciplinary communications</td>
<td>PRISM Score (1 and 2) included in pages to physician</td>
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<tr>
<td>Rounding &amp; Team Communication</td>
<td>Hospitalist shift sign out for PRISM 1 patients. PRISM 1 patients identified on Huddle Board</td>
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<tr>
<td>Care Coordination &amp; Goals of Care</td>
<td>Case Manager/Social Work completes Initial Screen. Care Coordination and Psychosocial needs determined. PRISM 1 screens completed within 24 hrs (M-F)</td>
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<td>Case Manager/Social Work Referral or Trigger Based</td>
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<td></td>
<td>ACP Program Leader (PRISM 1) and Social Work (PRISM 2) review and address status of Advance Directives and ACP. Status indicated in Depart Summary.</td>
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<td></td>
<td>Transition Coach Screens for TC program (M-F) *May vary for HF &amp; MI patients</td>
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<tr>
<td>Progressing Care</td>
<td>Interventions to prevent new conditions &amp; recognize acute changes: Bedside RN greets patient upon arrival after any transfer</td>
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<td>Consider Internal Medicine consult for surgical PRISM 1 patients</td>
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<td>Patient testing to be done bedside for first 24 hrs. If unable to do so patient is to be accompanied by STAT RN/unit RN</td>
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<td>Acute condition change: RN: VS q30min x 4, q1hr x 2, q2hr x 4, then q4hr, Notify Physician</td>
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<td>Physician: evaluate patient in person</td>
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<td>Low Threshold for transfer to higher level of care if condition change/Unstable</td>
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<td><strong>Discharge &amp; Transition</strong></td>
<td><strong>Patient Education</strong></td>
<td>Patient’s primary caregiver or partner is identified at first IDR and noted on care board. Family member or caregiver included in education.</td>
<td>Med Changes/High Risk Meds reviewed by RN, Physician/APP prior to discharge (hypoglycemic agents &amp; anticoagulants)</td>
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<td><strong>Enhanced discharge summary/communication</strong></td>
<td>Discharge Summary completed and verified day of discharge. Verbal IP Provider to PCP handoff attempted</td>
<td>Vertical IP Provider to PCP handoff attempted for high risk discharges</td>
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</tbody>
</table>
|             | **Support for flu appointment and/or care** | Case Manager/Social Work Ensure Patient has PCP identified for follow-up care & communicates status in IDR | Ensure follow-up appointment is scheduled to occur with PCP (or other appropriate physician) & communicates status is IDR. Medicine:  
  - PRISM 1 & 2: within 3-7 days of discharge.  
  - PRISM 3: within 7 days of discharge  
Surgical:  
  - PRISM 1: within 3-7 days of discharge or as determined by Medicine Consult or Surgical Attending |         |           |

*May vary for HF & MI patients*
PRISM time line

• Before July 15, 2012
  – Preparation work, baseline performance metrics

• July 15, 2012 – March 15, 2013
  – Prospective scoring begins, placement rules phased in, IHA begins follow-up appointment work

• Post-March 15, 2013
  – Bundles implemented
30 Day Outcomes – CY13

**Outcomes of Non-surgical Patients**

- PRISM 5
- PRISM 4
- PRISM 3
- PRISM 2
- PRISM 1
- No Score

**Outcomes of Surgical Patients**

- PRISM 5
- PRISM 4
- PRISM 3
- PRISM 2
- PRISM 1
- No Score

Legend:
- a Death in hospital
- b Post-discharge death, no readmit in 30 days
- c Readmit + post-discharge death
- d Readmit + alive at 30 days
- e Alive without readmission
30 day Mortality – O / E

Observed/Predicted Probability of Mortality within 30 Days (Prospective PMort30)
Period 1 – July 2011 – July 15, 2012 (red dashed line)

Excludes fungal patients
Period 1 – July 2011 – July 15, 2012 (red)
Period 2 – July 15, 2012 – March 15, 2013 (green)

Kaplan-Meier curves demonstrate survival advantage

\[
p = 0.0009 \\
p = 0.002
\]
30 day Failure to Rescue Mortality

30-day Failure to Rescue (30-day Mortality Rate in those having a Hospital-acquired Diagnosis)

July 2012
Understanding the unplanned transfers to the ICU is important
Errors Provide Useful Information

- We can learn more from our failures than from success
- Our processes can be improved when studied

“Give me a fruitful error anytime, full of seeds, bursting with its own corrections. You can keep your sterile truth to yourself.”  
Vilfred Pareto
Learning from Defects

- What happened?

- Why did it happen (system lenses)?

- What could you do to reduce risk?

- How do you know risk was reduced?
  - Create policy / process / procedure
  - Ensure staff know policy
  - Evaluate if policy is used correctly

- How will you share the learnings?

*Unplanned Transfers are considered DEFECTs, and we try and learn from them*
PRISM 4 – Unplanned Transfers

Measure used to evaluate our additional placement rule of all PRISM 4 & 5 are placed in med/surgical general bed unless they meet IMC or ICU admission criteria
OTHER APPLICATIONS FOR PRISM

- Length of stay improvement
- Patient experience improvement
- Preventing readmission
Inpatient Length of Stay

Non-Surgical Length of Stay

Surgical Length of Stay Categories
Patient Experience and PRISM

Doctors Explain in a Way You Understand

Doctors Listen Carefully to You

Doctors Treat You with Courtesy and Respect

% "Always"

(Oct 2012 - Jun 2013)
Impacting Failure to Rescue Mortality

• Understand what Failure to Rescue means
• What is the mortality for this population in your hospital?
• Causes are multifactorial but related to failure in the steps of escalation of care: Recognition, Communication, Response
• Multiple strategies should be employed to impact this population including:
  – Rapid response systems
  – Risk prediction models applied at decision to admit
  – Learning from our defects
It is not enough to do your best; you must know what to do, and THEN do your best.

~ W. Edwards Deming
Questions?
Wrap Up

Next Steps & CEU Instructions
“If you have a strong commitment to your goals and dreams, if you wake up everyday with a passion to do your job, everything is possible”

Chantal Petitclerc
Resources

• HRET HEN Contact: HEN@aha.org
• Improvement Advisor: Kim Werkmeister kwerkmeister@aha.org
• Reach out to your State Hospital Association
• Subscribe to ICU Harm LISTSERV®
Reminders

• To join the ICU Harm LISTSERV®, login to HRET-HEN.org and click on the button.

• An evaluation survey on this boot camp will appear when you close out of the WebEx platform. Please let us know how we are doing!

• Instructions on how to claim CEUs will be sent via email 24-48 hours after the event.
Continuing Education Units

• 1 hour of the virtual event attended
• Following the session an email sent to all registered participants with instructions
  – Email sent by Hospital Engagement Network (hen@aha.org)
  – Check any spam or junk folders if you do not receive the instructions
  – Complete the ABQAURP survey listed in the email
Continuing Education Units:
Viewing as a Group

Hospital Engagement

CME/CEU Instructional Spreadsheet

Designed to help identify solutions to reduce hospital acquired conditions and readmissions and spread them to hospitals and other health care providers.

WHAT'S NEW:

How do I log into the website?

This question has become popular, so we thought we would post the answer. Every participating healthcare facility within the HEN has an unique number that is three to four characters long ending in their state abbreviation [Format =HRETxxxxST]. This ID becomes the "Username" for the facility's profile. The
Continuing Education Units: Viewing as a Group

• Complete “CME/CEU Event Group Listing” form
  – Username and password required
• List name and email address for each individual who viewed the offering
• Submit to Jamal Turner (jturner@aha.org) no later than 24 hours after the event
  – Include “Group Listing” in the subject line
• Expectation that the group facilitator meets the 1 hour viewing requirement
THANK YOU
Break Time

Join us for the 2nd part of today’s webinar, covering OB harm at 12:30 pm CT!