Improving Patient Safety through Provider Communication Strategy Enhancements

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AHRQ Partnerships in Implementing Patient Safety (PIPS) Grants

• Assist health care institutions in implementing safe practice interventions that show evidence of eliminating or reducing medical errors, risks, hazards, and harms associated with the process of care

• Involve projects that can inform AHRQ, providers, patients, payers, policy makers, and the public about how safe practice interventions can be successfully implemented in diverse health care settings and lead to safer and better health care for all Americans
Improving Patient Safety through Provider Communication Strategy Enhancements

Purpose:
To develop, implement and evaluate a comprehensive team communication strategy, resulting in toolkits that can be generalized to other settings of care.

To improve patient safety by decreasing team communication failures in the hospital setting and improve the culture of patient safety.

Why Communication?

• The overwhelming majority of untoward events involve communication failure

• The clinical environment has evolved beyond the limitations of individual human performance
The Need for Teamwork

Health Care is an extremely complex environment with:

- Surprises
- Uncertainty
- Incomplete information
- Interruptions and multi-tasking
- What are the surprises in your world?

Specific Aims

- Implementation of a structured communication tool (SBAR)
- Development and implementation of an escalation process tool
- Implementation of multi-disciplinary patient centered rounds utilizing a daily goals sheet
- Implementation of team huddles
Methods

• Pretest-posttest design

• Time frame: July 2005 – June 2007

• Setting: Denver Health Medical Center (Urban Public Safety Net Hospital, Integrated Health Care System)

Methods Continued

➢ Sample: Healthcare team (Staff & Providers)

  Phase I: MICU, ACU

  Phase II: Behavioral Health – Adult, Adolescent, Psych ED

  Phase III: Organization

➢ Incorporates baseline data collection, implementation of the team communication interventions, followed by data collection & analysis
Expected Outcomes

- Decreased communication failures as a contributing factor in Patient Safety Net reports
- Decreased time to resolution for non-emergent patient care issues requiring communication between team members
- Improvement in a culture of patient safety
- Implementation Tool Kits

Communication Enhancement Strategies

Structured Communication - SBAR

- Escalation

Interdisciplinary Rounds

- Daily Goal Sheets

Huddles
Structured Communication: SBAR

If the phone goes dead in 10 seconds – will the person on the other end know what is needed?

**Situation** – State what you are calling about (5-10 second punch line)

**Background** – Identify factors leading up to current situation (including objective data i.e. vitals, labs)

**Assessment** – State what you think the problem is (diagnosis not necessary – include severity)

**Recommendation** – State what you think needs to be done for the patient (get a time frame)

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**Escalation**

The progressive and efficient movement of an issue up the hierarchy that results in timely problem resolution
Adult Rapid Response

Date: __________  Time: __________

**FIRST ASSESSMENT**

- Consider the patient's location, when assessing the patient and determining the need for a rapid response.

**Psychomotor:**

- Respiratory: 
  - Respiratory rate ≥ 30
  - Respiratory rate < 8
  - Hypoventilation, nasal oxygen saturation < 95%
  - Bacterial oxygen administration

**Cardiovascular:**

- Acute change in systolic BP > 100
- Acute change in diastolic BP ≥ 10
- Acute change in HR ≥ 12
- Acute change in HR ≤ 50
- Abnormal vital signs on initial assessment
- Abnormal vital signs on repeat assessment
- Tachycardia, tachypnea, or tachypnea
- Unexplained change in vital signs
- Unexplained change in patient response
- Unexplained change in urine output
- Unexplained change in bowel sounds

**Laboratory:**

- Unexplained change in vitals
- Unexplained change in patient response
- Unexplained change in bowel sounds

**Interventions:**

- Oxygen saturation ≤ 70%
- Unexplained change in oxygen saturation
- Unexplained change in patient response
- Unexplained change in bowel sounds

**Temperature:**

- Temperature ≥ 39°C
- Temperature ≤ 36°C
- Unexplained change in temperature
- Unexplained change in patient response
- Unexplained change in bowel sounds

**SPECIAL CONSIDERATIONS:**

- Unexplained change in patient condition
- Unexplained change in patient response
- Unexplained change in bowel sounds

Any acute change in patient condition requires a thorough review of the patient. If the change is significant enough to warrant a rapid response, the patient will be transported to the nearest hospital. If the change is minor, the patient will be monitored and reassessed.

If any of the above criteria are met, the clinician should initiate a rapid response. The rapid response team will be mobilized to assess the patient and determine the necessary interventions. The patient will be transported to the nearest hospital if the change in condition is significant enough to warrant it.

**Additional Instructions:**

- In addition to the above criteria, all patients who meet the criteria for a rapid response will be transported to the nearest hospital. The rapid response team will be mobilized to assess the patient and determine the necessary interventions.

**Physician Signature and Date:**

__________________________  ____________

Date: __________  Time: __________

ATTENDING PHYSICIANS ONLY:

__________________________  ____________

Physician Signature  Date  Time
Interdisciplinary Rounds & Daily Goal Sheet
Assessment and planning for a patient done by all appropriate health care disciplines in a simultaneous (synchronous) manner

Piloting Interdisciplinary Rounding
Utilizing the Lean Tools: A plan for interdisciplinary rounding was developed and implemented as a Rapid Improvement Event (RIE)

Goals:
Increased efficiency
Decreased redundancy
Single sets of patient goals, known by entire team
Decreased phone calls/pages among providers throughout entire day
### Multidisciplinary Rounding with Daily Goals Sheet

**What needs to be done for the patient to be discharged from the Unit?**

**What is the patient’s greatest safety risk? How can we reduce that Risk?**

**Pain Management/Sedation**

**Medication changes (can any be discontinued?)**

**Tests/procedures**

**Review scheduled labs; morning labs and CXR**

**Family Communication**

<table>
<thead>
<tr>
<th>Goals and Action Items</th>
<th>AM Rounds</th>
<th>PM Rounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient’s greatest safety risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pain Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratory/Volume status Goals</td>
<td></td>
<td></td>
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<tr>
<td>Nutrition/Temperance Goals</td>
<td></td>
<td></td>
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<tr>
<td>NYC Prophylaxis (NO SSRI)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOX Prophylaxis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sterile Skin Preparation</td>
<td></td>
<td></td>
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<tr>
<td>Medication Therapy Goals</td>
<td></td>
<td></td>
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<tr>
<td>T, U, O, H, S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Therapeutic Drug Levels</td>
<td></td>
<td></td>
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<tr>
<td>GI Nutrition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catheter/Tube/Dental Line changes (CC)</td>
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<td></td>
</tr>
<tr>
<td>Medication changes (GC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GIUP/Consults for Blood building Labs</td>
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<td></td>
</tr>
<tr>
<td>Tests/Prophylaxis Status Pending Labs: staging</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consultations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communicate with Primary Care/ICU</td>
<td></td>
<td></td>
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<tr>
<td>Family communication/conference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharge/ICU/Surgical?</td>
<td></td>
<td></td>
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<tr>
<td>Reorder Orders Signed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaccinations/Education/Consultation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
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</tbody>
</table>

**Follow/Meeting Signature:**

Date:
Huddles

Quick meeting of a functional group to set the day/shift in motion by commentary with key personnel

Different from joint rounding in that huddles have a primarily operational focus

Example:
   Bed turnover

Evaluation of the Interventions

- Communication Process analysis
- Review of Patient Safety Net (PSN) reports
- Hospital Survey on Patient Safety Culture
- Survey of staff and providers understanding of daily goals
- Focus group interviews
- Cost-benefit analysis
Patient Safety Net Reports 2005

- 21% of contributing factors identified by risk management are attributed to Team Factors.
- 84% of Team Factors involve communication problems between providers.

Process Analysis

EVENT # 107: SURGERY

11:00 AM / 3:39 PM

Nurse wants to inform the surgery resident about non-access to IV on a patient.

No call back from the resident. Orders entered are different, phone and pager nos. do not match.

Nurse pages surgery resident again.

Nurse calls the ICU.

Nurse pages surgery resident.

Nurse pages surgery intern.

Total Lead Time = 5 hours and 16 mins.
### Preliminary Process Analysis Data

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<thead>
<tr>
<th></th>
<th>Medical ICU</th>
<th>Acute Care</th>
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<tbody>
<tr>
<td>Pre-intervention</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean total time</td>
<td>7.19 minutes</td>
<td>8.01 minutes</td>
</tr>
<tr>
<td></td>
<td>N=112</td>
<td>N=135</td>
</tr>
<tr>
<td>Post-Intervention</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean total time</td>
<td>4.16 minutes</td>
<td>5.94 minutes</td>
</tr>
<tr>
<td>(Preliminary results)</td>
<td>N=31</td>
<td>N=32</td>
</tr>
</tbody>
</table>

### Process Analysis Data

<table>
<thead>
<tr>
<th>Start time to completion time (in minutes)</th>
<th>Pre-Intervention MICU</th>
<th>Preliminary Post Intervention MICU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>7.19</td>
<td>4.16</td>
</tr>
<tr>
<td>Median</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Mode</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>30.42</td>
<td>6.07</td>
</tr>
<tr>
<td>Minimum</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Maximum</td>
<td>312</td>
<td>27</td>
</tr>
</tbody>
</table>
Process Analysis Data

<table>
<thead>
<tr>
<th>Start time to completion time (in minutes) Preliminary Data</th>
<th>Pre Intervention ACU</th>
<th>Preliminary Post Intervention ACU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>5.94</td>
<td>8.01</td>
</tr>
<tr>
<td>Median</td>
<td>1.5</td>
<td>2</td>
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<tr>
<td>Mode</td>
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<td>18.3</td>
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<tr>
<td>Std. Deviation</td>
<td>9.55</td>
<td>18.3</td>
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<tr>
<td>Minimum</td>
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<td>1</td>
</tr>
<tr>
<td>Maximum</td>
<td>51</td>
<td>136</td>
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</table>

Study Challenges

Healthcare team Education

Housestaff (Intern/Resident) Rotations

Interdisciplinary Tools

Synchronized provider rounding

Synchronized huddles
Lessons Learned

• Importance of Senior Leadership Staff

• Multi-media as well as Didactic Educational Opportunities

• Physician Presenter for Medical Staff

• Strategically located cues

• On-Boarding Employees

Our Research Team

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