Clinical Scene Investigation (CSI): Setting the Stage for Quality Improvement and Patient Safety

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Traditional Patient Safety Education

- Policies & Procedures
- Practice Alerts
- Accreditation standards
- Audit Reports
- Collaborative Reports
How CSI came about…

• The project is an adaptation of a competency validation method developed by John F. Dixon, RN, MSN.

  – 4 Criteria for Identification of What to Validate
    • New procedures, policies, initiatives
    • Change in procedures, policies, equipment
    • High Risk areas
    • Problematic areas

Wright (2005)
Background

- The staff of the Pediatric Intensive Care Unit (PICU) at Children’s Healthcare of Atlanta, Egleston consists of 118 nurses and 28 respiratory therapists.
- Annual competency validation is composed of 4 hours self-guided education and 4 hours class education with skill verification for high-risk, low volume skills.
CSI Objectives

Main Objectives

• To validate the staff member’s ability to recognize risks to patient safety in a clinical setting using a scene scenario and simulation environment

• To Receive feedback from staff re: CSI experience

• Minimize impact on non-productive time (NPT)

Participant Objectives

• Mandatory Participation

• Complete in 15 minutes

• Record a minimum of 10 patient safety risks/errors
CSI in PICU

• The PICU PS&Q multidisciplinary team identified patient safety risks for ICU patients
  – Incident reports
  – New or Modified clinical procedures or processes
  – PICU quality initiatives
  – New policies or standards that needed reinforcement
Errors to find from 6 Categories:

- General & Medication Safety
- Bloodstream Infection Prevention
- Equipment & Procedural Accuracy
- Ventilator-Associated Pneumonia Prevention
- Pressure Ulcer Prevention
- 2012: CAUTI Prevention
Team Involvement

- Pharmacy
- EMR specialist
- Medication Safety Specialist
- System Quality Team
- Quality and Patient Safety Council
- Professional Development Council
Examples of Simulation

- Planned 30 nursing and respiratory errors for CSI
  - Non-occlusive CVL dressing
  - Intravenous line contamination
  - Endotracheal tube insecure
  - Medication and infusion drip errors
  - Mislabeled specimen
  - Patient identification errors
  - Inadequate pressure ulcer prevention
  - Clamped chest tube
  - Pressure line management errors
  - Inadequate ventilator-associated pneumonia prevention
  - Isolation protocol errors
What our Detectives Found...

- Ventilator-Associated Pneumonia risk
  - Fish-hook on ETT
  - Condensate drains to patient
  - No mouth care kits available

- Biohazard Waste Disposal Errors

- CLABSI Risk:
  - Dressing
  - Line Contamination

- Pressure Ulcer Risk
  - Syringe under patient
Challenges for the Team

• **Staging the scene**
  – Completed by 11 council members within 2 hours: full council participation

• **Maintenance of scene integrity**
  – Council members assigned to refresh scene during scheduled clinical shifts

• **Avoiding unintentional errors**
  – Review scene after first 20 observations to remove distracters

• **Patient Census**
  – Planned program during historically lower census period to use an unoccupied patient room for the scene

• **Feedback to participants**
  – Professional Development Council received list of scene errors and developed rationale with policy citation
  – Each participant received a copy of errors staged by the team, rationale, and their original scorecard
Results:

- Total Participants
- RN
- RCP

Evaluation Return Rate

- 2011
- 2012

Return Rate
Time to Complete CSI

- <15 min: 2011 (green) vs. 2012 (pink)
- <30 min: 2011 (green) vs. 2012 (pink)
- <45: 2011 (green) vs. 2012 (pink)
- 1h: 2011 (green) vs. 2012 (pink)
Completion Occurred

During shift

Before/after

Come in

2011

2012
Non-Productive Time For Competency Validation

- Number of RN/RCP
- Staff NPT
- RN-i
- Total RN-NPT (I & P)

Graph showing the comparison between Annual and CSI values for different categories.
How Valuable Was This Experience?

- “What was the most valuable?”
  - “Fun & educational”
  - “Discovering details”
  - “Helped me to think about preventing mistakes”
  - “Increased awareness of errors”
• “What was the least valuable?”
  – “Little time-consuming, but worth it”
  – “Only having 15 minutes”
  – “Trying to do it during a shift”

• “What recommendations do you have to improve the overall experience of CSI?”
  – “Teaching beforehand”
  – “Live Simulation”
  – “Let us know the number of things we are looking for”
  – “Not so many errors, maybe focus on specifics”
Conclusions:

• Overall, CSI was viewed as a valuable educational experience by staff based on evaluation comments and feedback.
• CSI required minimal non-productive time.
Implications for Practice

• Cost-effective method of staff competency verification to recognize clinical errors in a patient environment

• Project may be replicated for other patient care areas with adaptations to their patient safety and quality improvement needs
Acknowledgements

David Heitz, Lori Emilus, Sarah Piland, Meghan F. Duggan, Lauren Derrigo, Bonnie Miler, Kim May, Sally Morris, Susanne Hannada, Charlene Cunningham

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