Enhancing Patient Safety in the Pediatric Emergency Department through Simulation

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INTRODUCTION

- Patient safety hazards and adverse events are a significant concern in the United States, especially in the pediatric population
- Approximately 13 adverse events occur per 1,000 hospital discharges for children
- Increasing situational awareness is an effective intervention to enhance patient safety
- Learning how to report identified errors and near misses enables mitigation of real or possible harm
- Simulation helps learners and trainees develop situational awareness
- Patient care simulation scenarios have demonstrated improvements in learner confidence and their ability to identify safety hazards

Fig 1: Students identify simulated patient safety hazards

OBJECTIVES

- To enhance medical student and trainee awareness of and confidence in identifying and reporting patient safety hazards through a brief interactive simulation activity

METHODS

- A list of 20 high-priority patient safety hazards was created using a modified Delphi technique
- Clinical scenario: ***a five-year-old boy is in the pediatric emergency department suffering from an acute asthma exacerbation***
- Learners were divided into teams of 3-5, briefed on the scenario, and given 10 minutes to identify hazards
- Hazards fell into 5 broad categories: ***1. situational safety***, ***2. privacy and personal information***, *3.* ***infection prevention***, ***4. treatment errors***, and **5. *electronic health records***
- Participant makeup:
  - 102 second year medical students starting clinical clerkships
  - 91 fourth year medical students transitioning to residency
  - 15 emergency medicine interns
  - 13 pediatric interns
- Students then watched a 5-minute video on reporting near misses and errors using the UCD incident reporting system, followed by a 15-minute debrief with a facilitator, and completed an evaluation survey.

RESULTS

- Key outcomes:
  1. frequency of safety issues identified
  2. confidence in identifying and reporting hazards, errors and near misses.
- Learners rated their overall satisfaction on a 0-10 scale (0= Not at all Satisfied, 10= Very Satisfied).
- Mean learner satisfaction scores were high at 8.5 ± 1.5, 7.8 ± 1.7, 8.1 ± 0.9, and 8.9 ± 0.9 for pre-clerkship, pre-residency, emergency medicine interns and pediatric interns, respectively.

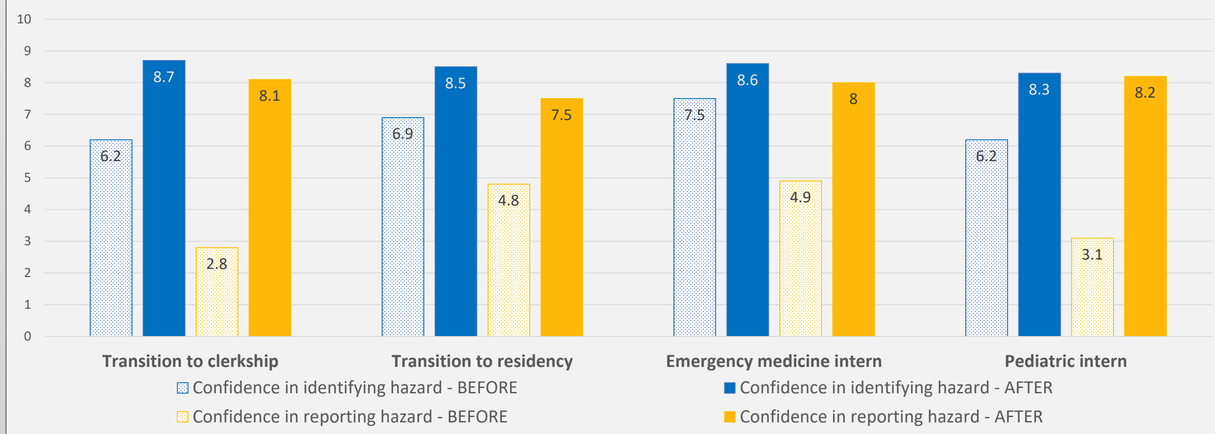

Fig 2: Confidence in identifying and reporting patient safety hazards

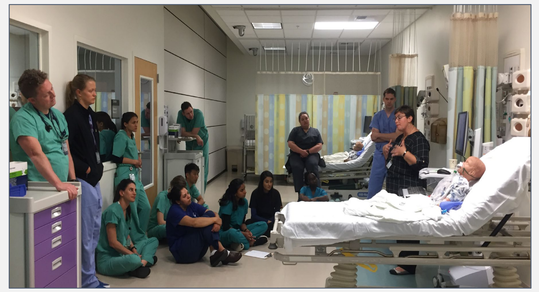

Fig 3: Students debrief with a facilitator

CONCLUSIONS

- The 5 **most** commonly identified safety hazards identified were:
  1. patient identification band off (98.1%)
  2. choking hazards (96.2%)
  3. another patient's discharge papers at bedside (96.2%)
  4. food present in room with NPO patient (96.2%)
  5. slip hazard in room (94.3%).
- The five **least** commonly identified hazards were:
  1. wrong name and date on whiteboard (69.8%)
  2. undated IV (49.1%)
  3. unsecured medications at bedside (47.2%)
  4. unsigned orders open (33.9%)
  5. multiple patient charts open in the electronic health record (9.4%)
- Next steps include:
  - Analyzing data on changes to number of incident reports filed by learners/trainees
  - Developing an exercise where participants practice reporting an error themselves

CONTACT INFORMATION

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