Risk Informed In-Situ Simulation for Pediatric Emergency Transfers (AHRQ R18-HS017912-01; Michael Reese Health Trust)

Background

- In-situ simulation is a high fidelity method conducted in the operational clinical environment, which involves healthcare team members functioning in their real roles.
- It utilizes live, real time systems and processes of care (i.e. EHR, lab, medical imaging).
- The goals of this project were to:
  1) Develop a risk-informed in-situ simulation training to address clinician communication and teamwork; and system and process risks during pediatric emergency transfers.
  2) Evaluate in-situ simulation as a tool to effectively expand team training beyond awareness to performance.

Methods

- A multi-disciplinary team of clinicians developed four clinical simulation scenarios based on risks previously identified in the Risk Assessments for Pediatric Emergency Transfers project.
- Researchers used a pre-post design to assess the effectiveness of in-situ simulations implemented in the emergency departments and pediatric intensive care units of the CPQSC sites. All simulations were video recorded and followed by a debriefing to discuss team performance, roles, and skills.
- Participants completed the AHRQ Safety Culture Survey prior to participation to measure a baseline of institutional patient safety culture.

Results and Conclusions

- 352 clinicians participated in 42 simulations across five CPQSC sites; and simulation videos are currently being analyzed to assess the effectiveness of in-situ simulation as a method to improve clinical communication and teamwork.
- Researchers also identified system and process risks through these in-situ simulations, including: (1) lack of communication between care team clinicians; (2) lack of designated team roles and responsibilities; (3) inefficiencies in EMR charting, especially in emergent situations; (4) problematic placement of computers in unit; (5) delays in patient registration, resulting in delays in patient care.
The research team developed several documents and checklists to prepare institutions interested in implementing in-situ simulations. For more information, please visit the Risk Informed In-Situ Simulation for Pediatric Emergency Transfers Tool Kit.