Uncovering Hidden Safety Threats: System-focused Simulation to Enhance Clinical Preparedness and Patient Safety During Sedation and Transport

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Problem

• Pediatric patients are routinely sedated in a dedicated clinical space and follow a short transport route to Comer MRI.
• Transporting and sedating pediatric patients via a new route and providing care in a new MRI space carries with it potential risk of latent safety threats and challenges in clinical preparedness.
• System-focused debriefing with the SEIPS (System Engineering Initiative for Patient Safety) and PEARLS (Promoting Excellence And Reflective Learning in Simulation) frameworks provides an opportunity to increase the understanding of latent safety threats (LSTs), develop mitigation plans and optimize preparedness for clinical care.

Goal

• Optimize clinical preparedness and patient safety during transportation and sedation of pediatric patients in the MRI Research Center (MRIRC)

Strategy

• Simulation-based testing and evaluation of the route and space, capitalizing on the expertise of the interprofessional team (sedation nurses, physicians, pharmacy, PICU, MRI staff, simulation center)

Findings

Identified:
14 LSTs
23 equipment needs
Cognitive aid content

Knowledge gaps = 6
E.g. emergency #’s
emergency equipment
location and content

Equipment needs = 23
E.g. no defibrillator and
peds sized equipment

Tools and Tech = 4
E.g. Vocera
phones not functional for
emergency calls

Process = 3
CART team
arrival –
significant delays
wayfinding
challenge

Environment = 1
Obstructions to
movement of
patient and
equipment (e.g.
IV pole) in space

Lessons Learned

• Simulation is a valuable tool for improving clinical preparedness and identifying latent safety threats.
• An interprofessional team approach is essential to optimizing the efficacy of system-focused simulations and debriefs.
• A continuous quality improvement process is needed to collate, synthesize, share and follow-up on findings from system-focused simulations.

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