The Perioperative Sign-out Process in Children’s ICU: Implementation of a Standardized Communication Process

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Introduction
• The sign-out communication during transfer of care is error-prone.1
• Mis-communications or failure to communicate during this period may affect the quality of care.
• We identified hands-off communication between anesthesia, surgery, ICU, nursing and respiratory therapy teams as an area for QI in the NICU/PICU
• The aim of our QI project was to standardize the process of hand-off communication in the NICU and the PICU and (2) evaluate provider satisfaction regarding the sign-out process following standardization of the process.

Methods
• A multi-disciplinary team of experts first met to discuss the process.
• The process was mapped out with the roles assigned.
• Time Out for Sign-Out (TOSO) process posters were designed (Figs 1 & 2).
• The interactive TOSO process was standardized for transfer of care for Exit ICU and Entry ICU.
• Staff providers were surveyed prior to and after implementation of the standardized TOSO process (Table1).

Process change time-line
• Nov-Dec 2015: Education
• Nov-Dec 2015: Pre-implementation survey
• Dec 2015: In situ mock trial run of TOSO
• Dec 2015: Follow up meetings of core team members
• Jan 2016: TOSO process implemented
• July-August 2016: post-implementation survey

Results
• The survey was completed by 113 providers in the pre-implementation phase and 85 in the post-implementation phase.
• The distribution of the staff providers by work unit for the pre-implementation and post-implementation survey was: anesthesia, 26.5% vs 28.4%; surgery 2.7% vs 1.2%; NICU 38.1% vs 37.6%; PICU 32.7% vs 31.8% respectively.
• Table 1 shows the results of the survey before and after implementation of the TOSO process. The Chi-square test was used for statistical analysis.

Conclusions
• Our QI project demonstrates that:
  1. Standardization of the perioperative sign-out process in PICU and NICU is feasible
  2. There is a significant improvement in staff satisfaction following implementation of a standardized interactive sign-out process where multi-disciplinary teams are involved.

A detailed study will be needed to demonstrate that standardizing the perioperative sign-out process results in improvement in patient outcomes in children’s ICUs.

References