Implementation of a Multidisciplinary Standardized Electronic ICU:OR:ICU Handoff Patient Safety Initiative

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Introduction
Critical patient safety events, inefficient utilization of resources, and case start delays often occur when patients from the intensive care unit (ICU) require operative procedures. Miscommunication between providers, inconsistent, inadequate, or inaccurate reporting of patient information can also occur when a standardized and systematic approach to transferring of care of ICU patients has not been implemented.

Purpose
• Optimize the handoff process and improve patient safety
• Refine participant roles to streamline information
• Ensure clear leadership transition

Methods
A multidisciplinary team consisting of leadership from surgery, anesthesiology, critical care medicine, ICU nursing, and perioperative nursing met twice a month over the course of a year to create and implement a handoff tool and protocol for transfer of care of critically ill pediatric patients from the ICU to the operating room and back to the ICU, taking into consideration the needs and resources of all care providers involved.

Phase I [ICU to OR]: The team developed a protocol for preparation and transfer of care of unstable and stable ICU patients to the operative team (fig. 1).

Phase II [OR to ICU]: An electronic template was developed that included all pertinent information necessary for a seamless transition from the operative team to the ICU team. Once the template was evaluated and approved by all members of the multidisciplinary team, it was uploaded into the hospital electronic medical record system (integration into EMR took 2 months) to be utilized as a handoff note for ICU patients. A standardized process for OR to ICU patient transfer was also implemented (fig. 2).

Results
Phase I took one year to develop and has been actively implemented for one year. We have seen a marked decrease in hospital-generated incident reports pertaining to transfer of care between the ICU and the operating room, with a concomitant increase in on-time surgical case starts. Data and quality assessment for Phase II is pending after a full year of active implementation is complete.

Conclusions
A multidisciplinary team approach to improving patient safety and outcomes involves a significant amount of time commitment for collaboration and assessment for effectiveness. Fortunately, this template can be extrapolated outside our institution to other hospitals trying to implement a similar initiative within a matter of months. Not only does a standardized method and set of expectations increase safety during handoff of critically ill patients, but efficiency gains can also be attained.

References