Background Incident reports suggested that patients were reaching the operating room (OR) without completion of necessary preparatory tasks. Incidents included Near Misses with potential for harm. Parallel processing and inadequate communication among preoperative nurses, anesthesia providers, and OR nurses were determined to be root causes of many of these failures.

Objectives Significantly increase the number of days-between preoperative task-completion (PTC) failures.

Methods Incident reports were analyzed for root causes. Preoperative process flow was mapped. Process flow at other institutions was observed. Multidisciplinary bedside handoffs utilizing a task-completion checklist were tested, adapted, and adopted as a new preoperative process (figure 1). Days-between PTC failures were plotted on an XMR chart as the primary metric. First case procedure start times were plotted on XMR charts as a balancing measure. Qualitative data were collected about process issues identified by the handoff process.

Results After introduction of bedside handoffs days-between PTC failures reaching the OR increased from every 5 days to >40 days (figure 2). The average procedure start time was delayed by 8 min (figure 3). A majority of PTC failures that were stopped from reaching the OR were surgeon-specific (figure 4A). Unavailability of nurses was a reported barrier to process success. (figure 4B).

Conclusions Bedside handoffs inclusive of preoperative nurses, anesthesia providers, and OR nurses increased the days between PTC incidents reaching the OR. This safety intervention had the tradeoff of a slight decrease in efficiency as measured by procedure start times. Interventions targeting nurse availability and earlier surgeon task completion are still necessary to optimize efficiency.

IHI ID 17 IMPROVING TIMELY RECOGNITION OF SEPSIS IN PEDIATRIC INTENSIVE CARE UNIT PATIENTS

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Background Sepsis is a leading cause of pediatric mortality. Prior research shows that patients who receive antibiotics within 6 hours of sepsis recognition have decreased in-hospital mortality. While we had demonstrated improvements in recognition of sepsis for newly admitted patients, delayed...
Abstract IHI ID 17 Figure 1  Clinical decision support sepsis identification tool. This tool flags high-risk pediatric patients enabling a nursing assessment and prompt calling of a sepsis huddle if applicable.

Abstract IHI ID 17 Figure 2  Pathway from prompt recognition via clinical decision support tool or clinical assessment to initiation of sepsis treatment.

Abstract IHI ID 17 Figure 3  T-chart outlining
recognition of sepsis in the pediatric ICU (PICU) remains a significant vulnerability.

**Objectives**

To increase and sustain the days between delayed severe sepsis recognition in the PICU by 50% within two years.

**Methods**

Using the Improving Pediatric Sepsis Outcomes database from January 1, 2016 to July 31, 2018 we identified episodes of delayed recognition of severe sepsis in patients admitted to the PICU. We define delayed severe sepsis recognition as time to antibiotics 6 hours after obtaining blood cultures. We utilized several PDSA cycles to improve the sepsis identification process within our unit including use of multidisciplinary sepsis huddles for high risk patients and an automated clinical decision support (CDS) tool (figure 1 and 2). The primary outcome of delayed sepsis recognition was tracked using a days-between t-chart.

**Results**

After implementation of sepsis huddles in May 2017, the days between episodes of delayed severe sepsis recognition improved from our baseline of 9 days to 28 days. Since the implementation of our automated CDS sepsis screening tool in May 2018, we have shown sustained improvement (figure 3).

**Conclusions**

Implementation of a sepsis huddles and an automated CDS tool in the PICU has led to an improvement in the days between cases of delayed severe sepsis recognition.