Transitions of care represent a major source of medical errors, patient morbidity/mortality, and increased healthcare waste. A 2018 CLER report indicated largely unfavorable responses toward handoffs and care transitions for perioperative services and neuro-intensive care. Use of the IPASS handoff tool is associated with up to 30% reduction in adverse events and 23% reduction in medical errors. Implementation of IPASS for postoperative handovers in the SICU resulted in improved organization, safety, and communication.

**Introduction**

- Transitions of care represent a major source of medical errors, patient morbidity/mortality, and increased healthcare waste.
- 2018 CLER report indicated largely unfavorable responses toward handoffs and care transitions for perioperative services and neuro-intensive care.
- Use of the IPASS handoff tool is associated with up to 30% reduction in adverse events and 23% reduction in medical errors.
- Implementation of IPASS for postoperative handovers in the SICU resulted in improved organization, safety, and communication.

**Methods**

- A multi-disciplinary working group was created to assess the need for improved handoffs and guide future interventions.
- A preliminary survey was created using the RedCap database to assess existing staff perceptions and practices regarding postoperative handoff practices in the NICU.
- Serial observations of handoffs were conducted to observe existing practices in real time.
- A formalized handoff process – including both a postoperative process map and structured IPASS handoff – was created and implemented by the multi-disciplinary working group.
- Following an initial intervention phase of 4 months, a brief post-intervention survey as well as serial handoff observations were conducted to reassess the process and guide future interventions.

**Results**

**FIGURE 1: Pre-intervention Survey - Behaviors and Suggestions**

- Handoff Behaviors - Senders
- Access EMR
- Find clinicians
- Happy with handoffs
- Percent Response: 0-100

**FIGURE 2: Proposed Intervention:**

Structured IPASS Handoff and Postoperative Process Flowchart.

- Handoff outline developed from multi-disciplinary input.
- Important characteristics specific to NICU patients are emphasized (i.e. focus on neurological status, outcome scores, pain-control limitations, etc.) to address more patient-specific concerns.

**FIGURE 3: Postop Handoff Survey - Perceptions:**

- Comparison of Pre- and Post-intervention Staff Responses
- Postop Handoff Characteristics
- Percent Favorable Response
- Pre-intervention vs. Post-intervention

- Handoffs and Team Communication
- Percent Favorable Response

**Conclusions and Next Steps**

- Postoperative NICU handovers using IPASS improve:
  - Objective measures of handoff quality – including communication of critical patient centered content.
  - Subjective perception of handoff quality – including perceptions of organization, efficiency, safety, comprehensiveness, and teamwork.
  - There is strong support for the use IPASS format as a structured, standard format for postoperative NICU handovers, and the vast majority want to continue its use.
- Barriers and next steps for further improvement:
  - Identifying and addressing “high-risk” times when it is difficult for all providers to be in attendance – i.e. evening signout, conferences
  - Streamlining the handoff process for improved efficiency and timeliness
  - There was no significant improvement (despite trend) in staff remaining for entirety of handoff
  - Consideration of other urgent clinical responsibilities
  - Increasing data collection - Quantifying errors and outcomes