A Handoff Tool to Facilitate Transfer of Care from Anesthesia to Nursing in Intensive Care Units

Presenting Author: Aalap Shah MD

Co-Authors: Anna Xue BS, Daniel Oh BA, MS, John D Lang MD, Bala G Nair PhD
1Department of Anesthesiology
2School of Medicine, University of Washington, Seattle, WA

Background/Introduction: Patient care handoff from one team of providers to another is a critical moment highly prone to medical errors. Transfer of care at the end of surgery between anesthesia and nursing teams is a typical example when inaccurate and incomplete transfer of relevant clinical information could increase the risk of inadvertent medical mistakes. We describe the development of a tool that provides a customized report of intraoperative data to facilitate safe handoff. Additionally, the tool also notifies the recovery team of patient transport, with the handoff summary report produced prior to the patient actually arriving at the recovery bed. Advance notice and upfront availability of handoff information could better prepare the recovery team for a smoother transfer of care.

Methods: We developed an AIMS-based handoff tool that can be evoked at the touch of a key on the AIMS computer. The tool presents the most current AIMS data summarized into the following main categories (Figure 1)– medications, anesthetic techniques and line placements, fluid input/output and labs. At the end of surgery, prior to leaving the operating room, the anesthesia provider selects the disposition location and initiates a “print summary and page recovery” action. This automatically prints the transfer summary report in designated recovery room printers and sends a text page to recovery staff notifying that a patient is leaving the operating room. The recovery room staff collects and reviews the summary report in preparation for handoff. During handoff, the anesthesia and recovery teams use the transfer summary report as a reference document.

We piloted the handoff tool to facilitate transfer of care in the intensive care units (ICU). The Cardiac, Surgical and Medical ICU staff members were presented with the transfer tool and the associated workflow of receiving the patient transport notification page, collecting the handoff summary report and utilizing it to facilitate transfer of care. Similarly, the anesthesia team was also trained in the use of the handoff tool. Volunteer medical students were recruited and trained to observe the transfer of care and collect data pertinent to the handoff process.

Results: Handoff process was observed in 7 instances when the transfer summary sheet was not used (controls) and in 14 instances when the transfer summary sheet was used (intervention). In general, omission of critical data elements was less when using the transfer summary sheet - Urine output: 3/14 (intervention) Vs. 3/7 (controls), Blood loss: 5/14 (intervention) Vs. 4/7 (controls) and Fluids & infusions: 2/14 (intervention) Vs. 3/7 (control). Duration of the handoff process was similar for control and intervention cases though the intervention group had primarily cardiac ICU cases while the control group comprised of mainly surgical ICU.
cases. The use of the handoff tool to facilitate patient transfer could be easily integrated into the clinical workflow without disruptions.

**Conclusion:** Pilot observation and data indicate that an AIMS-based handoff tool could be easily integrated into the clinical workflow and could potentially facilitate safer patient transfer. Further studies are required to prove the effectiveness of such a tool.

**References:**


**Figure 1:** Handoff tool used to facilitate transfer of care in the ICU