[NM-228] Improving Communication During Perioperative Handoffs: A Multidisciplinary Approach to Risk Reduction

Amin A, Bachman C, Humikowski C
University of Chicago , Chicago , Illinois, USA

Background: Perioperative handoffs are an important aspect of ensuring the safe transition of care amongst critically ill patients. Handoff failures are common and often occur in a chaotic and busy environment, which can result in the transfer of incomplete or incorrect patient information. An association between poor quality handoffs and adverse events has been demonstrated (1). After two sentinel events at our institution, which stemmed from incomplete communication between anesthesia providers and the intensive care service, a multidisplinary team was assembled to improve handoffs.

Methods: A team of attendings and fellows from the pediatric and neonatal intensive care units (ICU) and anesthesiology developed a tool to standardize pre and post procedure handoffs. The form (figure 1) prompts providers to relay pertinent clinical data including airway issues, total fluids and sedatives/analgesics, intravascular access, surgical/anesthetic details, critical intraoperative events and important laboratory data. The receiving team completes it. After six months of use, a needs assessment survey was sent to various providers to obtain feedback and identify barriers to effective handoffs. We are also following the use of the tool.

Results: The first month of the project, usage of the tool in the pediatric intensive care unit was 60% of all cases returning from the operating room with a peak of 76% three months after project initiation. As identified by the survey, barriers to teams being present for face-to-face handoffs include lack of knowledge about patient arrival on the unit, inability to leave bedside of more critical ICU patients, presence of ICU providers in a timely fashion, and overall poor compliance of the handoff tool.

Discussion: Though our project is in its infancy, we believe that the creation of a standardized handoff tool, optimizing the information, and mandating its routine use will improve patient safety and lead to a decrease in adverse events related to miscommunication. As evidenced by prior studies, we expect that the use of the tool will improve the quality and reliability of the handoff process as well (2). Potential areas for improvement include improving the usage of the tool to a goal of 100% involvement and overcoming the barriers identified by the survey. Future goals of development include evaluating quality of handoffs, measuring patient outcomes, incorporating the handoff tool into the computerized medical record, and expanding to include other disciplines and areas of the hospital (i.e. operating room to general floor admissions).

References:
1. Segall et al. Anesth Analg 2012; 115: 102-15
2. Boat A, Spaeth J. Pediatric Anesthesia 2013; 23: 647-654

NON-CARDIAC PERIOPERATIVE HANDOFF

PRE-Procedure
Primary care team (RN & MD) to Anesthesiology

	Patient Sticker Here

Date:

Name:	Weight:
	Allergies:
Diagnosis:	
	NICU/PICU
Planned procedure:	contact (pager):

Neuro: *(sedation, pain control, etc.)*	CV: *(hemodynamics, vasoactive drugs, etc.)*	Resp: *(current support, airway issues, ETT/trach size, etc.)*
Heme: *(coagulopathy, recent platelet count, transfusion reaction history, etc.)*	GI/GU: *(foley, NGT, gastrostomy, etc.)*	Other:
Lines & Infusions: *(what is currently running & where, include TPN and/or IVF)* ☐ Plan to change infusion lines?		Meds: *(critical meds due, e.g. antibiotics, antiepileptics, stress-dose steroids)*

POST-Procedure
Anesthesiology and Surgery to receiving care team (RN & MD)

☐ Anesthesia handoff
☐ PACU team handoff

	Patient Sticker Here

Date:
Name:

Patient History

Diagnosis:	Weight:
	Allergies:

Surgery

Procedure performed:	Surgeon:
	Contact (pager):

Surgical Service Present at Signout?   Yes   No   If so, which Service?
Intra-Operative Events/Complications?   Yes   No   If yes, explain:
Significant Bleeding?   Yes   No   If yes, explain:

In		Lines		Drains/Tubes			EVD	
Colloid		PIV		Type	Suction		Set at?	___ cm
Crystalloid					Yes No			
CellSaver					☐ Cont			
pRBC		Arterial			☐ I/S			
FFP					Yes No		CSF to be	
Platelets					☐ Cont		replaced?	
Albumin		CVC			☐ I/S			
Cryoprecipitate					Yes No			
Other					☐ Cont			
Out		Other			☐ I/S			
EBL								
UOP								
Other								

Anesthesia

Anesthesia Present at Signout? Yes No	Anesthesiologist:
	Contact (pager):

Difficult Airway?   Yes   No   If yes, explain:
Extubated in OR?   Yes   No
ETT size & depth:
Ventilation/Oxygenation problems?   Yes   No

Intra-operative	
Paralytics? Reversed?	
Sedatives? Analgesics? Last given?	
Antibiotics?	
Steroids?	
Vasopressors?	
Vasodilators? Anti-HTNs?	
Last hemoglobin	
Peak lactate	
Last lactate	

PICU Checklist

☐ Diet
☐ IVF
☐ Lab schedule
☐ Post-op imaging
☐ Pain control
☐ BP limits
☐ Call subspecialist if:
☐ Satisfied with signout?   Yes   No

Center OR desk: 3-6585
Center OR#: 4-690___ (room #)
Center PACU: 4-4460

PICU attending: 5-7959
PICU fellow: 5-7949
PICU main: 2-6494

PICU charge RN: 5-7979
NICU fellow: 5-6373
NICU charge RN: 5-6350