



# PACU Handover Timeout

## *Enhancing the current process*

Go-Live at UH: September 5<sup>th</sup>



# Outline

- Current State
- Enhancements
- Expectations
- ASPIRE Metric
- PACU Handover Timeout Video
- Definition of PACU RN Brief Assessment
- Questions



# Why is the PACU Handover Timeout important?

- Information loss can occur during all phases of care.
- During a handoff, information is at risk of degradation and miscommunication.
- The transfer of care (handover) from the operating room to the postoperative anesthesia care unit (PACU) is an especially susceptible time. Information loss can lead to an increase in medication errors, sentinel events, and poor patient outcomes.



# Submitted Patient Safety Report Forms

- “Pt sat in PACU w/o a service or orders to treat pt from 1500-0415 and with **no contact from service from approx. 2300** until 0715 despite three pages to resident.
- Pt went to floor 13 hours after **coming out of OR still w/o service orders.** ”
- “Though pt had orders for pain control pt did not have floor orders for over 1.5hrs which **created a delay in care**”



# Submitted Patient Safety Report Forms

- “provider consistently gives a rushed, disrespectful, incomplete report. Leaves you feeling like you are a bother, insignificant and ridiculous for having expectations of communication. They will tell you "ask the C3 for orders, I gotta go". This delays the patient from getting the necessary timely care we could be providing”

- “saw the contact precaution flagged for ESBL which nobody has mentioned on bedside report.”



# Submitted Patient Safety Report Forms

“Pt went home with IV catheter in place”

Pt. arrived in PACU when this RN was not present, and **another RN took report from surgery**. Anesthesia said they forgot to give toradol at the end of the case and surgery said RN could give it. This author paged surgeon first contact for toradol orders because only ibuprofen was ordered. No return page from surgeon. This author approached anesthesia for the orders, because 800 mg of ibuprofen was ordered. anesthesia ordered toradol. This author administered toradol. Pt. had no history of renal insufficiency and this minimized need for narcotics to manage pain. Pt. was transferring to phase 2. After this RN gave report to phase 2, the surgeon came to bedside. He stated "I thought I told you I changed my mind about the toradol." This author stated "**I wasn't here when you brought the patient out, so no you couldn't have told me that.**" Surgeon stated "Well, I definitely said that. No toradol, but ibuprofen." This author replied "**That information was not relayed to me in report about the patient.**" The Surgeon left bedside.



# Submitted Patient Safety Report Forms

Patient received to unit at 1446. No member of the surgical service accompanied patient. **No hand off report was given. No orders were placed.** Patient boarded outpatient, but received with a CBI. Service paged for report and orders. At 1602, orders were placed. **At no time did service give a report to PACU.**

Pt. has had a persistent renal bleed after undergoing percutaneous nephrolithotomy. Overnight his Hgb came back at 5.8 and he was transfused 2 units of blood. He was taken to the OR today for left PCN tube removal and left internal ureteral stent placement as well as cystoscopy/clot evacuation. He had STAT PACU labs drawn, which showed a hgb of 6.3, much less than the appropriate response we would expect. We elected to transfuse 2 u PRBCs. I wrote for this order as transfuse as soon as ready, which is just under STAT in terms of urgency. I did not sign and hold this order and expected that it be given in PACU. To my fault, **I should have verbally relayed this order as well since it was an important one. The parties involved had a breakdown in communication** as the nurse assumed that it was a floor order. I was upset when a couple hours later the patient had arrived on the floor with no blood. The order was placed at 4:35 PM and the blood was not hung on the floor until 7:13PM. This was an unacceptable delay in the care of this patient



# Submitted Patient Safety Report Forms

Day shift RN given report at 0700 by previous night shift RN. Day shift RN was told specifically that patient did not receive toradol in OR prior to coming to PACU. Prev RN had contacted anes for medication order as pt was rating pain 5/10. Day shift RN then paged anes again to ask for pain med. An order for toradol was written and given at 0811. Prior to transferring pt from PACU it was noticed on the paper copy of the Intraop record that Toradol had been given in the OR.

“Pt was admitted to Phase I recovery from IR after extensive invasive procedure involving continuous infusion of TPA infusion into venous access line for RLE DVT without report from Proceduralist. Nursing report was insufficient as the nurse reporting off did not know pt. baseline neurologic/neurovascular status. Pt was not able to move RLE post procedure. “





# Submitted Patient Safety Report Forms

pt did not receive their scheduled antiepileptic. They should have gotten a dose at 9am but were in PACU so no meds were given nor sent with the pt



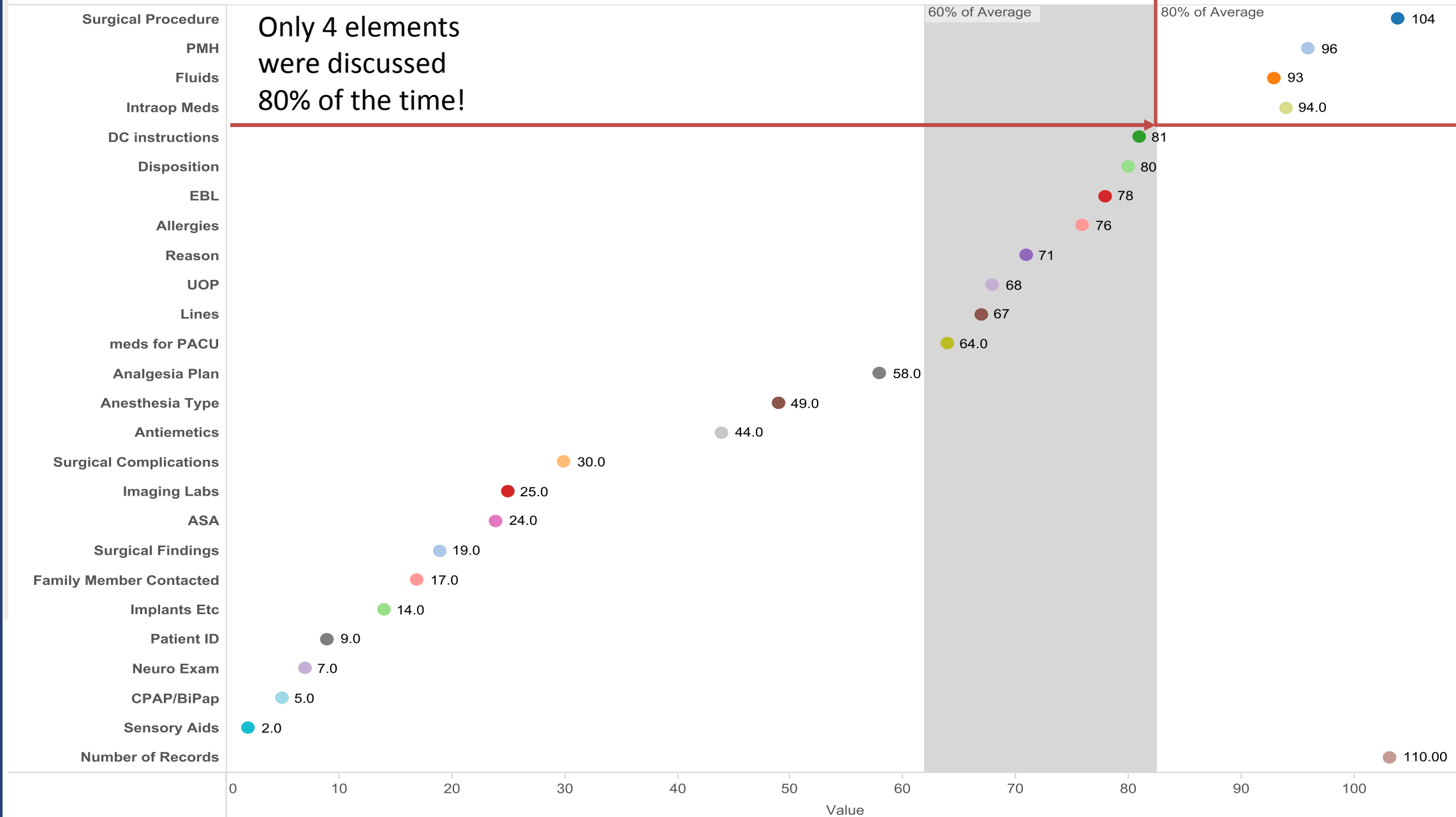
# Pre-Implementation Observations

- Observed 110 handovers in the Adult Main PACU
- Elements observed included:
  - Length of handover process
  - Who was present at bedside
  - When they arrived/departed
  - Content discussed during handover process
  - Quality of teamwork and communication



# Content discussed during handover ( n=110)

## Content by percentage





# Current State: Handover Time & Presence of Team Members

	PACU Anesthesia	Surgeon/Proceduralist	OR Anesthesia	Patient Arrival to Anesthesia Departure
<b>Mean Handover Times*</b>	1 min 8 sec	1 min 16 sec	2 min 11 sec	6 min 43 sec

\*Timing began when individual began talking and ended after they gave report

Anesthesia Provider had a delay in leaving PACU since there were additional questions from PACU RN. This prevents the Anesthesia Provider from being able to start the next case. Please note that the patient arrival to Anesthesia provider departure mean time was almost 7 minutes!

Fully Present for Handoff			
Nursing	OR anesthesia	PACU anesthesia	Surgery
109	104	30	9
Partially Present for Handoff ( did not stay for full report)			
Nursing	OR anesthesia	PACU anesthesia	Surgery
1	5	51	90

Stayed until handoff complete

Left prior to handoff completion



# Enhancements

- **Centricity PACU Summary Report**
- **Revised MiChart Nursing PACU Handover Report**
- **Rebranding as a “Handover Timeout”**
  - All team members stop and focus on the handover process
  - Structured communication to ensure all necessary elements are discussed



# Rationale for changes to current process

- Decrease information loss
- Decrease miscommunication
- Improve adequacy of the handover process
- Mitigate patient safety events



# PACU Handover Timeout Script



## PACU Handover Timeout

“All Stay for the All Stop”

\*\*If an item does not apply to your patient, verbalize that it is “n/a” \*\*

### 1. Prior to Patient Arrival

#### PACU RN:

- Review “MiChart PACU Summary” including allergies
- Complete Chart Review (H&P)

### 2. Patient Arrival

- Anesthesia announces patient name, age and procedure
- Team connects monitors
- PACU RN completes brief assessment & checks ID band
- PACU RN announces, “Timeout”, introduces self and asks for introductions\*
- PACU RN leads the handover process

#### Introductions

- Surgery Reps name & pager #
- Primary surgical contact for f/u questions
- What are the primary surgical concerns?
- Anesthesia providers name & pager #
- What are the primary anesthesia concerns?

\*following patient stabilization

### 3. Anesthesia Provider to PACU RN & Surgical/Proceduralist Designee

- Allergies & Contact Precautions
- PMH, PSH
- Anesthetic Type
- Airway type
- Airway status
- Relevant Intraop & Preop Meds (PONV Plan, vasoactive, relaxants, reversal)
- Anesthetic Complications
- Assessment Parameters (Vital signs, Labs, etc.
- Vascular Access
- Pain Management Plan
- Intraop fluids (crystalloid, colloid, Blood products, Cell Saver, Cryo)
- Urine & EBL
- Type and location of sensory aids

### 4. Surgical/Proceduralist Designee to PACU RN & Anesthesia Provider

- Surgical Findings
- Postop Diagnosis
- Surgical Complications
- Intraop Position
- Drains/Devices
- Procedure Specific: Pulses, Grafts, Transplants, Implants, Dressings
- Neuro Exam
- Responsible family member contacted
- Disposition

### 5. PACU RN Wrap-up

#### Nurse reviews with Team:

- Nurse states their concerns
- Nurse asks team, “What other questions/concerns do you have?”
- If no other questions/concerns, PACU RN announces, “Handover complete”.



Sidenotes:

Medical Students may **not** act as a handover designee

All designees are to remain at the patient’s bedside until handover is complete



# MiChart PACU Summary: To be utilized by PACU Nurses prior to patient arrival

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ASA: ASA 3 Room: U-OR 01 OTO Account No: **Previous Version**



Patient extubated Awake

Anesthesia Start	Patient In Room	Anesthesia Induction End	Surgical Incision	Surgical Dressing Complete	Assigned Phase I	
08:20	08:27	08:42	08:57	09:34	09:36	
Patient transported to PACU	Phase I Present	Anesthesia End	Phase I Out	Phase II Present	PostOp Eval Wait	Phase II Out
09:47	09:50	09:57	10:51	10:52	10:58	11:19
PACU Care Complete						
11:19						

Time >>	08:00	08:30	09:00	09:30	10:00	10:30	11:00	11:30	12:00	12:30	Totals
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Meds												Totals	
Propofol Infusion (MCG/KG/MIN) Left Hand 18 g				100	140	100	OFF	OFF	OFF				49 (494770 MCG)
Remifentanyl (25 mcg/ml) (MCG/KG/MIN) Left Hand 18 g				0.08	0.16	0.2	0.04	OFF	OFF				28.197 (704.925 MCG)
Midazolam (IV) (MG)		2											2
Glycopyrrolate (MG)		0.2											0.2
Rocuronium (MG)			50										50
Dexamethasone (MG)			10										10
Remifentanyl (bolus) (mcg)			40										40
Heparin 5000 U SQ (units)			5000										5000
Phenylephrine (MCG)			50										50
Fentanyl (MCG)			50										50
Propofol Induction (MG)			150										150
Succinylcholine (MG)			140										140
Diphenhydramine (MG)				12.5									12.5
Sugammadex (mg)					375								375

Monitors												Totals	
End Tidal CO2			0	19	36	39	38	40	0				
TOF					4/4			0/4					
Rhythm			NSR		Sinus Tachy	Sinus Tachy	Sinus Tachy						
Eye check			Per surgeon		Per surgeon	Per surgeon	Per surgeon						
Temperature (C)					34.6	34.8							
Vent FiO2%		100	100	60	41	35	96	100					
SpO2			97	97	97	96	97	100					100
Vent PIP		1	4	13	14	14	11	1					
TV Actual (ml)			584	520	496	499	1112						
HR - EKG			104	97	99	87	89	87					
HR - SpO2			84	97	104	97	79	89					
BP Sys			136	100	126	108	111	171					
BP Dias			81	61	70	56	66	93					
NIBP Max			99	59	81	63	131	176					

## Intraoperative Summary

Birthdate  
Reg #

**Updated Version**

Staff / Case Information		
Surgery Date: 05/18/2017 08:30(a)	Anesthesia Attending: [REDACTED]	Procedure/Operation: MIDLINE TELESCOPIC DIRECT LARYNGOSCOPY WITH BIOPSY (a)
Surgeon:	Anes Resident/CRNA: [REDACTED]	Intraop Clinical Event/Complications:

## Airway Management

<b>Anes Intraop Script:</b> GA - ENT(a)
<b>Mask Ventilation:</b> 05/18/2017 08:40:00 - Mask ventilation Grade 3: Difficult ventilation (inadequate, unstable, or requiring 2 provider)(a)
<b>Laryngoscopic View:</b> 05/18/2017 08:42:00 - Grade Grade 2a - Partial view of Vocal Cords Laryngoscopic View. Required Cricothyroid Pressure? No(a)
<b>ETT:</b> 05/18/2017 08:42:00 - 7.5 mm RAE cuffed ET tube taped @ 24 cm(a)
<b>LMA Placed:</b>
<b>Orally Intubated:</b> 05/18/2017 08:42:00 - Orally intubated using Glidescope: (Grade 2a - Partial view of Vocal Cords: T1 - Easy) blade after first attempt without bougie(a)
<b>Patient Extubated:</b> 05/18/2017 09:44:00 - Patient extubated Awake(a)

Inputs	Outputs
<b>Total Fluids:</b> LR (ml) Left Hand 18 g Maintenance 800 (ml)	<b>Urine Output:</b> 0 mL()
<b>Blood Products:</b>	<b>EBL:</b> 0 mL()

## Intraop Medications/Infusions

<b>Oral Preop Meds Documented in Centricity:</b>	<b>Opioids:</b> Fentanyl (MCG) 50 MCG; last given at 08:38() Remifentanyl (25 mcg/ml) (MCG/KG/MIN) Left Hand 18 g 28.2 ML; last given at 09:48()	<b>Muscle Relaxant:</b> Rocuronium (MG) 50 MG; last given at 08:53() Succinylcholine (MG) 140 MG; last given at 08:39()
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# Expectations

- PACU RN leads and facilitates the PACU Handover Timeout
- All content will be discussed or verbalized as “n/a”
- All members will be present for the entirety of the handover
- A medical student can not be utilized as a designee



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Anesthesiology Performance Improvement and Reporting Exchange (ASPIRE) , a statewide BCBSM CQI, has a transfer of care metric related to the PACU handover process.

ASPIRE

Anesthesiology Performance Improvement and Reporting Exchange

**Measure Abbreviation:** TOC 02 (MIPS 426)\*

*\*TOC 02 is built to the specification outlined by the Merit Based Incentive Program (MIPS) 426: Post-Anesthetic Transfer of Care Measure: Procedure Room to a Post Anesthesia Care Unit (PACU) measure. MIPS measure specifications are available for download at <https://qpp.cms.gov/resources/education>*

**Description:** Percentage of patients, regardless of age, who are under the care of an anesthesia practitioner and are admitted to a PACU in which a post-anesthetic formal transfer of care protocol or checklist which includes the key transfer of care elements is utilized.

**NQS Domain:** Communication and Care Coordination

**Measure Type:** Process

**Scope:** Measured on a per case basis

**Measure Summary:**

This measure is a two-part measure:

- 1) Documentation of PACU or ICU handoff complete in the electronic anesthesia record as a yes/no question. The percentage of handoffs will be calculated as number of handoffs documented as “yes” in the electronic anesthesia record where the denominator equals the number of transfer to PACU events.
- 2) Development of a standardized audit process to determine quality of handoff. Each site will be expected to submit a minimum of 10 audit results per month to ASPIRE using a paper-based tool (see table below) and then submitted using a web-based password protected spreadsheet.



<b>Background</b>	<b>Yes</b>	<b>No</b>	<b>NA</b>
Introduction (Provider names and roles: PACU RN and anesthesia team members)			
Identification of patient*			
Pertinent PMH/PSH			
Discussion of surgical/procedure course			
Allergies			
Contact Precautions			
<b>Anesthetic Management</b>			
Airway management (ETT/ LMA)			
Type of anesthetic			
Anesthetic Complications			
<b>Medications</b>			
Preoperative Meds			
Sedations medications & amount administered. Reversal administered?			
Muscle relaxants: Time/Amount administered. Reversal administered?			
Pain Management Plan			
PONV Risk & Meds Administered			

<b>Fluids</b>			
Vascular access			
Total Intraoperative Fluids/Blood Products Administered			
Intraoperative labs			
<b>Expectations/Plans</b>			
Identify primary anesthesia concerns for this patient.			
Allow opportunity for questions/acknowledgement of understanding of report from receiving PACU team			



# Definition of PACU RN Brief Assessment

Upon arrival to PACU, the RN is responsible for completing a brief patient assessment.

This entails:

1. Obtaining a set of vital signs
2. Level of consciousness Assessment
3. Respiratory Assessment
4. Wound Assessment
5. Ensuring IV patent and infusing
6. Immediate need for pain meds
7. Surgery specific assessments (i.e. neuro patient)



# Questions?

**Contact: Perioperative Quality Improvement Committee (PQIC)**  
**UMHS-PQIC@med.umich.edu**