

Did We Miss Anything? Improving handover from the OR to PICU

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Nothing to disclose

Anecdote:

- 14 year old non-verbal, non-ambulatory patient admitted post-op to PICU after part one of a two-stage spinal instrumentation surgery.

Anecdote:

- Received extubated on handover from a staff anesthetist to a PICU resident, partway through a PICU fellow. ICU attending not present.
- Surgical handover given by Orthopedic resident. Orthopedic attending not present.
 - No special instructions given, no particular orders written.
 - “Straightforward case, part two on Friday”

Anecdote continued:

- Few hours later, patient is agitated and difficult to sedate.
- MD initiates:
 - Drug X for comfort.
 - Bipap for respiratory depression.
- The next morning:
 - Mother: “*Pre-op we were promised no bipap!*”.
 - Surgeon “*You are not supposed to use Drug X in my patients! And why IS she on bipap?*”

The Fall-out:

“This was never discussed on handover!”



“Why didn’t they listen?”



“How bad is this? Is everything going to be ok?! Who is in charge here?!?!?!”



The Consequences:

- Potential patient harm
- Decayed therapeutic alliance with patient/family
 - Decayed team dynamics and trust

Background

- The handover of care is a crucial transition point requiring a high level of coordination, teamwork and communication between multiple health care providers (HCP) in varying disciplines and departments.
- In the BCCH PICU, a standardized OR to PICU handover process developed 10 years ago: poor adherence to the standard.

Assumption:

- There was an impression of ongoing safety concerns relating to lack of required personnel at handover and a lack of a site to source.
- Determined based on PSLS data (mostly around site to source) and anecdotal information from PICU staff.

Mini-audit:

- Using mini-audit data, create concrete audit of personnel presence and site to source compliance.

BCCH PICU OR Handover Audit Sheet

Please complete this form with every admission from the OR.

When completed please place on the front of the patient's chart, someone will pick it up on the next business day.

Were the following people present and provided a verbal handover report?	YES	NO
Surgeon		
Anaesthesia or Anaesthesia Assistant		
OR Nurse		
PICU Intensivist or Fellow (present to hear handover)		

	YES	NO
Was a thorough site to source check complete?		

What service completed the surgery? (eg. Cardiac, ENT, General Surgery etc.)

If there are any issues that you noted with any part of the OR to PICU handover, please remember to fill out a PSLS.

Assumption: Oops!

- Found...100% compliance with personnel and site to source?!
- Something amiss...

Audit again:

- Find another way!
- There is a problem, but we hadn't defined it.
- Direct observation of two weeks of OR → PICU handover.

Problems noted:

Safety concerns noted during direct observation audit:

Patient not stabilized on arrival to PICU:

- Handover commencing with patient not on PICU monitors (27% of handovers)
- PICU RN managing sedation or protecting lines during handover (10% of handovers)

Team members not ready (21% of handovers) :

- Surgeons and/or PICU physicians not present at handover
- Unable to identify staff members by name or discipline
- Team members occupied with other tasks

Problems noted:

IV site to source checks incomplete (27% of handovers):

- IV lines tangled or IVs not running.
- Site to source not completed as per protocol.

General lack of coordination on arrival to PICU:

- No consistent approach to handover of information.
- No opportunity to seek clarifications.

Objectives:

- OR and ICU representatives came together to address the following:
 - Patient is stabilized by the OR team prior to handover.
 - Team members are introduced and are present
 - Each discipline has certain information to handover
 - There is an opportunity for questions
 - IV site -to -source checks are done.

Review Old Tool:



OR TO PICU HANOVER

For all Procedures other than Cardiac

TELEPHONE COMMUNICATION: CIRCULATOR TO PICU Immediately prior to start of first Closure Count When there are no Counts, 15 minutes before anticipated end of case		
(Consult with Anesthetist prior to making phone call)		
Ask to speak with PICU Nurse admitting the patient: _____		
Procedure/Patient Name: _____ When applicable, brief Hx: _____		
Allergies: _____ Weight: _____ Isolation Status: _____		
PICU bed #: _____ ETA - PICU ready to receive? _____		
Drug(s)/Infusion(s) required on admission:		Anticipated Ventilation Status:
_____		Extubated <input type="checkbox"/> Intubated <input type="checkbox"/>
Invasive Monitoring: _____ Arterial	CVP	ICP
Call PICU when preparing to leave the OR. On arrival in PICU, Patient moved to appropriate spot, see page two		
HANOVER REPORT: OR TO PICU *Use Checklist below when giving report*		
Anesthetist	Surgeon	OR Nurse
<input type="checkbox"/> Team Introductions <input type="checkbox"/> Patient name, age, weight <input type="checkbox"/> Surgical procedure <input type="checkbox"/> Pre-op Diagnosis & relevant History <input type="checkbox"/> Comorbidities <input type="checkbox"/> Pre-op Medications & Allergies <input type="checkbox"/> Anesthetic induction & maintenance <input type="checkbox"/> Airway status <input type="checkbox"/> Respiratory status <input type="checkbox"/> Cardiovascular status <input type="checkbox"/> Neurological status <input type="checkbox"/> Liver <input type="checkbox"/> Renal <input type="checkbox"/> Bleeding <input type="checkbox"/> Fluids <input type="checkbox"/> Blood products <input type="checkbox"/> Medications <input type="checkbox"/> Review all lines and infusions <input type="checkbox"/> Pain management <input type="checkbox"/> Complications <input type="checkbox"/> Anticipated Problems <input type="checkbox"/> Research participant	<input type="checkbox"/> Pre-op Neurological status <input type="checkbox"/> Pre-op Respiratory status <input type="checkbox"/> Operative info including complication(s) <input type="checkbox"/> Expected outcome/ specific events to be monitored <input type="checkbox"/> Specific post-op management suggestions, for example: - Shunt/EVD management - Airway management - Antibiotics - Immunosuppression monitoring	<input type="checkbox"/> Implants <input type="checkbox"/> Dressing(s) <input type="checkbox"/> Drains: Chest Hemovac(s) Catheters EVD <input type="checkbox"/> Skin integrity <input type="checkbox"/> Family <input type="checkbox"/> Belongings <input type="checkbox"/> ID Band check
PICU Team <input type="checkbox"/> Questions asked <input type="checkbox"/> Questions Clarified <input type="checkbox"/> Post-op		

Wordy and difficult to use in the moment

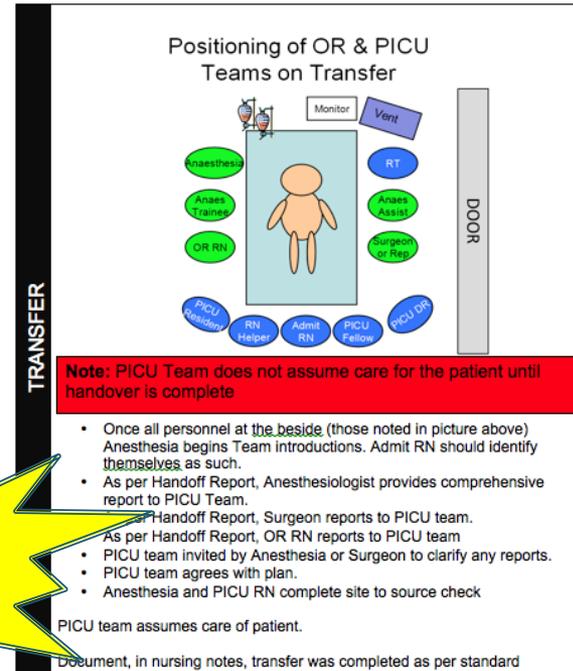
OR RN: and will connect drains to suction as required.

AA: to stabilize patient on ventilator (with RT), to ensure X2 gets plugged into PICU monitoring, draw blood work as applicable once arrived in the PICU

Please note: If AA is not present during handover then the Anesthesiologist is responsible for ensuring the tasks of the AA are completed

Anesthesiologist: will invite PICU team to position themselves at bedside for Handoff Report - see page one for information covered.

Verbal handover should not begin until all team members (PICU and OR) are ready



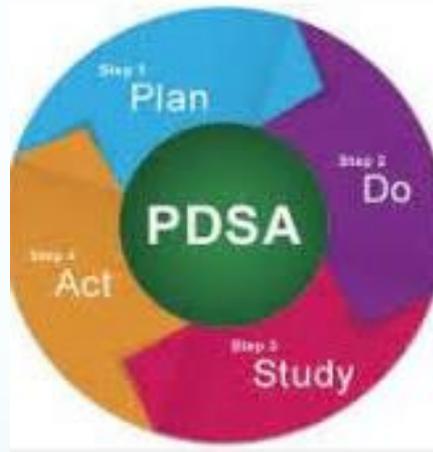
Create new tool:

- Create a tool that is SIMPLE!
- Team members to personally meet with relevant groups to engage in the process.
 - Use a “runner”.
- Make it the standard expectation.

OR → PICU Handover



PDSA cycles



OR → PICU Handover

Patient stable and monitored 

"**A**re all teams ready?" 

Teams introduced 

Handover



Nursing

- DRAINS / DRESSINGS
- PSYCHO-SOCIAL
- FAMILY



Anesthesia

- PATIENT MEDICAL HISTORY
- INTRA OP MANAGEMENT



Surgery

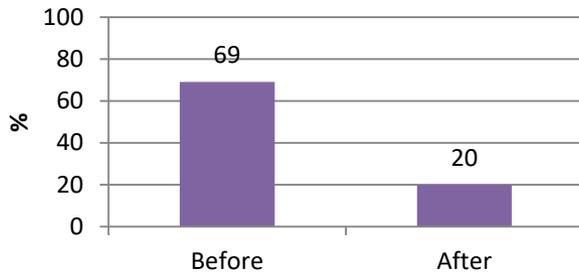
- PROCEDURE PERFORMED
- EXPECTED OUTCOME
- POST OP MANAGEMENT

Questions 

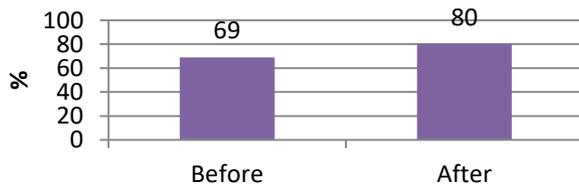
Site to Source Check 

Results

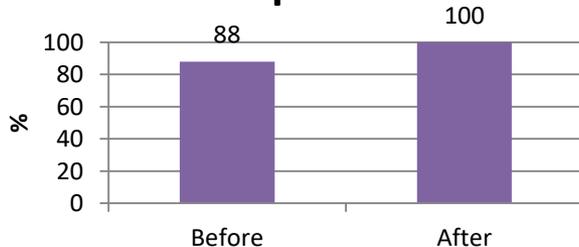
Safety Concerns



All Team Members Ready?



IV Site to Source Completed



There were 10 PSLS events relating to handover in the year prior to roll out of this tool.

In the 6 months since roll out of the tool, there have been zero.

Staff also report a much higher level of communication and confidence as they know what to expect and can more easily remind other staff when the process isn't being adhered to.

Sustainment and spread



BC Children's Hospital
Pediatric Intensive Care Unit

OR to PICU Handover Audit Form

Nursing - Please complete this form with every admission for the OR.

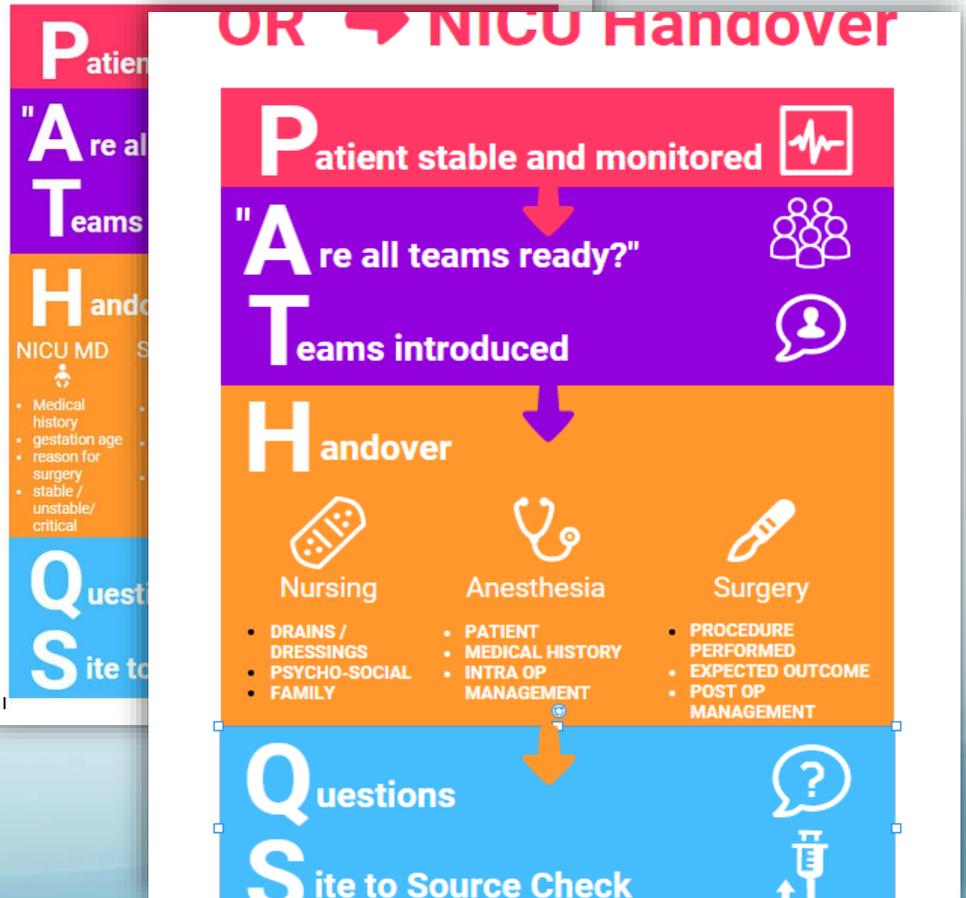
When completed please place on the front of the patient's chart, it will be picked up on the next business day.

	Step	Yes/No (please circle)	Comments?
P	Was the patient stable and monitored?	Yes / No	
A	Were all teams present and ready?	Yes / No	
T	Were core team members introduced?	Yes / No	
H	Was verbal handover given by all? (Anaesthesia/ Surgeon/ OR Nurse)	Yes / No	
Q	Did someone ask if there were any questions?	Yes / No	
S	Was a good site to source completed?	Yes / No	

Any other comments? _____

Date: _____ Surgical Service: _____

NICU → OR Handover



Lessons Learned:

- Never assume the problem → Dive deeper!
- If your first strategies do not yield data required to plan a project, find another strategy!
- Stakeholder engagement is paramount.
- Working across teams is paramount.
- Face to face communication is invaluable.
- Be flexible! No preconceived solutions.

Panel Q&A - lessons learned

- How did you engage disciplines outside of your own?
- Did you encounter ‘nay-sayers’ and how did you deal with them?
- What do you wish everyone did when they start a project like this?
- What are some different approaches to this type of project?