Time-Out Phase of Surgical Safety Checklist in Pediatric Operating Rooms

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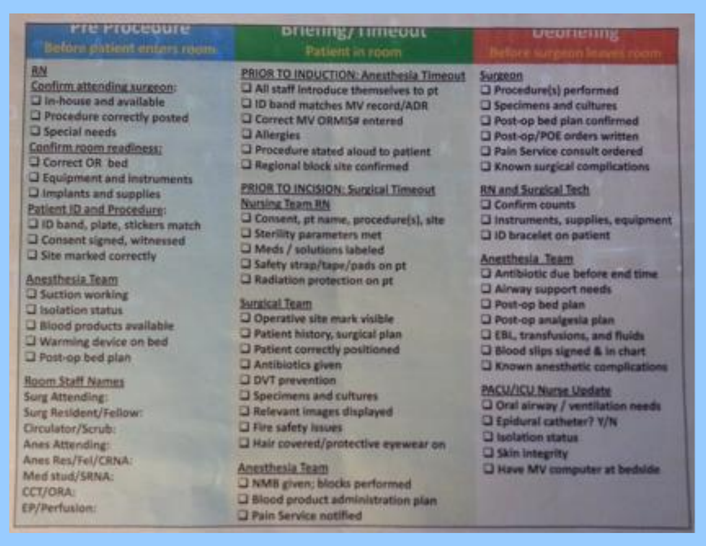
1 Background

- The surgical safety checklist was created to prevent errors and complications that may occur during surgery or perioperatively. The WHO launched its surgical safety checklist in 2008, initiating the movement for most hospitals to incorporate the use of the surgical safety checklist.
- The surgical checklist is comprised of three main sections – before the induction of anesthesia (sign in phase), immediately before the skin incision (time-out phase) and right after skin closure (sign out phase).
- Advantages of incorporating the use of the surgical checklist included reduction of mortality from 15% to 0.8% and reduction in complication rates in 11% to 7% and the team members felt that the time out phase increases patient safety in the OR.



2nd Generation Surgical Safety Checklist Tool currently being used in Johns Hopkins Hospital Pediatric Operating Rooms

- Some of the key items under the sign in phase are included as follows:
  - Patient identity confirmation, allergies, airway risks, blood loss risks
- Time out phase with items regarding communication between the team members verifying the patient's identity, safety precautions, DVT prophylaxis, antibiotics, correct positioning of patient.
- The sign out phase items focused around post op needs and concerns.
- One of the key aspects of the surgical safety checklist is that it should not be merely used as a check off item list.

2 Purpose

The main objective of this Quality and Safety Project was as follows:

1. To learn about the WHO surgical safety checklist
2. To observe the 10 pediatric subspecialty services, specifically to witness the timeout phase in each of these rooms
3. To analyze the current tool's use and effectiveness
4. To obtain feedback from the team members
5. To revise the tool for specialty services

3 Methods

Auditing process of various pediatric operating room cases was performed over a 3-4 month period. The second generation surgical safety checklist tool was used as a data collection tool during case observation. Data collection was based on the nursing student's observation in each of the cases and strictly monitoring the time-out phase of the surgical safety checklist.

The 10 specialty services include as follows: general surgery, cardiac, neurological, renal, urologic, airway/ENT, orthopedic, plastic, pulmonary, head-and-neck, and eye surgery. It is unclear approximately which specialty services were audited because it was not recorded.

Main roles of the auditing include as follows:

- Attend the OR specialty cases (especially cases with fast turnover rates)
- Actively listen to the time-out phase during the case and record
- Items on the check list were checked off as completed only when the multidisciplinary team discussed verbally specifically during the time-out phase.
- Make sure staff is unaware that the time-out phase is being evaluated.

- Data was organized according to each item in the time out phase of the surgical safety checklist and entered into an excel spreadsheet.
- A total of 16 cases were observed.
- Findings were shared with the staff in a brief presentation and a staff survey was taken (3 questions) to assess the staff opinions regarding the current tool and to assess their recommendations on how to improve the tool.

4 Results

- The auditing process demonstrated that items completed 100% of the time out of the entire 16 cases were safety strap equipment on patient, med/solutions labeled, and correct MV ORMIS number.
- ID band name check, sterility parameters, and correct positioning of the patient, correct OR safety attire also were completed almost perfectly but fairly missed by 1 or 2. The most missed item was notification of pain service, fire safety issues, radiation protection, procedure stated aloud to patient, and radiation protection on the patient.
- Most of these items were missed because it was either irrelevant to the case completely in that particular specialty services room.
  - For example, the radiation protection item would not be addressed unless radiation equipment was used during the case. Also, regarding the item, "procedure stated aloud to patient," although it is necessary to be completed in the operating rooms but may have been missed in the audit because it was completed before entering the OR.
- One item that was missed 100% was "the staff introducing to each of the team member," which should have been addressed. This may be due to familiarity between the team members, but should not be assumed. Also, the multidisciplinary team did not go over whether any of the team staff have any concerns regarding the procedure or didn't have a formal time to share comments about the procedure.
- The 3 questionnaire survey of the staff revealed that most of the staff shared that all staff to be "attentive and completely stop what they are doing" during the time out phase. Also, they wanted anesthesia time out and surgical time out to be combined, to be more consistent and present more synchronized team work.
- Table 2 represents the 3 questions that were asked to the nursing staff.

Table 1:

Time-Out Audits
Peds OR Various Subspecialty Rooms

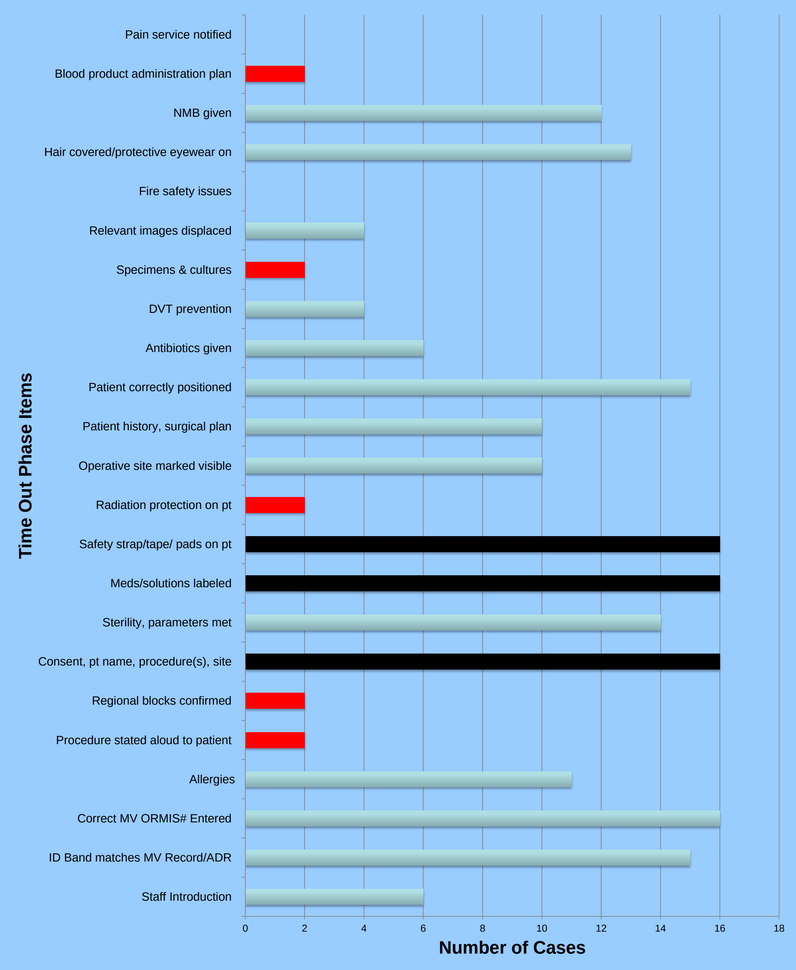


Table 2:

Pediatric Surgery Operating Room Nursing Staff Survey
1. What are three suggestions to improve the briefing and debriefing process? 2. Who do you recommend as best example for the time outs? 3. Who do you think should initiate the time out phase? (Please circle one) • Nurse
• Surgeon • Anesthesiologist • Surgical tech

5 Conclusions

Based on the audits and surveys, it is evident that the tool needs some improvement. Some ideas for improvement include:

- A tool that is particularly tailored to each of the pediatric surgery subspecialties.
- To have the anesthesia and the surgical time outs to occur at the same time.
- Education of the staff regarding the new improved tool.
- Some education may involve showing the example of best practice to all staff including attending surgeon, nurses, anesthesiologists, and surgical technicians.
- To create a consistent tool of the briefing and debriefing process.
- The need to designate a surgical champion or a nurse leader who is to be designated as the leader to initiate the tool in every case (Conley, et al, 2011). If so, it is essential to have all the staff aware of and to understand the role of this person.

After some of the following improvements have been made, it is recommended to schedule regular audits to measure the compliancy of the tool between the OR team members.

This may also help with identifying more issues with the tool and to generate new ideas to improve the tool.

6 Future Directions

Some future directions include:

- To have regular audits of the tool
- To make an education training video demonstrating the best example of the tool and show it to staff.
- Conduct regular audits regarding compliancy of the team staff using the tool.
- Potentially to have an electronic version of the tool.

7 References

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