

Addressing surgical safety through a supported multi-disciplinary process

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Introduction

In July 2016, addressing a broad patient safety initiative, the OR Universal Protocol process was reviewed. Over a 2-week period, anesthesia staff performed a comprehensive audit.



Audit findings showed overall compliance using previously established Universal Protocol elements in the Operating Rooms was 30% and adherence to the Debrief element was 7%. Lack of communication and team planning around the care of the patient (both current and upcoming) was noted.

An annual hospital goal tasked a multi-disciplinary team to train more than 1,000 individuals in the TeamSTEPPS methodologies. In September 2017, the two projects were combined to address both needs simultaneously.

Materials and methods

Based on audit results, the project team determined a complete revision of the Universal protocol elements, participation processes, and accountability was required. In January 2017, during a simultaneous presentation effort at three different physical locations and via WebEX, TeamSTEPPS methodology and an updated surgical safety checklist was presented to 630 Anesthesia, Clinical, and Surgical team members.

Each of the participating departments have TeamSTEPPS master trainers who delivered the presentations. In addition, an updated surgical safety checklist poster was placed in each of the 48 ORs outlining the revised Universal Protocol elements and responsible party assignments. To encourage an exchange of information about the patient and the procedure(s), role assignments in each section were emphasized during process training.

Results

Preparation for the presentation event included videotaping multiple UNC surgical teams performing specific events (Sign-In, Time-Out, Sign-Out). To improve usage and comprehension, the videos exemplified TeamSTEPPS methods and highlighted ideal team communication processes while also presenting the pending changes to the UNC Surgical Safety Checklist.

Driven by the Department of Anesthesia, an online Qualtrics audit tool was used in more than 6100 audits over a 9-month period (February – October, 2017).

Since August 2017, all elements of the audit have met or exceeded the 90% compliance target set by the organization, with the Sign-in and Time-out elements achieving greater than 90% compliance since February 2017. Compliance is measured by the number of items on the Surgical Safety Checklist that are covered during the different events.

Results have shown a marked increase from 7% to 95% in compliance with the debrief elements [Fig. 1].

Overall cumulative compliance with all Universal protocol elements has increased to 97% at all 3 facility locations. Results are being reported by facility location as well as surgical specialty with the ability to drill down to individual participants [Fig. 2].

Additionally, the auditor can document when perioperative personnel do not participate in the process. In those instances, the Medical Director of the Operating Rooms and/or Chief Medical Officer is notified to address non-compliance. A letter written by the Chief Medical Officer and signed by all surgical specialty Chairs was sent to each OR RN stating support for the process and encouraging additional communications with any Chair when non-compliance was noted.

The Surgical Safety Checklist poster is available in each Operating Room and used as a checklist for staff to confirm all elements of patient safety are addressed [Fig. 3]. The Qualtrics audit, routinely performed by anesthesia team members, provides raw data for analysis and reporting to confirm compliance and evaluate sustainment efforts.

Both the Perioperative Leadership team (CoPL) and the Perioperative Quality Council (PQC) review audit results monthly to address areas for concern and evaluate progress and stability.

Figure 1. Progression of compliance based on audit data

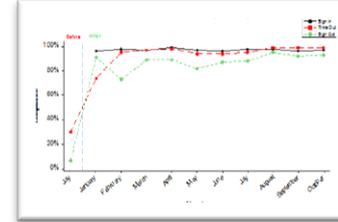


Figure 2. Reporting dashboard

By Location	
Sign-In - PREINDUCTION VERIFICATION	
Location	All of them Most of them Some of them None of them Total Compliance
UNC	16 0 0 0 16 100%
Chadwick CR	16 0 0 0 16 100%
McNaull CR	17 0 0 0 17 100%
McNaull CR	102 12 7 0 121 97%
Total	139 12 7 0 158 95%
TIME OUT - PREINDUCTION VERIFICATION	
Location	All of them Most of them Some of them None of them Total Compliance
UNC	2 0 0 0 2 100%
Chadwick CR	16 0 0 0 16 100%
McNaull CR	17 0 0 0 17 100%
McNaull CR	102 2 2 0 104 97%
Total	137 2 2 0 141 97%
Sign-Out - DEBRIEF	
Location	All of them Most of them Some of them None of them Total Compliance
UNC	13 0 0 0 13 100%
Chadwick CR	13 0 0 0 13 100%
McNaull CR	12 2 1 1 16 88%
McNaull CR	12 2 2 0 16 88%
Total	134 2 2 0 148 95%

Figure 3. Updated Surgical Safety Checklist

UNC Medical Center Surgical Safety Checklist	
1	Verify patient name, date of birth, and date of surgery are correct. Verify the operating room and procedure.
2	Verify patient identity, allergies, and blood products available.
3	Verify patient consent, including the time, date, and location of the procedure.
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Conclusions

Providing TeamSTEPPS training for more than 1,000 hospital staff presented a daunting task to the assigned team. Connecting the TeamSTEPPS methodologies to surgical safety and discovering significant improvement opportunities, the team moved forward with a surgical team training focus. Utilizing coordinated presentations to the Anesthesia, Clinical, and Surgical teams enabled the team to accomplish the goal.

Ongoing audits fueled almost exclusively by the anesthesia staff provide clear improvement results that are reviewed bi-weekly and as needed. Established goals were reached and have been maintained for more than 90 days.

All clinical Perioperative Division staff are trained in the TeamSTEPPS methods during their new hire orientation period. Annual refresher classes are also provided. A Learning Made Simple (LMS) online module is being finalized to provide individual training to any staff member, including anesthesia and surgical, who is not able to participate in a formal, in-person TeamSTEPPS presentation. LMS can also track all presentation participants. TeamSTEPPS training has been approved through the hospital Nurse Planner for 1.0 CNE.



Literature cited

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Acknowledgments

The Department of Anesthesia at UNC Hospitals for their consistent team leadership and feedback with the auditing process.

Erin Eckert for project direction and drive to achieve a hospital goal.

Further information

For more information about the project and our ongoing development, please contact Janet Chadwick at Janet.Chadwick@unchealth.unc.edu

