



COMPLIANCE WITH TIME-OUT PROCESS IN THE OPERATION THEATRE AMONG THE HEALTH CARE PROFESSIONALS

Reshma Das M. R* Student, MBA in Hospital Management, Annamalai University, Chidambaram, Tamilnadu, India *Corresponding Author

Junior Sundresh Associate Professor of Surgery, Raja Muthiah Medical College, Annamalai University, Chidambaram, Tamilnadu, India

ABSTRACT **Introduction:** Patient safety covers the prevention of errors and adverse events associated with healthcare that affect patients. An adverse event is unintentional harm caused by healthcare management rather than by the patient's underlying disease that results in a prolonged hospital stay, temporary or permanent disability or death.

Aim: To study the compliance with time out process in the operation theatre among the health care professionals.

Methods: This prospective observation study was conducted in 325 patients' in all the age groups who undergo minor and major surgeries of selected specialties, that is, urology, obstetrics and gynecology, ENT, general surgery and ophthalmology were included.

Results: About 0 to 10.77% of incompliance seen in completion of informed consent form including both anesthesia consent form and procedure consent form such as incomplete information about name of the surgery, site of the surgery & date and time when the consent was taken. Highest percentage of non-compliance seen in pre-operative medical assessment completion, i.e. 24.62% to 56.93%. Most of the specialty failed to assess the patient completely prior to the surgery.

Conclusion: Top-level leadership should proactively promote and cultivate organizational commitment to comply with time out process. Educate the pertinent staff on the preoperative medical assessment and continuously reinforce their importance.

KEYWORDS : patient safety, compliance, operation theatre

INTRODUCTION:

Making errors is part of normal human behavior. However, when errors have significant consequences or occur in high-risk industries they become of paramount importance. Errors occur throughout healthcare, but in particular, surgery as a high-risk specialty. Surgery is a dynamic specialty with a milieu of possible mishaps waiting to happen. Therefore, to understand and prevent errors in surgery we must explore this intricate multi-cogwheel process.¹ However, until the 1999 institute of medicine report, To ERR is Human, clinicians unaware of the number of surgery-associated injuries, deaths and near misses because there was no process for recognizing, reporting and tracking these events.² Medical blunders are periodically brandished across the newspapers and the news, which always attract the public's attention and concerns. However, there has been little research in why and how errors occur in the healthcare industry. Most of the current research has been on the prevention of drug errors and the estimation and epidemiology of adverse events occurring to inpatients.¹ However, these epidemiological estimates are only the tip of the error iceberg in healthcare. Errors occur throughout healthcare, but in particular, surgery as a high-risk specialty, has been shown to have a detrimental effect on patients with one study quoting an annual incidence rate of adverse events among patients having an operation as 3.0%, of which half were preventable.^{1,3}

WSS (wrong site surgery) can be a devastating experience for the patient and have a negative impact on the surgical team. State licensure boards are imposing penalties on surgeons for WSS, and some insurers have decided to no longer pay providers for WSS or wrong-person surgery, nor for leaving a foreign object in a patient's body after surgery. Surgery performed on the wrong site or wrong person has also often been held compensable under malpractice claims. Indeed, 79 percent of wrong-site eye surgery and 84 percent of wrong-site orthopedic claims resulted in malpractice awards.⁴ The incidence of reported WSS has increased in recent years. From the inception of the Joint Commission's Sentinel Event program, the number of WSSs reported has increased from 15 cases in 1998, to a total of 592 cases reported by June 30, 2007. Of these, WSSs most commonly occur in orthopedic or podiatric procedures, general surgery, and urological and neurosurgical procedures.⁴

In January 2007, the World Health Organization (WHO) began a programme aimed at improving the safety of surgical care globally. The initiative, called "Safe Surgery Saves Lives" aimed to identify minimum standards of surgical care that could be universally applied across countries and settings. One component of the initiative was the introduction of a peri-operative checklist. A core set of safety check was developed in the form of a WHO surgical safety checklist that can be used in any surgical setting and operating theatre environment. Each

step in the checklist is simple, widely applicable, and measurable and has been shown to be associated with a reduced risk of death and major complications in a range of clinical settings. The instrument suggest three phase: sign in, time out and sign out.⁷

AIM

To study the compliance with time out process in the operation theatre among the health care professionals.

MATERIALS AND METHODS

Study type: Prospective Observational study

Sample size: 325 patients undergoing surgery in the operation theatre.

Inclusion criteria: All minor and major surgeries of selected specialties, (urology, obstetrics and gynecology, ENT, general surgery and ophthalmology). All the age groups who undergo surgery were included in the study irrespective of genders. All the elective and emergency surgeries were included in the study.

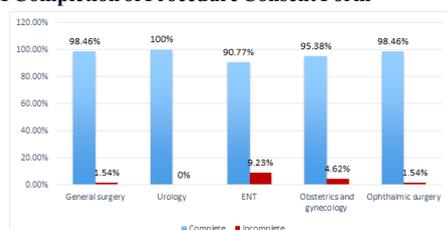
Exclusion criteria: Excluded orthopedic surgery, dental surgery and cardiac surgery. (Apart from the selected specialties like Urology, Ophthalmology, ENT, Obstetrics & gynaecology and general surgery, all other specialties were excluded from the study).

Source of data: primary data collected directly at the scene by using the audit tool that was designed and approved. Objective will be explained to all the people who are involved in the study. Secondary data: source of information will be collected from the medical records.

Data collection method: During the time out procedure, researcher will be collected primary data as a silent observer recording the available and missed data related to patient safety. Secondary data will be collected from the medical records. A well-structured audit tool will be used during the period to identify the practice issues related to time out verification process.

RESULTS

Figure 1 Completion of Procedure Consent Form

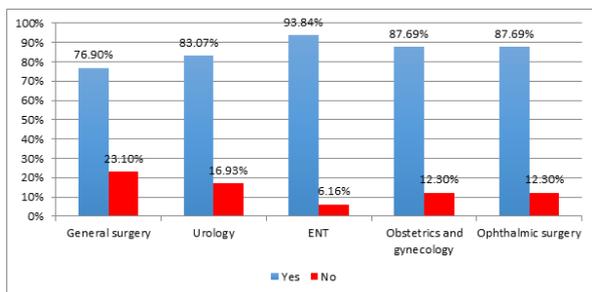


Urology had 100% of completeness without any deficiency in the procedure consent form. On the flip side, ENT had 90.77% of completeness of procedure consent form. General surgery and ophthalmic surgery shared same percentage, ie, 98.46%. Obstetrics and gynecology had 95.38%. The main reason behind the non-compliance in documentation is that the consent form was not verified preoperatively. About 0 to 10.77% of incompliance seen in completion of informed consent form including both anesthesia consent form and procedure consent form such as incomplete information about name of the surgery, site of the surgery & date and time when the consent was taken.

Table 1 Consent Form Completeness for the Anesthesia

Specialties	% of completeness	% of incompleteness
General surgery	89.23%	10.77%
Urology	100%	0%
ENT	96.92%	3.08%
Obstetrics and gynecology	93.85%	6.15%
Ophthalmic surgery	92.30%	7.7%

Figure 2 Compliance/ Non-Compliance in Acknowledging the time out by the Entire Team



The team for time-out process includes the surgeon, assistant surgeon (if applicable), anesthetist, nurse and the technician. The above-mentioned incompliance was mainly due to the absence of surgeon, assistant surgeon or anesthetist during the time-out process. General surgery team had incompliance, which accounts for 23.10%. Urology team had 16.93% and ENT team had 6.16% of incompliance. On the other hand, obstetrics and gynecology surgery team and ophthalmic surgery team had shared same percentage of distribution of incompliance, which accounts 12.30%. Compliance on verification of Availability of Implants, Special Equipment's & Prosthesis during time out was 100% whereas verification of relevant documents during time out process was 99.69%.

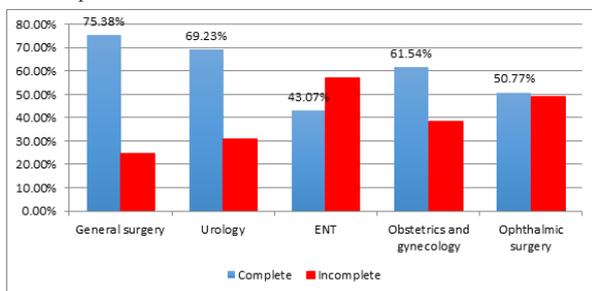


Figure 3 Distribution of Preoperative Medical Assessment Completion

CONCLUSION

The present study did not assess outcomes, but it is assumed that poor compliance puts patients at risk. Regular and implementation of WHO Surgical safety checklist is used as a tool for improving team communication; strengthening teamwork and improving patient safety. On top that, to amplify consistency, the active team members should be motivated to utilize the checklist during their work practice regularly. Awareness creation should be in place especially for new nursing/anesthetic staffs because of high turnover. Moreover, conducting regular audit of checklist utilization, offering regular refreshment and multidisciplinary training to improve communication may increase the rates of compliance with the safety checklist.

REFERENCE

1. SudipK. Sarker, Charles Vincent, Errors in surgery, International Journal of Surgery, Volume 3, Issue 1, 2005, Pages 75-81. [http://www.journal-surgery.net/article/S1743-9191\(05\)00025-7/fulltext](http://www.journal-surgery.net/article/S1743-9191(05)00025-7/fulltext)
2. Deborah F. Mulloy; Ronda G. Hughes, Chapter 36 Wrong-Site Surgery: A Preventable Medical Error, (Patient Safety and Quality: An Evidence-Based Handbook for Nurses). <https://www.ncbi.nlm.nih.gov/books/NBK2678/>
3. Thomas, E.J. and Brennan, T.A. Errors and adverse events in medicine: an overview. in: C.A. Vincent (Ed.) Clinical risk management. Enhancing patient safety. BMJ Publications, London; 2001.
4. <https://psnet.ahrq.gov/primers/primer/18/wrong-site-wrong-procedure-and-wrong-patient-surgery>. Wrong-Site, Wrong-Procedure, and Wrong-Patient Surgery. Patient safety network (Last Updated: June 2017)
5. <https://www.theguardian.com/society/2016/feb/18/serious-errors-such-as-operating-on-wrong-patient-still-occurring-in-nhs>
6. Mark Crane, Wrong-Site Surgery Occurs 40 Times a Week, June 29, 2011, Joint Commission Center for Transforming Healthcare. <http://www.medscape.com/viewarticle/745581>
7. The Joint Commission. Sentinel events statistics. Oakbrook Terrace (IL): Joint Commission; 2009. Available at: <http://www.jointcommission.org/SentinelEvents/Statistics/>, April 30, 2010.
8. WHO. Patient Safety, 2013. <http://www.who.int>.
9. DeVine J, Chutkan N, Norvell DC, et al. Avoiding wrong site surgery: a systematic review. Spine 2010;35:S28-36.
10. Jhavar BS, Mitsis D, Duggal N. Wrong-sided and wrong-level neurosurgery: a national survey. J Neurosurg Spine 2008;9:109.