A Workplace-based Insight Into The Difficulties In Implementation Of WHO Surgical Safety Checklist In Operation Theatre

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Introduction :

Human error is one of the most important factors affecting patients' safety in Operation Theatres. To decrease it, WHO introduced WHO Surgical Safety Checklist (WHOSSC) in 2008 which is a very effective method but only when it is properly used1. Implementation of WHOSSC demonstrated positive impacts on the patient and team outcomes, but variation in its implementation and staff's perception still poses a challenge2. The checklist intends to encourage behavior change towards effective communication and culture of safety in operation theatre. Risk reduction is not achieved by just 'ticking off' checklist items, but by the actions and behaviors of the perioperative team.

A knowledge gap still remains of how perioperative staff integrate (or not) the WHOSSC into their pre-existing risk management strategies and tools and how their risk perceptions are impacted by the use of the WHOSSC. Therefore, studies that seek to understand the role of adaptive, human and social practices in safety efforts such as the SSC are therefore important. Hence the present study was designed to identify the difficulties in implementation of this checklist at institutional level.

Primary objective:

To identify the difficulties in implementation of WHOSSC at institutional level .

Secondary objective:

To acquire suggestions on overcoming the hurdles in successful implementation of the WHOSSC checklist

Material Methods :

Study design –Observational study

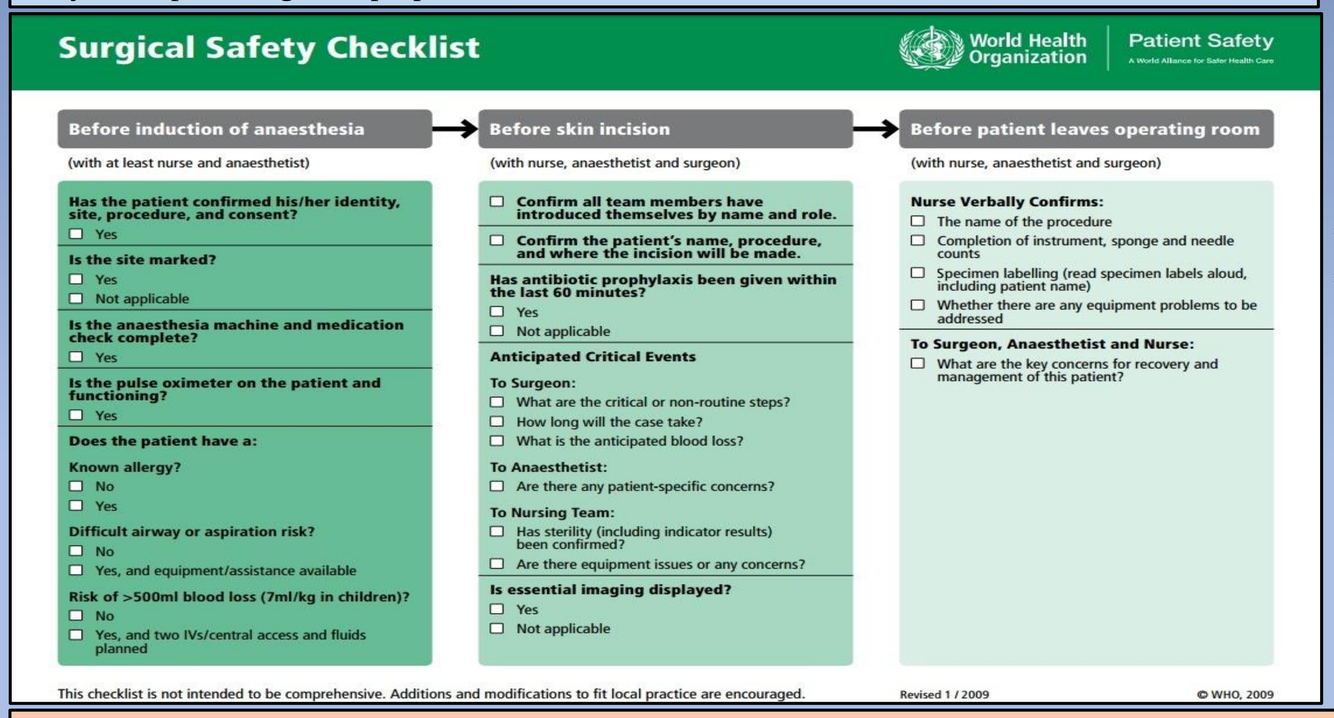
Study location – GMC and Maharashtra Postgraduate Institute of Medical Education and Research, Nashik

Sample size – 45 participants calculated using data from previous study.[3]

This Observational study was conducted at a Tertiary Care Centre in 45 participants after taking written inform consent. The Institutional Ethical Committee approval was taken prior to the commencement of the study.

The participants constituted of the perioperative staff working in the Operation Theatre like Surgeons, Anesthesiologists and Nursing Staff. A pre- designed validated questionnaire was prepared to identify the difficulties in implementation of WHO surgical safety checklist.

The questionnaire consisted of 15 questions to identify the awareness, perception and implementation hurdles of WHOSSC checklist. Open ended questions were also included in the questionnaire to derive suggestions for increasing the adherence to the checklist. Qualitative data was analyzed in percentage and proportions.



Surgical Safety Checklist

World Health Organization | Patient Safety — A World Alliance for Safer Health Care

Before induction of anaesthesia (with at least nurse and anaesthetist)

- **Has the patient confirmed his/her identity, site, procedure, and consent?** ☐ Yes
- **Is the site marked?** ☐ Yes ☐ Not applicable
- **Is the anaesthesia machine and medication check complete?** ☐ Yes
- **Is the pulse oximeter on the patient and functioning?** ☐ Yes
- **Does the patient have a:**
  - Known allergy? ☐ No ☐ Yes
  - Difficult airway or aspiration risk? ☐ No ☐ Yes, and equipment/assistance available
  - Risk of >500ml blood loss (7ml/kg in children)? ☐ No ☐ Yes, and two IVs/central access and fluids planned

Before skin incision (with nurse, anaesthetist and surgeon)

- ☐ **Confirm all team members have introduced themselves by name and role.**
- ☐ **Confirm the patient's name, procedure, and where the incision will be made.**
- **Has antibiotic prophylaxis been given within the last 60 minutes?** ☐ Yes ☐ Not applicable
- **Anticipated Critical Events**
  - To Surgeon: ☐ What are the critical or non-routine steps? ☐ How long will the case take? ☐ What is the anticipated blood loss?
  - To Anaesthetist: ☐ Are there any patient-specific concerns?
  - To Nursing Team: ☐ Has sterility (including indicator results) been confirmed? ☐ Are there equipment issues or any concerns?
- **Is essential imaging displayed?** ☐ Yes ☐ Not applicable

Before patient leaves operating room (with nurse, anaesthetist and surgeon)

- **Nurse Verbally Confirms:** ☐ The name of the procedure ☐ Completion of instrument, sponge and needle counts ☐ Specimen labelling (read specimen labels aloud, including patient name) ☐ Whether there are any equipment problems to be addressed
- **To Surgeon, Anaesthetist and Nurse:** ☐ What are the key concerns for recovery and management of this patient?

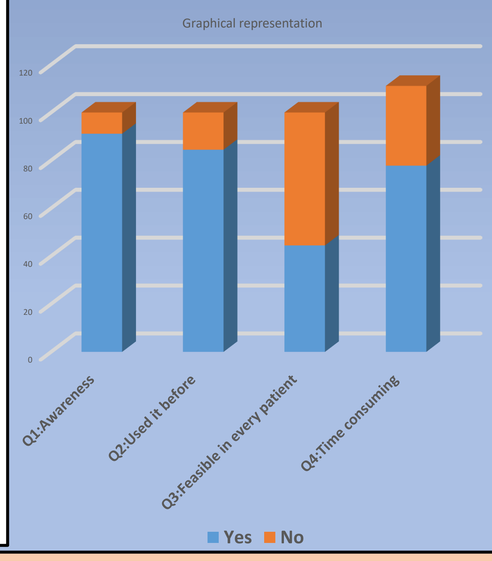
This checklist is not intended to be comprehensive. Additions and modifications to fit local practice are encouraged. Revised 1 / 2009 © WHO, 2009

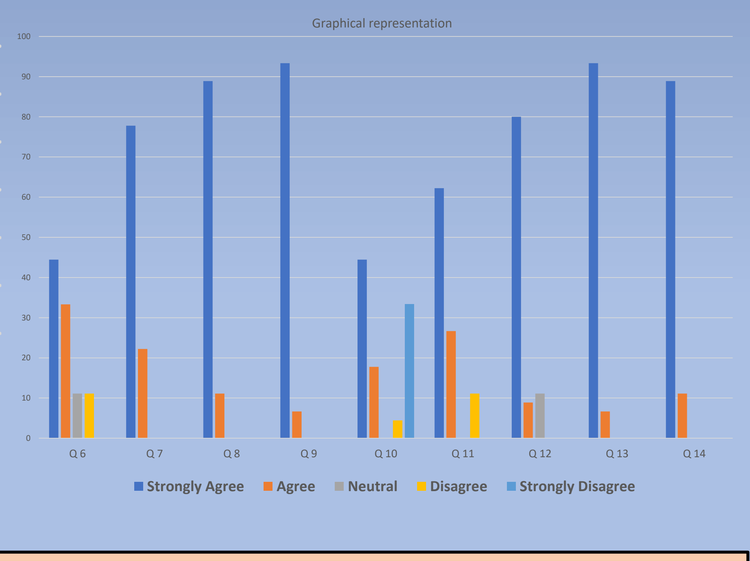
Observations:

Sr. No.	Questions	Yes	No
Q1	Are you aware of the WHO Surgical Safety Checklist?	91.11%	8.88%
Q2	Have you used the WHO Surgical Safety Checklist before?	84.44%	15.55%
Q3	Do you think filling the complete checklist is feasible for every patient?	44.44%	55.55%
Q4	Do you feel ,it is too time consuming?	77.78%	33.33%

		Never	Really	Sometimes	Often	Always
Q5	If yes, How many times do you fill it completely?	17.78%	0%	46.67%	8.89%	11.11%

Sr. No.	Questions	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Q6	**Interpersonal communication between medical and paramedical staff creates a hurdle in completing the checklist.**	44.44%	33.33%	11.11%	11.11%	0%
Q7	**Feasibility is low in high risk patients where every minute counts.**	77.78%	22.22%	0%	0%	0%
Q8	**There is lack of robust standard operating procedures.**	88.88%	11.11%	0%	0%	0%
Q9	**Intrinsic motivation and determination of the team members may vary infilling the checklist.**	93.33%	6.66%	0%	0%	0%
Q10	**Huge patient workload is a barrier in filling the checklist.**	44.44%	17.77%	0%	4.44%	33.33%
Q11	**Swapping of patients between residents and consultants leading to lack of adherence to checklist**	62.22%	26.66%	0%	11.11%	0%
Q12	**Sensitization of residents to adherence to the checklist should be included in curriculum.**	80%	8.89%	11.11%	0%	0%
Q13	**Sensitization of OT Staff to adherence to the checklist should be done at Institute level.**	93.33%	6.66%	0%	0%	0%
Q14	**Compulsion to complete the checklist should be there from Hospital management.**	88.89%	11.11%	0%	0%	0%
Q15	**Suggestions for better adherence to the checklist…….**					





Result: Awareness of the WHOSSC checklist was present in 91.11% participants while only 84.45% participants of them were already using it. Though only 20% of them confided that they could fill it completely most of the time. The checklist was perceived to be time consuming by 77.78% of participants. 55.55% thought it is not feasible every time while 78 % considered that it is not feasible during emergency operations. 77% agreed that interpersonal communication is a hurdle while 22% disagree with it. More than 93% participants were of the opinion that robust SOP and motivation of all staff is required for successful implementation of the WHOSSC checklist. 88.89% were of the view that sensitization of residents regarding use of WHOSSC checklist should be introduced during residency curriculum.

Discussion: This study explored about awareness, perception and practical difficulties while using WHOSSC in Operation Theatres. Our findings correspond to Lim etal study. We found lack of Interpersonal communication, deficiency of robust SOP, variation in intrinsic motivation and determination and sweeping of patient between resident and consultants were some of the hurdles in implementing the checklist. Lim etal and Nugent etal study in their study also concluded that WHOSSC checklist was perceived as time consuming. In our study also 77.78% participants reported that time is the factor for decreased adherence to WHOSSC checklist. As WHOSSC proved improved patient safety, It is responsibility of all perioperative members to work together to improve its adherence and mostly Institute should take leadership role in its implementation .

Conclusion : WHOSSC is time consuming and not feasible in every emergency patients. Lack of Interpersonal communication, deficiency of robust SOP, variation in intrinsic motivation and determination and sweeping of patient between resident and consultants are some of the hurdles in implementing it. Institutional management should take initiative to improve its use by creating robust SOP, regular auditing and giving incentives. The assessment of implementation of WHOSSC checklist by residents should be strictly monitored by the consultants to make it a work culture henceforth.