Surgical safety checklist in the COVID era

In December 2019, we were woken up to the rapid spread of human–human transmission of novel coronavirus 19 (SARS-CoV2) causing COVID-19.[1] The management of patients during the time of COVID-19 pandemic adds a new challenge due to the added risks of infection to healthcare workers caring for infected patients. With no vaccine or proven treatment yet available, the only way to protect the healthcare workers is by ensuring minimal exposure to the pathogen, wearing personal protective equipment (PPE) and key infection preventing strategies.[2-4] Operating rooms (ORs) are considered high risk areas where aerosol generating procedures are conducted. Safe surgery during this pandemic must also include safety of healthcare workers. Surgical safety checklist (SSC), a simple tool for over a decade has proven that successful implementation has decreased errors, improved communications and teamwork among OR professionals

SURGICAL CHECKLIST

Patient Name:	Date:

In the OT- Before induction - SIGN IN	In the OT- Before skin incision - TIME OUT	In the OT - Before closure - SIGN OUT
Patient has confirmed ➢ Identity ➢ Procedure ➢ Side/ Not applicable ➢ Consent	○ Surgeons, Anaesthetist and Nurse verbally confirm • Patient • Procedure • Side / Not applicable	○ Name of procedure recorded
Preinduction • Team roles identified Anaesthetist/Surgeon/Helper/Nurse • Only Essential personnel remain inside	• All OT personnel wear PPE*	○ Instrument, sponge and needle count correct ○ Specimen labelled
History & Inv • S/S- Fever/Cough/Cold/Sorethroat • Covid test - Date	○ Anticipated critical events – Surgical team	○ Any equipment problems to Be addressed
Personnel Protective equipment* • Covid suspects – PPE(Shield,N95,3-plymask, Gown, Double gloves)** • Covid+ve patient PPE(** plus Goggles, Headcover, Shoe covers)	○ Anticipated critical events – Anaesthesia team	○ Postoperative care concerns - Surgical team
	○ Anticipated critical events – Nursing team ○ Mob/ gauze count done and recorded	○ Postoperative care concerns- Anaesthesia team
○ Site marked / Not applicable	○ Antibiotic prophylaxis	○ After skin closure before reversal: Confirm Instrument, sponge and needle count correct
○ Preparation for position	○ Essential imaging displayed/ Check C arm position / Not applicable	
○ Viral markers	○ Check HPR frozen form / Not applicable	
○ Blood confirmed / Not applicable	○ Check tourniquet application / pressure / Not applicable	**Extubation** • Personnel – Appropriate PPE* • Only Essential personnel remain inside
○ Any known allergy?	• Powered instruments usage***. Non- Essential personnel>6 feet away	
○ Specific instruments available/Not applicable • Powered instruments required*** (Saw/Micro motor/Microdebrider)		• Breach in PPE protocol (if any) documented & informed to Sister –in-
○ Anaesthesia safety check completed ○ Pulse oximeter on patient and functioning	Throat Pack Inserted / Any other packs Inserted/ Not applicable	**Transfer from OT to ICU/RR** • Patient -3 ply mask • Intubated - HME filter, 3 ply mask • Transfer- Head end- plastic sheet
○ Difficult airway/ Aspiration risk/Adequate starvation	• INSERTION - At Induction/ During Surgery • REMOVAL –At Extubation/ During surgery	
	• Two person check • Two person check	

Signature and Name

Surgical Team	Anaesthesia Team	Nursing Team

Modified and adapted from WHO surgical safety checklist

Figure 1: Modified Surgical Safety Checklist

while conducting complex surgical procedures all around the globe.[5] The need of the hour is a modified version of the checklist to prompt the OR team of important steps that can increase staff safety, which can be otherwise missed in this complex scenario. A "Fixed COVID checklist" might be useful.[6] However, it may not fit the local circumstances and practice. A modified version reflecting the local needs and encouraging all the team members to buy in would improve the implementation and acceptance, in addition encourage ongoing teamwork. It is important that all the team members should have the opportunity to give input and feedback in creation of modified hospital-specific checklist before it is implemented. This is important as the availability of resources would vary from place to place and a hospital-specific checklist best suits the safety needs of the facility that uses it. While modification is essential, the basic skeleton of the checklist with three pause points need to be preserved. The checklist should include items which would benefit in improving safety of all the team members (minimize aerosol generation; all staff wearing PPE), steps which can be easily missed and addressed by including it in the checklist. We at tertiary care oncology setup incorporated important items in our existing checklist to avoid duplication and to make it more acceptable [Figure 1]. As suggested by Lifebox foundation and Jhpiego, it is important to have SMART (specific, measureable, achievable, results focused and time bound) goals during implementation of COVID-19 SSC in your hospital setup. We at our institute audited the compliance with the use of PPE by healthcare workers of the operation theatre complex which was found to be 96.3%.[7] Another important aspect is educating all the healthcare workers about the risks of COVID-19 infection and the role of checklist in minimizing the transmission of the infection. The importance of team-building and communication cannot be overemphasized for successful implementation of the checklist.

In conclusion, the management of patients in the current COVID-19 era presents a new challenge for the OR healthcare workers with a higher risk of contracting the infection. Modification of the checklist can be considered as an easily attainable and positive step in the direction of improving safety for the OR healthcare workers caring for patients and patients undergoing surgery.

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