



# WHO surgical safety checklist implementation



**World Health  
Organization**

REGIONAL OFFICE FOR

**Europe**



**Organisation  
mondiale de la Santé**

BUREAU RÉGIONAL DE L'

**Europe**



**Weltgesundheitsorganisation**

REGIONALBÜRO FÜR

**Europa**



**Всемирная организация  
здравоохранения**

**Европейское** региональное бюро

Dr Evgeny Zheleznyakov,  
WHO European Centre for Primary Health  
Care, Division of Health Systems and Public  
Health, WHO Regional Office for Europe

# 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?

# Modifying the checklist

<b>Focused</b>	The Checklist should strive to be concise, addressing those issues that are most critical and not adequately checked by other safety mechanisms. Five to nine items in each Checklist section are ideal.	<b>Tested</b>	Prior to any rollout of a modified Checklist, it should be tested in a limited setting. The real-time feedback of clinicians is essential to successful development of a Checklist and its integration into the processes of care. Testing through a "simulation" as simple as running through the Checklist with team members sitting around a table is important. We also suggest using the Checklist for a single day by a single operating team and collecting feedback. Modify the Checklist or the way that it is incorporated into care accordingly and then try the Checklist again in a single operating room. Continue this process until you are comfortable that the Checklist you have created works in your environment. Then consider a wider implementation program.
<b>Brief</b>	The Checklist should take no more than a minute for each section to be completed. While it may be tempting to try to create a more exhaustive Checklist, the needs of fitting the Checklist into the flow of care must be balanced with this impulse.		
<b>Actionable</b>	Every item on the Checklist must be linked to a specific, unambiguous action. Items without a directly associated action will result in confusion among team members regarding what they are expected to do.		
<b>Verbal</b>	The function of the Checklist is to promote and guide a verbal interaction among team members. Performing this team Checklist is critical to its success—it will likely be far less effective if used solely as a written instrument.		
<b>Collaborative</b>	Any effort to modify the Checklist should be in collaboration with representatives from groups who might be involved in using it. Actively seeking input from nurses, anaesthetists, surgeons and others is important not only in helping to make appropriate modifications but also in creating the feeling of "ownership" that is central to adoption and permanent practice change.	<b>Integrated</b>	Many institutions already have strategies to insure the reliable performance of many of the processes that are part of the WHO Checklist. Integrating new safety checks into the processes is challenging but possible in nearly all settings. The major additions to existing routines involve the integration of team communication, briefings, and debriefings. These items are of critical importance and should not be removed from the Checklist.

# Factors for successful implementation

- ✓ Early engagement of staff
- ✓ Active leadership and identification of local champions
- ✓ Extensive discussion, education and training
- ✓ Multidisciplinary involvement
- ✓ Coaching
- ✓ Ongoing feedback
- ✓ Local adaptation

# How to ensure that our checklist meets the goals of the WHO Surgical Safety Checklist?

1. Does the entire team stop all other activity for a few moments at three critical points, i.e., pre-anesthesia, pre-incision and before the patient leaves the OR? The goal is for the entire team to participate in each pause. (The surgeon may not have to be present for the pre-anesthesia check.)
2. Does the entire team verbally confirm each item on the WHO Checklist? The goal is for the entire team to participate. At a minimum, every item on the WHO Checklist should be confirmed. Other items may also be addressed.
3. Are the items verified without reliance on memory? The goal is to use a tool for reference to ensure every item is covered, e.g., a form, poster, or computer screen.

# Implementation steps

*Many of the steps on the Checklist are already followed in operating rooms around the world; few, however, follow all of them reliably.*

*Therefore, the Checklist has two purposes: ensuring consistency in patient safety and introducing (or maintaining) a culture that values achieving it.*

1. Building a team
2. Meet with hospital leaders
3. Start small, then expand
4. Use the checklist
5. Track changes
6. Set goals
7. Update the hospital on progress
8. Ensure continuity

# Evaluating surgical care

❑ **Outcomes:** Mortality rates (death on the day of surgery and postoperative in-hospital deaths) and surgical sites infection rates

❑ **Process:**

- Marking of the operative site by the surgeon
- Performance of an anaesthesia safety check of the machine and medications
- Use of pulse oximetry throughout administration of anaesthesia in all cases
- Objective evaluation of the airway
- Use of sterility indicators to ensure adequacy of sterility practices
- Administration of prophylactic antibiotics within one hour before skin incision
- Verbal confirmation of patient, site and procedure immediately before incision with all team members present
- Preoperative team briefing to discuss clinical concerns for recovery and management of the patient operative plan, and other critical issues
- Post-operative team debriefing to discuss problems during the case and concerns

# Key for success – commitment by hospital leaders

- The chiefs of surgery, anaesthesia, and nursing departments must publicly embrace the belief that safety is a priority and that use of the WHO Surgical Safety Checklist can help make it a reality.
- To demonstrate this, they should use the Checklist in their own cases and regularly ask others how implementation is proceeding.
- If there is no demonstrable leadership, instituting a Checklist of this sort may breed discontent and antagonism.

**Thank you!**  
**Paldies!**