

## *Checklist Modification*

The World Health Organization developed the surgical safety checklist through a process of broad international consultation, followed by limited trials of feasibility, and finally a large, multi-center pilot study. Modifications were made to the checklist at all stages based on feedback from experts in clinical medicine and patient safety, as well as from those who had actually used the checklist in surgery. This checklist is intended to be nearly universally applicable, useful in all environments and types of surgery. However, we encourage modification of the checklist to better fit the needs and processes of care in specific environments and surgical disciplines.

Modification of the checklist should be undertaken with a critical eye. While it is not necessary to replicate the process of broad consultation that was employed in creation of the checklist, it is essential that the checklist be tried in simulated and real-life situations in order to ensure its functionality. Additionally, many of the principles used in the development of the checklist can also be applied to its modification.

1. **Focused-** 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 [there are three sections in the WHO checklist], which is supported by experience in the aviation industry.
2. **Brief-** 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.
3. **Actionable-** 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 and ultimately to loss of buy-in to the checklist.
4. **Verbal-** A major key to the function of the checklist is the fact that it is a verbal exercise among team members. Reading the checklist “out loud” as a team-

exercise is critical to its success and it will likely be far less effective if used solely as a written instrument.

5. **Collaborative-** Any effort to modify the checklist should be made through the collaboration of representatives of all individuals who might be involved in using it. Actively seeking input from nurses, anesthesiologists, 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.
6. **Tested-** Prior to any rollout of a modified checklist, it must be tested. 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 operative 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.
7. **Integrated-** Some institutions already use checklists and other methods to insure the reliable performance of many of the processes that the WHO checklist touches upon. In addition, hospitals throughout the world have already developed and are using checklists routinely at the time immediately prior to incision [the Time Out or surgical “pause”]. These institutions will be faced with the challenge of integrating already existing safety processes/checklists with the WHO checklist. This integration process is possible and logical in nearly all settings. In many of these institutions, the major additions to their all ready existing routines involve the integration of items on the WHO checklist that are focused primarily on team function and communication. [Team introductions, pre-procedural information sharing and discussing a treatment plan at the end of surgery] We believe that these items are of critical importance and should never be removed from the checklist.