Implementation of the World Health Organisation Surgical Safety Checklist: Implications for anaesthetists

The Australian and New Zealand College of Anaesthetists recently endorsed the World Health Organization’s Surgical Safety Checklist. This laudable attempt to reduce adverse events during surgery has already demonstrated a 40% reduction in mortality and a reduction in complications by over a third in an international multi-centre trial.

Despite these encouraging results, we believe the ultimate success of the checklist will depend largely on how it is implemented. The operating theatre is a complex social and technical environment: any intervention such as the implementation of the checklist will perturb that system, perhaps in unintended and unpredictable ways. Effects on human performance in particular can be expected following the implementation of the checklist, such as changes in cognitive load, divided attention and prospective memory. For example, similar to medication checking, any check must be completed with conscious effort, rather than as an automatic, superficial task. The suggested checks of ‘time out’ and ‘sign out’ are recommended to occur during, or immediately following induction and during emergence respectively. At these times the anaesthetist must divert his or her attention from the anaesthetic to perform a separate, independent cognitive task with items that are not necessarily related to the primary task. Moreover, these events occur at precisely the times of peak cognitive load when attending to an additional unrelated task and maintaining vigilance have been shown to be most difficult. In our observations of the current ‘time out’ practice at a number of Victorian hospitals, the process is usually initiated and performed primarily by the nursing staff, with little regard to the readiness of the anaesthetist. Not uncommonly, the surgeon has...
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minimal involvement and frequently the surgery has already started.

The ethos behind the checklist has much in common with checklists used to enhance airline safety. Conversely, within the airline industry it is recognised that during critical times of flight (i.e. take-off and landing) the flight crew should be attending only to the task at hand. Indeed the concept of “sterile communication” within the cockpit is enshrined in United States Regulations. In order to prevent cognitive overload at these critical times, the flight crew are not to be disturbed with any extraneous tasks or questions:

“No flight crewmember may engage in, nor may any pilot in command permit, any activity during a critical phase of flight which could distract any flight crewmember from the performance of his or her duties or which could interfere in any way with the proper conduct of those duties...”

We believe a more appropriate time to perform the ‘time out’ checklist would be before induction. At the very least, there should be a formal confirmation with the anaesthetist that they are available to participate.

The Surgical Safety Checklist presents a most exciting opportunity to improve the safety of our patient, and anaesthetists must play a leading role in its effective implementation. Nevertheless, caution is warranted when planning the timing of this important additional task. Unintended adverse effects resulting from anaesthetists’ distraction from primary anaesthetic tasks may paradoxically threaten patient safety. Successful implementation would see all members of the operating theatre team ready, engaged in the process, and able to express any safety concerns they may have.

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References