

The WHO Surgical Safety Checklist

Alan F Merry and Bruce H Barraclough

A simple-to-use, inexpensive, low-risk tool that is not about ticking boxes but about keeping patients safe — it encourages surgeons, anaesthetists and perioperative nurses to work as a team, communicate and engage fully in safety processes

Following pilot implementation of the World Health Organization's Surgical Safety Checklist (the Checklist), a 30% reduction in surgery-related death and complications was achieved — a great result from a simple and affordable intervention!¹ The Checklist² was launched in Australia by the Hon Nicola Roxon MP, Federal Minister for Health and Ageing, on 19 August 2009, and a week later in New Zealand by the Hon Tony Ryall MP, Minister of Health. Similar launches have occurred around the world.

The Checklist, produced by the WHO's Second Global Challenge of the World Alliance for Patient Safety, was evaluated in a pilot study involving almost 8000 patients in eight centres, including one in our region, in countries with health systems of varying sophistication.¹ This study showed that the Checklist was simple to use, and was associated with a worthwhile improvement in outcomes attributable to improved adherence to a number of predefined safety processes. For example, combined results from the sites showed reductions in: deaths, from 1.5% to 0.8% ($P = 0.003$); complications, from 11% to 7% ($P = 0.001$); and unplanned re-operations, from 2.4% to 1.8% ($P = 0.047$). This was a quality improvement study, not a randomised controlled trial, but the Checklist is a well thought-out, inexpensive, low-risk initiative that makes sense and works.

The problem of iatrogenic harm has been characterised and quantified in a number of studies internationally,^{3,4} including widely cited work in our own region.^{5,6} These studies show that

too many patients are harmed by the health care intended to help them,⁷ and that this harm is often the result of preventable failures in process.⁸ The Checklist is a cognitive aid to assist in the processes of caring for patients during anaesthesia and surgery but, more importantly, it is also designed to promote teamwork and communication within the operating room. Therefore, it was appropriate that the launches of the Checklist were collaborative affairs, with wide representation from nursing and medical organisations, including the Royal Australasian College of Surgeons, Australian and New Zealand College of Anaesthetists and Australian College of Operating Room Nurses, among others.

The value of checklists in process management has been recognised in high-stakes activities other than medicine since at least the 1930s, and it is now time for surgeons, anaesthetists and perioperative nurses to increase their use of checklists for process control.

Various methods of checking have been used by nurses, anaesthetists and surgeons for many years, but unacceptable errors continue to occur. For example, of the serious and sentinel adverse events reported in New Zealand in 2008, 19 cases involved the wrong site, wrong patient or wrong procedure, and six involved retained surgical swabs or other paraphernalia.⁹ This distressing situation is not far out of line with experiences in similarly sized Australian states or other countries. In New South Wales, in the second half of 2007, there were 10 wrong patient, wrong site or wrong procedure incidents in operating rooms; 61 incidents

involving imaging and nuclear medicine; two in radiology services; and 13 in wards and other areas.¹⁰

The Checklist is applied in three phases: “Sign In”, when key issues are checked before induction of anaesthesia in the operating room; “Time Out”, which includes introducing all staff in the operating room, a briefing of the team and a final check of key issues before incision; and “Sign Out”, which is a clear handover to postoperative staff of important issues for ongoing patient management. It is relevant that the Checklist was developed through a highly evidence-based process, in which an international inter-professional group of experts reviewed the available literature, identified aspects of the perioperative process which typically fail, and consulted widely in designing a solution. Ticking the boxes is not the objective — getting people to engage in the key processes of perioperative care is. Local modification is encouraged, and an Australian and New Zealand version has been developed and launched,¹¹ which includes prophylaxis of venous thrombo-embolism as one of the key issues checked during “Time Out”. Change management is hard work and worldwide experience indicates the need for active implementation programs led by clinical champions. The Checklist will not eliminate mistakes, but it has good potential to reduce them. All who practise surgery, anaesthesia and perioperative nursing are asked to adopt the Checklist in an engaged and constructive manner and make it work.

The importance of instigating the use of the WHO Surgical Safety Checklist as an operating room routine cannot be overstressed.

- Preventable iatrogenic harm continues to be a major problem internationally, including in surgery and anaesthesia.
- The Checklist is an inexpensive, low-risk, adaptable initiative based on commonsense that has been shown to be workable and to significantly reduce harm in surgery and anaesthesia.
- The Checklist has the support of many local and international medical and nursing organisations.

Competing interests

Alan Merry and Bruce Barraclough received financial support from the WHO to travel to the secretariat meeting in London and working party meeting in

Geneva to develop the Surgical Safety Checklist. Bruce Barraclough received travel assistance from the Royal Australasian College of Surgeons to attend the launch of the Checklist in Canberra. Alan Merry received assistance from the Australian and New Zealand College of Anaesthetists to attend the launch of the Checklist.

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