The anaesthetist and the World Health Organization Surgical Safety Checklist

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Correctly implemented, the World Health Organization Surgical Safety Checklist (WHO SSCL) may be a breakthrough in surgical patient care.

The WHO SSCL was developed as part of the WHO's World Alliance for Patient Safety *Safe Surgery Saves Lives* initiative. The project was led by Atul Gawande, a Boston-based endocrine surgeon, and developed over several months through discussions and meetings with surgeons, anaesthetists, operating nurses, and technical experts from around the world. It aims to reinforce accepted safety practices, and foster better communication and teamwork in theatres, thereby improving patient safety.

The 21-point checklist takes just 120 seconds to complete, and is divided into three simple steps, as shown in Figure 1:

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The efficacy of the prototype 19-point perioperative checklist in reducing surgical morbidity and mortality was established in a pilot study performed in eight hospitals, from both well-resourced and poorly-resourced areas across the world.[1] The study demonstrated that the checklist led to a decrease in 30-day mortality, from 1.5% to 0.8% (p-value = 0.003), and in major in-patient surgical complications in adults undergoing non-cardiac surgery, from 11% to 7% (p-value < 0.001).

A recent study has suggested that the continuing problem of wrong-side surgery may be significantly prevented by the thorough implementation of the WHO SSCL.[2] The demonstrated benefits may be due to the fact that the checklist acts as a reminder and a compliance tool for multiple safety factors, which might otherwise be overlooked in the complex environment of a busy operating theatre. Improved adherence to, and timing of, prophylactic antibiotics, are key among the benefits, with an accompanying demonstrated reduction in surgical-site infections, as shown in initial and subsequent studies.[1,3]

Anaesthetic-related benefits for the patients include the explicit consideration of the risks of pulmonary aspiration, allergic reaction, a difficult airway, and significant blood loss. Less explicit benefits may result from discussion of intraoperative concerns and postoperative care with the members of the theatre team. The overall standard of care is aided by the confirmation that the machine check has been performed, that an oxygen-saturation probe is in place before the start of anaesthesia, and that any equipment-related concerns are identified before each case commences. In addition, the checklist serves as a prompt to recheck the items between cases, such as suction, vaporiser levels and circuit integrity.

The checklist has been made compulsory in several countries around the world and its use is growing, even where it is not mandatory, due to increasing recognition of its benefits. The Department of Health (DOH) in the Western Cape adopted the checklist in 2009, and the South African National DOH has made compliance with the checklist one of its measured standards in its national core standards audit of state hospitals.

The implementation of new processes in a complex environment, such as operating theatres, can meet resistance.

Our experience mirrors published descriptions of barriers to implementation, which include the following:[4,5]

- Unfamiliarity, as well as individual and organisational resistance to change
- Traditional hierarchical attitudes in theatres, which are likely to intimidate nurses in particular, and hinder their full participation
- Poorly completed forms, in which the boxes are ticked without engagement in the process. This is more likely to occur when the system is forced upon theatre staff, without adequate training
- The checklist being hurried through without adequate discussion
- Dismissive replies by personnel. These should not be allowed to go unchallenged
- The absence of key personnel during the time-out step.

Successful implementation of the WHO SSCL requires the four following essential elements:

- Informed local champions who lead by example, to develop

Figure 1: The World Health Organization Surgical Safety Checklist

a critical mass of "positive adopters" to lead the process. These should be sought among anaesthetists, surgeons and theatre nurses[4]

- Organisational leadership. Although the provincial and National DOH require the SSCL to be completed, experience in the Western Cape has shown that it is unlikely to be implemented or maintained, without the commitment of senior management and staff in each hospital
- Training. Members of staff need to have the process, and benefits of the checklist, explained through workshops and in-theatre training. A leader for each section of the SSCL needs to be identified. The WHO Implementation Manual provides good advice on how the checklist should be completed[6]
- Audits to monitor progress with the implementation, and the results of the audits fed back to the theatre users.

The WHO SSCL provides operating theatre staff with a validated and simple instrument, to improve safety culture in operating theatres. However, in order for the checklist to function effectively, recognition and leadership from health organisations, hospitals, surgeons, anaesthetists and nursing personnel, are required. Attempts in the Western Cape to get the scrub sister to initiate the time-out step have been largely unsuccessful. We believe that the anaesthetist may be the best person to direct the process in theatre.

If you, or a member of your family was having an operation today, would you like the surgical checklist to have been diligently performed?

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