Operating room safety in Australia – are we up to the world standard?

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Each year Australian healthcare workers perform more than 2.2 million surgical procedures1. Assuming that Australian surgical complication rates are similar to those of other developed countries it is likely between 3 to 17% of patients undertaking these procedures will incur a complication such as surgical site infection or even wrong surgery2. Also alarming is the likely number of occupational exposures to blood and body fluid including needlestick injuries (NSI) which Australian healthcare workers (HCWs) and in particular perioperative nurses, routinely sustain1. An early Australian study reported 2.53 NSIs per 1000 surgical procedures making NSIs one of the most significant occupational health and safety risks for operating room (OR) staff. The unresolved nature of these events, their high potential for harm and the substantial economic, financial and physical burdens they pose to healthcare consumers and providers compel us to better understand them.

Accordingly, the purpose of this paper is briefly describe their epidemiology and preventability with particular focus on the respective roles of regulatory agencies, professional associations, medical manufacturers and individual HCWs.

Researchers have been studying surgical errors for several decades and repeatedly human errors are implicated in almost all such events. Types of human error implicated include distraction, excessive and repeated human errors are implicated in almost all such events. They are repeated reports of HCWs experiencing substantial stress, fear, anxiety and lost productivity as a result of even the most simple of NSIs. Although safety engineered sharps devices (SEDs) have been directly linked to reductions in NSI risk in many different locations, there is limited evidence to suggest that SEDs are preventing NSIs in healthcare settings unlike many other developed countries. Australian health policy remains silent on a national mandate requiring their routine use3. It is likely that without sweeping policy and practice reform that includes compulsory SED use in the operating room, surgical staff will continue to sustain NSIs and suffer harm at a rate similar to that now experienced.

Like SSI and NSI, wrong site, wrong patient and wrong procedures are serious but preventable adverse events. In 2004/05 Australia reported 20 cases of wrong patient and 23 cases of wrong body part surgery12. Similar trends have been reported in subsequent years. Researchers conclude that most are associated with either failure to follow relevant policies and/or procedures, breakdowns in communication or anomalies in availability of patient information3. So serious is this problem on a global level that the World Health Organisation have recently developed and tested a simple but comprehensive surgical checklist which is recommended to precede every surgical procedure14. Used consistently and followed properly by all members of the surgical team, the checklist improves patient safety by identifying systemic errors such as:

- lack of intraoperative site verification when multiple procedures are performed by the same provider;
- ineffective handoff communication or briefing process;
- removal or coverage of site marks during skin preparation or surgical draping;
- failure to mark specific digits in hand or foot surgery; and/or
- incorrect labelling or placement of X-rays.

The use of a WHO-based surgical checklist is now required prior to all surgical events in Australia.

The impact of adverse events in surgery varies depending on several patient and procedure-specific factors however almost every adverse surgical event is associated with additional stress, cost and risk. Almost always, the event itself or its report in media results in reduced public confidence in the Australian health system. For some HCWs their unintended involvement in an accidental adverse event has lead to serious claims for compensation and even expulsion or deployment from their profession of choice. The impact on patients ranges from readmission, extended stay, additional treatment to death. Adverse surgical events almost always involve some degree of increased vulnerability and stress of devastation.

Reducing the occurrence of adverse events requires the support of government through policy reform and investment in safer healthcare and medical device regulation systems and in education and resources that will reduce or eliminate the risk of surgical error.
Government can also support the development of better systems for reporting and responding to adverse events within a reporting culture of non-puniation designed to enhance our understanding of events and their subsequent prevention. The promotion and support of a culture of patient safety within individual healthcare organizations are important functions for organizational leaders and individual clinicians. Professional associations such as ACORN, can also promote and support this type of culture among their members as evidenced in a unique international model developed by the Association of Operating Room Nurses (AORN) in the USA who, with the support of medical device manufacturers, supported members through the:

- development and distribution of a comprehensive Patient Safety Tool Kit;
- establishment of an anonymous error-reporting system to provide a safe forum for perioperative healthcare providers;
- establishment of a Hotline and Web site for HCWs to post questions, comments, suggestions and reports of surgical error;
- continual assessment of the impact of these measures and their further improvement; and
- opportunity to inform medical device research and development and improve suitability of future products\(^ {16-21}\).

This paper has briefly outlined the compelling need for HCWs to stop and ask themselves two important questions; firstly “am I, my organisation and my professional association doing all they can to prevent surgical error and improve patient safety?” and secondly, “have I and they fully explored all available options to prevent surgical errors through adoption of safety engineered sharps injury prevention devices, improved workplace ergonomics and proper use of the recommended “TimeOut” procedures prior to every surgical event?”. Until the answer to each question is and remains a resounding “Yes” our work is incomplete. We need to accept and respond to the reality that even though compared to developing countries Australian healthcare and surgery are relatively safe, every year Australians are placed at risk of surgical site infection, surgical sharps injury and wrong side, patient or procedure surgeries. However with appropriate systems, proper authority and adequate supply of innovative safety devices, these adverse surgical events are now largely preventable and we along with regulatory agencies, medical industry and professional associations, have an important role in spearheading and sustaining Australia’s initial surgical adverse event prevention efforts.

**Declaration of Conflicts of Interest**

Prof Cathryn Murphy is a casual consultant to governments, associations and device manufacturers throughout the world. She is employed by Queensland Health. This manuscript has been written independent of all of those relationships.
References

Professor Cathryn Murphy RN, PhD, recently conducted a Master Class for Ansell at the ACORN Conference in Darwin. Request for a detailed copy of her presentation on 'Operating Room Safety in Australia' by e-mailing ojansz@ap.ansell.com

INVITATION FOR ACORN FELLOWSHIP

The President and the Board of Directors now invites applications from the College membership for: ACORN Fellowship

ACORN Fellowship
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ACORN invites you to take this quiz:
Yes  No
☐  ☐ Are you a nurse eligible for registration in your state or territory?
☐  ☐ Are you a financial member of your individual state or territory Local Association?
☐  ☐ Do you have in your practice area of education, management, policy, research or clinical practice a demonstrated commitment to the goals of ACORN and be able to provide evidence of this?
☐  ☐ Do you encourage membership of ACORN?
☐  ☐ Do you have appropriate postgraduate qualifications in perioperative nursing or affiliated disciplines of nursing?
☐  ☐ Can you provide evidence of contributing to perioperative nursing by having published in journals, actively participated in ACORN or your Local Association?

If you answered yes to most of these questions, then you are eligible to apply for admission to the membership category of Fellow of the Australian College of Operating Room Nurses.

Details about the process for nomination, guidelines and criteria are contained in the ACORN administration manual (2007) or available from Mrs Kylee Carmody, ACORN Administration Assistant.
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