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# Task transfer: A survey of Australian surgeons on the role of the non-medical surgical assistant

## Abstract

**Background:** A non-medical surgical assistant is a clinician who provides perioperative care in the role of surgical assistant but does not possess a medical degree. This role has been practiced in Australia for more than 20 years.

**Aim:** This survey investigates Australian surgeons' attitudes and current practice regarding the role of the non-medical surgical assistant.

**Design/method:** Distribution of the survey was online in December 2015 by the Royal Australasian College of Surgeons (RACS). Data analysis was descriptive using online survey methodology and convenience sampling.

**Results:** In the private sector in Australia 105 respondents (35 per cent) use a non-medical surgical assistant. In the private sector in Australia, 188 respondents (64 per cent) were 'very supportive' or 'supportive to some degree' of the role, with 60 (20 per cent) 'undecided' and 48 (16 per cent) 'not supportive'.

**Conclusion:** The results illustrate there is support in the Australian surgical community for the role. The majority of respondents advocated contribution to governance of the role and curricula oversight by the RACS.

**Keywords:** non-medical surgical assistant, perioperative nurse surgeon's assistant, perioperative nurse practitioner, Royal Australasian College of Surgeons

## Introduction

The lines of demarcation between health care professionals were once clear. Gender, education and the ability to prescribe have historically differentiated doctors and nurses<sup>1</sup>. Privileges of medical practice protected by legislation and insurance reimbursement are no longer the sole domain of the medical doctor<sup>2</sup>. A need for 'non-physician practitioners' to meet changes in the health care environment has contributed to less defined lines of demarcation between health care professionals' roles<sup>3-6</sup>. In the light of alterations to the context of health care and availability of resources, registered

nurses (RNs) and allied health professionals are acknowledged as an under-used asset for safe and cost effective health care delivery<sup>7-10</sup>. Task transfer does not dilute medical care but does strengthen health care<sup>11</sup>.

## Background

The role of the non-medical surgical assistant (NMSA) is well established in the international setting with clinicians who are not medical doctors providing perioperative care<sup>12</sup>. An example of international support for the NMSA role is well illustrated in the United Kingdom (UK). The Royal College of Surgeons England (RCSE) has been proactive

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Every year ACORN offers \$20 000 to support research into perioperative nursing practice.

For more information please go to [www.acorn.org.au/education/grants-and-awards](http://www.acorn.org.au/education/grants-and-awards).

# Reshaping perioperative nursing practice to get the job done: A constructivist grounded theory study

**Keywords:** perioperative nursing, patient safety, rule breaking, constructivist grounded theory

## Introduction

An estimated 234 million operations are performed in hospitals each year and complications of surgery are common and often preventable<sup>1</sup>. The rates of complications vary between studies with reports of perioperative death rates of between 0.4 and 0.8 per cent and rates of complications between 3 and 17 per cent<sup>1-5</sup>. Adverse events can lead to patient disability, death, or increased length of stay, imposing a significant burden on the health care system, patients and their families.

Perioperative nurses have a key role in securing patient safety and preventing mistakes<sup>6-15</sup> and these are recognised as both the nurses' responsibility and within their locus of control<sup>15,16</sup>. Research and evidence-based actions to minimise the risk of patient harm inform the standards developed by the Australian College of Perioperative Nurses<sup>17-28</sup>. These standards are closely aligned with similar standards in the UK, US and Canada and represent the accepted standard of professional practice for perioperative nurses in Australia.

Notwithstanding the actions taken by the perioperative nurse and the availability of standards, policies, procedures and protocols that support practice, incorrect surgical count incidents continue to occur<sup>29-31</sup> – patients sustain injuries from poor positioning<sup>32-35</sup>,

the inappropriate management of diathermy results in burns<sup>36-38</sup>; surgical fires whilst rare, do strike<sup>39-42</sup>; specimens are mislabelled or go missing<sup>43,44</sup>; incorrect implants are selected and inserted<sup>26</sup>; patients suffer surgical site infections<sup>45-51</sup>; and wrong patient, wrong procedure, wrong site surgery remains a significant issue<sup>52,53</sup>.

Factors that contribute to working in ways other than following rules and standards in the perioperative setting include emergencies, high workloads, poor workflows, productivity pressures, resource availability, deficient communication, inability to deliver timely care, unfamiliarity with technology, and lack of awareness of policies or poor understanding of content<sup>54</sup>. Several studies have found deviations or violations employed as ways of working around rules, policies and procedures<sup>54,55</sup>. The sheer volume of policies and guidelines; multiple rules on the same topic; naming, accessibility, length and complexity; poor version control and the trivial nature of some policies may have the unintended consequence of reducing compliance<sup>56</sup>.

While there are standards and rules that inform and govern practice, nurses at times adopt ways 'other' than following the rules 'to get the job done'<sup>54,55</sup>. These ways of working are variously identified as violations, deviations, rule-breaking,

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# Recommended practices for the management of surgical smoke and bio-aerosols for perioperative nurses in Thailand

## Abstract

Evidence-based guidelines for the management of surgical smoke and bio-aerosols for perioperative nurses are necessary to improve the quality of care for patients and to ensure a safe environment in operating rooms. A survey of 377 operating room (OR) nurses throughout Thailand was used to assess the incidence of health problems related to surgical smoke exposure, as well as the current practices for these substances. A high percentage of OR nurses reported little or no use of smoke evacuation tools such as central smoke evacuation systems (100 per cent), portable smoke evacuation units (82 per cent), wall suction with inline filters (56.5 per cent) or laparoscopic evacuation/ filtration systems (63.7 per cent) during surgery. Most of the perioperative nurses suffered from headaches and/or sore throats. Due to the wide range of deleterious health issues that arise from exposure to surgical smoke, it is critical that perioperative nurses closely adhere to best practice guidelines for minimising this environmental hazard.

**Keywords:** recommended practices, management, surgical smoke, perioperative nurses

## Introduction

The National Institute of Occupational Safety and Health (NIOSH) and the Centers for Disease Control and Prevention (CDC) have studied electrosurgical smoke at length. Smoke and bio-aerosols are routinely produced by surgical instruments including lasers, electrosurgical units, radiofrequency devices, ultrasonic devices and power tools. Plume and bio-aerosols contain odour-causing and odourless toxic gases and vapors such as benzene, hydrogen cyanide and formaldehyde, as well as dead and live cellular debris (including blood fragments), bacteria and viruses<sup>1-9</sup>. The risk of inhaling surgical smoke and bio-aerosols has been linked to headaches, respiratory problems, eye and skin irritation, infection<sup>1,2</sup> and mutagenic and carcinogenic potential in patients, perioperative

nurses, anesthesiologists and other operating room personnel<sup>1,4,10-12</sup>.

The hazards of surgical smoke and bio-aerosols have been an environmental exposure concern for many years. The risks from inhalation and the resultant health disorders, however, have not led to mandatory regulations to prevent exposure in the clinical workplace or operating room. Perioperative nurses and other OR personnel have long suffered from inhalation of surgical smoke or plume. Unprotected workers remain at risk of irritation to the upper respiratory tract and eyes, as well as additional reactions from these chemical agents. Previous studies indicated that common complaints associated with exposure to surgical smoke include headaches, watering eyes, cough, burning throat, nausea, drowsiness, dizziness, sneezing and rhinitis<sup>13</sup>. In addition, previous studies have implicated surgical smoke in

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# Inadvertent postoperative hypothermia prevention: Passive versus active warming methods

Temperature management within the perioperative environment is an imperative component of and a standard of practice in providing effective patient safety and comfort. This literature review will explore the evidence surrounding the use of active and passive warming mechanisms in the prevention of postoperative hypothermia. Many studies have recognised the adverse consequences of inadvertent postoperative hypothermia, hence the rapid advancement in education about and use of equipment and devices for its prevention. Evidence-based literature was reviewed to provide rationales and recommendations for strategies to prevent postoperative hypothermia. This literature review will potentially guide clinicians through the use of effective devices to allow for informed choices to provide appropriate patient care.

Inadvertent postoperative hypothermia (IPH) is defined as a core body temperature lower than 36° C. IPH usually occurs in response to general or regional anaesthesia and transpires due to the vasoconstriction mechanism responsible for maintaining temperature becoming inhibited on administration of anaesthetic agents. Not only is anaesthesia responsible for a 20 per cent reduction in metabolic heat production but also environmental factors such as the cold operating theatre, body exposure and lack of pre-warming for flushing solutions affect the incidence of IPH<sup>1</sup>. Some authors have reported that the incidence of postoperative hypothermia morbidity can be as high as 50 to 90 per cent<sup>2-4</sup>. Perioperative nurses have a primary role in caring for and monitoring patients within the Post Anaesthesia Care Unit (PACU) and it is imperative that they gain increased knowledge of and understanding about the management of IPH to improve patient outcomes.

## Background

Various studies have proven that IPH can lead to patients experiencing a variety of physiological changes. These changes can include cardiac arrhythmias leading to cardiac arrest, increased mortality<sup>5</sup>, infection and complications of the surgical wound<sup>6</sup>, prolonged bleeding<sup>7</sup>, and increased discomfort and shivering<sup>8</sup>. According to Giuliano and Hendricks<sup>5</sup> around 70 per cent of surgical patients will experience IPH. As a consequence of complications related to IPH, hospital stays may be prolonged resulting in increased treatment

costs for surgical site infections (SSI), increased transfusion needs and extended PACU stays<sup>9</sup>. Temperature management therefore can be cost efficient; however, it is the PACU nurse's role to correctly identify and utilise appropriate warming strategies to provide the patient with a safe and effective perioperative journey<sup>10</sup>.

This literature review extensively critiqued and analysed the different ways of managing inadvertent postoperative hypothermia in the postoperative area. This review will help to identify the most cost-

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# Is your graduate nurse suffering from transition shock?

## Abstract

The term ‘transition shock’ is a relatively new concept used to describe the experience of moving from the comfortable and familiar role of the pre-registration nursing student to the professional registered nurse (RN)<sup>1</sup>. The initial and most dramatic stage in this theory of role adaption occurs over the first four months of professional practice<sup>1</sup>.

Transition shock has foundational basis in Kramer’s theory of ‘reality shock,’ which describes the phenomenon of studying for many years to practice a particular role, and then finding the professional reality is different than expected<sup>2</sup>. Reality shock has four phases – the honeymoon phase, the shock phase, recovery and resolution. Dr Judy Duchscher’s theory of transition shock penetrates beyond the professional aspects of shock<sup>1</sup>.

Duchscher, whose research into this issue in nursing spans over ten years, states that ‘nurses often identify their initial professional adjustment in terms of the feelings of anxiety, insecurity, inadequacy and instability it produces!’ Few would argue that the first few months of a graduate RN’s career are the most stressful<sup>3</sup> – consolidating the theory outlined by Kramer.

This paper seeks to define transition shock and outline signs and symptoms which may be exhibited by the graduate nurse. Potential solutions to mitigate the effects of the shock phase on the perioperative graduate will be extrapolated. It is hoped that perioperative nurses will have an improved ability to recognise the issue and, with greater awareness and understanding, potentially be able to improve support for perioperative graduates to ensure a smooth path to successful transition and, in the long term, increase retention of graduates in the profession.

In offering solutions, the logistical issues affecting education and support in the operating theatre are highlighted and issues for potential research are recognised.

**Key words:** transition shock, graduate nurse, preceptor, stress

## What is transition shock?

Over ten years of research, Duchscher proved that transition to professional practice has a significant emotional toll on the graduate nurse. She cites statements such as ‘drowning’ ‘terrified’ and ‘scared to death’ alongside feelings of exhaustion in trying to ‘stabilise the emotional roller coaster’ the new graduates find themselves on in those first months<sup>1</sup>. Her research showed that graduates nurses fear being ‘exposed’ as incompetent, fear providing unsafe care and causing harm inadvertently,

and fear not being able to cope with their responsibilities. Ultimately they fear rejection by new colleagues<sup>1</sup>. These feelings relate directly to the new graduate’s level of confidence and self-image as a professional<sup>1</sup>.

Duchscher’s theory elucidates how the graduate’s role, responsibility, relationship and knowledge foundations impact on the intensity and extent of this transition period<sup>1</sup>. Jewel<sup>3</sup> further states that during this time feelings of self-doubt, inadequacy and exhaustion lead

## Innovation – a worthwhile journey

*Conflict of interest statement: This article was written on behalf of Scrubit, in which I have business and/or financial interest, and may lead to its implementation in Australian hospitals.*

**Innovation, literally, means ‘the introduction of something new’. However, the term implies an improvement or change for the better and innovation is important in the medical sector – particularly in the field of nursing – where so many challenging issues are present. In this article, Beth Wozniak shares her experience of innovation – the trials, tribulations and victories on her journey from seeing a need as a graduate nurse to seeing the software system she developed being used in hospitals.**

People often ask me what gave me the idea for my innovation. The critical moment for me came during my graduate year. I was working as a scrub nurse and noticed that the crucial process of surgical set-ups relied on printed word documents and hand-written notes. I saw nursing staff print off the list of required equipment, or ‘preference card’, and take a trolley to collect the items from the storerooms located throughout the operating theatre complex. As they collected an item or instrument they crossed it off the list. When an item was unavailable they circled it. It seemed like an archaic and fragile system that was held together only by the dedication of nursing staff.

I could see that despite nurses’ efforts, the system was inefficient, difficult to maintain and highly susceptible to error. This was my light-bulb moment – when I had an idea for an app that would improve surgical set-ups. However, I knew that innovation would not just happen, that it would be a long and probably difficult process.

The first step was to initiate conversations with my colleagues, and I am grateful these were well received. If other nurses had not

been interested or had reacted negatively, I may not have embarked on this journey. However, many agreed that the current processes were in dire need of an overhaul. This was an excellent first step. It wasn’t just a problem I alone perceived – it was a concern that many shared and almost everyone was interested in seeing a change to make practices improve. It was also comforting to know that the issues and problems I was seeing in theatre practices were not perceptions that related solely to my level of experience.

From these conversations and my own observations, I identified a number of issues related to the set-up system. The printout often did not list items by their correct names and did not include reference numbers or location. This meant it could take nursing staff excessive amounts of time to complete the task and resulted in unnecessary waste when unused or incorrectly opened equipment was then discarded. It also resulted in nursing staff having to leave the theatre to retrieve missing items or exchange incorrect ones.

As well as lacking information about required equipment it was also not easy to update preference

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cards using the printout system. As I’m sure you know, it is essential that preference cards are reviewed frequently and updated at least monthly, or as soon as an alteration is requested. With printed lists, nurses must rely on a system of hand-written notes or their memory to update preference cards, which leads to preference cards being updated incorrectly or updates being missed altogether.

With these issues in mind, I spent eight months developing my idea and, once I was fully convinced that the idea had sufficient merit, I began searching for a technical expert. This search led me to meet with software developers Lloyd Davies and Paul Fisher, who shared my desire to innovate. They too were astounded by the surgical set-up process. We got together to brainstorm, test, iterate our ideas and develop a prototype. During this time I found myself happily immersed in the ‘start-up’ world, a world where I was forced to learn quickly and deliver beyond my level of experience or pay grade. But I didn’t mind – I actually enjoyed it. I was fundamentally combining my love of nursing with a crash course in business while gaining skills that would take most people years to acquire in any other environment.

The next step in my story saw me return to my workplace with the prototype of the software we had named ‘Scrubit’. Initial conversations were commenced at this point between hospital management, hospital group senior management and select theatre staff. We discussed their perceived problems with the current system and our proposed solution to those problems. We agreed that the solution was of



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## Education report

I realise it is already March, but this is my first opportunity to wish you all a happy new year and every best wish for a productive, happy and safe 2018.

ACORN has an exciting 2018 educational program lined up for you. The highlight will be the biennial ACORN conference which for the first time will be combined with the Asian Operating Room Nurses Association (ASIORNA) conference. This event is expected to attract over 1500 delegates and 100 trade partners, our largest ever world-class research and education event. The conference will be held from May 23<sup>rd</sup> to May 26<sup>th</sup> in Adelaide. The new Adelaide Conference Centre is stunning and will provide a wonderful venue for this event. Early bird registrations close on Monday 26 March 2018, so may I suggest that you all get in early and not only register for the conference but also request this time off work. If you do attend the conference, I would be very happy if you would like to make yourself known to me as I am always interested in your educational ideas.

### ACORN Webinars

We now have three types of webinars: our education stream, company sponsored webinars and standards webinars. In 2017, we presented nine webinars which are recorded and available to watch from the member area of the ACORN website. After a year, the presenters are contacted to ascertain if the content of their now 12-month-old webinar is still current or out of date. If it is considered that information is no longer contemporary, the webinar will be removed from the website. Apologies if some of your favourites have been removed; however, it is our aim to provide the most up-to-date evidenced-based education, and certainly I am happy to provide updated webinars on the same subject should that be requested.

### Educational webinar needs survey

My objective for our webinars is to provide members with education and professional development topics that are both valuable and interesting. I

also recognise that members have requested to be consulted on the direction of ACORN education so I am very keen to have your input on the topics of need and interest. You will have received an email from ACORN earlier in February inviting you to participate in the '2018 Educational webinar needs survey'. In order to actually meet your needs, I really must know the types of presentation topics, subject matter and issues you, the members, may be interested in or facing in the workplace.

Obviously, there are differences in all workplaces – different procedures, and different surgeons' and anaesthetist preferences etc. – so some workplace education is best provided at the coalface. However, what I hope to do again this year is to collate your suggestions and ideas and provide presentations with a theoretical framework, presented by experienced colleagues, which will assist your practice as perioperative nurses.

It only seems like yesterday when the last survey was conducted, but it was actually over two years ago. I appreciate that you are busy but if you have not already done so, I would be grateful if you could take the time to complete this short survey by 11 March 2018.

### Member benefits

One of our member benefits has been that ACORN members can apply for scholarships that are awarded by the University of Tasmania (UTAS). There is sometimes a misconception that these are ACORN scholarships, but they are not. You may have received an email late last year informing you that UTAS will be continuing their scholarships to ACORN members but, due to changes in Commonwealth government funding, will now offer a 75 per cent reduction on HECS fees in 2018 which will decrease to 50 per cent in 2019. UTAS scholarships will cover courses in 'Perioperative nursing' and two new streams, 'Leadership in practice' and 'Clinical nursing and teaching'. The 'Anaesthetics and recovery' stream will no longer be available to ACORN members at the certificate level but if members would like to learn more about this speciality they are welcome to take the anaesthetics and recovery subjects as elective subjects at the graduate diploma level. If you are interested in scholarships for the 'Anaesthetics and recovery' stream at a certificate level, please contact UTAS directly for more information.



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## An overview of the ACORN Standard 'Safe patient positioning in the perioperative environment'

In a landmark publication, *To Err is Human*, experts estimate that as many as 98 000 patients die each year from medical errors, highlighting patient safety as a key area for improvement in health care<sup>1</sup>. This is reinforced in the National Safety and Quality Health Services Standards<sup>2</sup>. Correct patient positioning is a critical part of any surgical procedure yet is often overlooked despite the risk of iatrogenic injuries that are reported as a result of improper positioning<sup>3</sup>. Incorrect patient positioning can have a profound effect on patients, causing postoperative distress and increased morbidity, with nerve injuries the second most common litigation of all anaesthesia-related medico-legal claims reported, according to the ASA Closed Claims Project database<sup>4</sup>.

Although there are a number of standard positions commonly used during surgery today, based primarily on the planned procedure<sup>5</sup> and surgeon preference<sup>6</sup>, it is interesting to note that during the 18<sup>th</sup> century many procedures were performed with the patient positioned in the upright position using operating chairs. While this position provided good access to the upper body the increased risk of blood loss required the patient to have a strong constitution<sup>7</sup>. With advances in anaesthesia and surgical techniques, core surgical positions have been adapted and the decision on how to best position the patient to facilitate activities during surgery is based on identifying the patient's anatomical and physiological alterations, the type of anaesthesia and procedure type so that the positioning is adequate and does not result in postoperative complications<sup>8</sup>.

By 2057, the predicted increase in the number of Australians aged 65 and over will place increasing pressure on Australia's health sector and presents unique challenges for health care

professionals. Although many chronic conditions require surgical interventions, with comorbidities affecting the patient's recovery<sup>9</sup>, age itself should not be a determinant of whether surgery should be avoided in older patients<sup>10</sup>. Providing a blueprint for correct patient positioning during surgery has become increasingly important to avoid recognised patterns of injuries which are linked to specific surgical positions<sup>6,11</sup>. While positioning the patient for surgery is a core feature of patient care in the perioperative setting – a feature that requires a balance between providing adequate surgical access and minimising the risk of injury<sup>11</sup> – the patient's physiological tolerance is a vital aspect that should also be taken into consideration.

Positioning the patient for surgery is considered the role and responsibility of all members of the perioperative team to protect the patient from positioning-related injuries<sup>5,12-15</sup>. Therefore, a good understanding of the considerations and consequences of patient positioning that impact on the

postoperative care of surgical patients is fundamental in providing safe patient care during their admission to the operating suite<sup>6</sup>.

There are a number of factors that contribute to position-related injuries. These are classified as patient factors (e.g. gender, obesity and comorbidities), mechanical factors (e.g. shearing, stretch and surface contact) and anaesthetic factors, including hypoxia, hypotension and hypothermia<sup>11</sup>. Types of injuries reported in the literature include injuries to peripheral nerves and musculoskeletal structure, pressure injuries, compartment syndrome and ocular injuries. It is therefore important that modifiable factors that have the potential to decrease preventable errors related to patient positioning in the operating suite are identified<sup>16</sup>.

The purpose of the ACORN Standard 'Safe patient positioning in the perioperative environment' is to provide direction for safe manual handling during patient transfer and safe patient positioning during surgery, and to inform the development of policies and procedures for reducing the risk of patient injuries within the perioperative environment.

The standard has been updated to include the following, according to current literature related to safe patient positioning:

- conducting a preoperative and postoperative assessment specific to patient positioning