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A selected international appraisal of the role of the Non-Medical Surgical Assistant

Introduction

The term Non-Medical Surgical Assistant (NMSA) is not widely acknowledged in Australia but is used to describe the role of clinicians without a medical degree or qualification who provide clinical services during the perioperative phase of a patient's journey. The role of NMSA has many configurations internationally and not all NMSA roles arise from a nursing platform. To date, the implementation of many Advanced Practice Nurse (APN) roles have lacked educational support or professional direction¹. The literature supports the standardisation of APN roles where they are regulated by the profession and attained through an appropriate tertiary level qualification^{2,3}. In this paper, we review characteristics of the roles of the NMSAs in the United States of America, Canada, the United Kingdom and New Zealand, countries that have similar standards for practice to Australia and provide a similar standard of health care. We will discuss implications for perioperative nurses and make recommendations for a future approach which formalises the role of the NMSA for the Australian context.

Background

While the title NMSA is not globally accepted, the role is typically associated with a clinician who delivers care that would otherwise be provided by medical practitioners. Care may incorporate elements of preoperative assessment and postoperative care encompassing pain management, wound care and discharge planning. The intra-operative phase cares for patients when they are highly vulnerable. This care includes application of surgical skills, dexterity and technical knowledge of anatomy, instrumentation and equipment^{4,5}.

The increase in international discussion about the role of the NMSA can be credited to factors such as changes in health care workforce regulation (e.g. European Working Time Directive limiting training doctors to a 48-hour week)^{6,7}, medical professionals seeking a better work-life balance, or the feminisation of the medical profession leading to an

increase in the casualisation of the workforce^{8,9}.

Method

Aims and objectives

The objective of this paper was to investigate the international NMSA role and differentiate levels of autonomy and professional recognition. These elements can then be applied to the NMSA role as it evolves in Australia.

Scope

The literature was searched for international papers that discussed:

- role titles and descriptions of NMSAs
- prerequisites for entry into programs for NMSAs
- programs of education including accreditation standards
- standards of practice for NMSAs
- educational attainment and qualifications required for NMSAs

- professional governance, regulation and representation for NMSAs
- role differentiation between NMSAs, nurses and other health professionals
- autonomy and scope of practice issues.

Search strategy

A search of the databases CINAHL, Medline, Web of Science, Proquest and Pubmed was conducted. Papers were required to be published in English after 1990. Examples of terms searched for include:

- non-medical surgical assistant
- Perioperative Nurse Surgeon's Assistant
- Registered Nurse First Assistant
- Registered Nurse First Surgical Assistant
- Surgical Care Practitioner
- Physician Assistant/Associate
- Nurse Practitioner
- Advanced Scrub Practitioner.

A search for grey literature was conducted on the role of the NMSA via professional associations and regulatory organisations for relevant documents such as curricula, position descriptions and position statements.

A third element of information gathering was to contact international NMSAs currently working within these roles or within the associations governing the roles. By way of a snowball effect, additional contacts were established from the United States of America (USA), the United Kingdom (UK), Canada and New Zealand. Approval from the University of Queensland's Human Research Ethics Committee (Approval No. 2015000084) was granted for the wider Higher Research Degree project.

Results

Findings of the review are presented via a summary of the NMSA role internationally with further discussion grouped according to each of the countries of focus in this review.

An international overview of the NMSA

The role of the NMSA is well established internationally. Terms to describe NMSAs can be divided into nursing specific and non-nursing specific role titles. For example, Nurse Practitioners and Registered Nurse First Assistants are terms exclusively used to describe a nursing role which may mirror an NMSA role. Roles not exclusive to nurses but not excluding them are Physician Assistants/Associates, Surgical Care Practitioners, Surgical First Assistants, Operating Department Practitioners, Certified Surgical Technologists and Certified Surgical First Assistants. Some of these roles appear in all countries while some are limited to a single country. The Australian roles of Perioperative Nurse Surgeon's Assistant, Nurse Practitioner and Physician Assistant were also investigated. Table 1 outlines a summary of the roles investigated.

United States of America

It is important to note that, in the USA, there is a degree of ambiguity around processes of licensure, certification and registration of NMSAs. While registration may appear to be a comprehensive process, it is the most laissez-faire form of regulation in this health care system. Certification and licensure both require the applicant to pass a 'board-approved education program and examination'; however, certification in order to practice may not be mandatory¹⁰.

Of the NMSA roles in the USA, the roles of the Physician Assistant (PA) and Nurse Practitioner (NP) have been positively represented in the media. In 2015, *US News and World Report* cited the NP role as the second-best career of the year with PA coming in at number ten¹¹. As of 2013, there were over 100 000 practicing NPs and over 80 000 practicing PAs in the USA. While not all of these practitioners are in the perioperative context, they are well-represented in this area. In the US, NP programs started as a certificate qualification but are now rigorous and standardised at master's level¹². There is a clear movement in the USA to further strengthen NP programs to a professional doctorate level of education. NPs must pass a licensure exam to practice and in the USA are autonomous in their practice ordering investigations, treatments and pharmaceuticals¹³.

Typically, entry into the PA program stipulates a graduate degree as a minimum entry requirement in the USA, although not necessarily with a health care emphasis¹⁴. Four PA organisations within the USA have collaborated to produce national PA competencies^{15,16}. Licensure is given by individual states for services related to ordering investigations, prescribing, treatment and billing. All USA states and territories (except Puerto Rico) have laws regulating PA practice¹⁷.

Registered Nurse First Assistant (RNFA) is another role similar to NMSA, with most RNFAs working under the direction of a surgeon or health care provider^{18,19}. All state boards recognise this role but certification is voluntary^{20,21}. Scope, remuneration, regulation and legislation are inconsistent from state to state²². This role does not possess the same level of autonomy as the NP and PA.

Role	Country	Year established	Master's degree	Title protection	Standardised curriculum	National regulation	Assessment and diagnosis	Order investigations	Prescribe
Nurse Practitioner	USA	1960s	Y	Y	Y	Y	Y	Y	Y
	CA	1967	Y	Y	N	N	Y	Y	Y
	UK	>20 years	N	N	N	N	Y	Y	E
	NZ	1998	Y	Y	Y	Y	Y	Y	Y
	AU	2000	Y	Y	Y	Y	Y	Y	Y
Physician Assistant	USA	1967	Y	Y	Y	Y	Y	Y	Y
	CA	2006	N	Y	N	N	N	N	Y
	UK	2004	Y	N	Y	N	N	Y	N
	AU	2011	N	N	N	N	Y	Y	Y
Registered Nurse First Assistant	USA	1989	Y	N	N	N	N	N	N
	CA	1990s	N	N	N	N	N	Y	N
	NZ	2014	N	N	N	N	N	N	N
Certified Surgical Technologist / Certified Surgical First Assistant	USA	1969	N	N	N	Y	N	N	N
Surgical Care Practitioner	UK	1980s	Y	N	Y	Y	N	Y	E
Surgical First Assistant	UK	2003	N	N	N	Y	N	N	N
Operating Department Practitioner	UK	1970	N	N	N	Y	N	N	N
Perioperative Nurse Surgeon's Assistant	AU	2001	N	N	N	N	Y	N	N

Table 1: Overview of the education and autonomy of the Non-Medical Surgical Assistant role in Australia (AU), Canada (CA), New Zealand (NZ), the United Kingdom (UK) and United States of America (USA)

Y = Yes, N = No, Extra = Extra Education Required

A dual role has emerged in the USA of the Acute Care Nurse Practitioner / Registered Nurse First Assistant (ACNP/RNFA). This gives the practitioner the legislative authority to practice in an autonomous capacity and the required technical skills to first assist in the intraoperative phase¹⁹.

Roles unique to the USA are the Certified Surgical Technologist (CST) and Certified Surgical First Assistant (CSFA). These roles do not require any tertiary or nursing qualification for entry. Vocational qualifications vary from certificate to diploma to associate degree^{20,23}. Scope of practice of these roles can include, scrubbing or instrument 'nurse', first or second assistant or circulating duties^{23,24}. The majority of health care institutions require certification as a

condition of gaining credentialing as a Surgical First Assistant²³.

Canada

Three NMSA roles were identified in Canada: Physician Assistant (PA), Nurse Practitioner (NP) and Registered Nurse First Assistant (RNFA). The only role not requiring candidates to be Registered Nurses is the PA.

While about 50 per cent of PAs work in primary care, the remainder work in specialty areas such as surgery²⁵. All four PA programs offered in Canada are accredited through the Canadian Medical Association Conjoint Accreditation process. PAs and NPs in Canada are able to prescribe medication^{26,27}.

The title of NP is protected in Canada and educationally they are prepared at master's level plus internship. NPs

practice independently within the perioperative area²⁷.

Unlike PAs and NPs, RNFAs in Canada do not have a nationally standardised educational requirement, are not recognised as Advanced Practice roles and are governed as Registered Nurses²⁸. The RNFA is awarded a 'certificate of completion' or graduate certificate at the conclusion of the programs currently offered in Canada²⁹.

United Kingdom

Roles identified in the UK include Surgical Care Practitioner (SCP); Surgical First Assistant (SFA), formally known as Advanced Scrub Practitioner; Scrub Practitioner; Operating Department Practitioner (ODP); Physician's Associate (PA), which is synonymous with Physician Assistant in other countries; and, finally, the Nurse Practitioner (NP).

The only NMSA role in the UK that is exclusive to nurses is the NP role^{5,7,13,27,30–33}. Most roles require a nursing or allied health background with the exception of the ODP which does not require any formal tertiary qualifications but does require school achievements for entry³³. NPs and SCPs in the UK can prescribe medication and order investigations, and embody a more autonomous, care provider. However, the program for nurses to attain prescribing rights is rigorous and only undertaken if a need for these rights can be demonstrated³⁴. PAs in the UK are currently awaiting legislation to be passed for permission to prescribe²⁷. It is unclear how many PAs in the UK work in a perioperative role although one of the university websites does offer 'surgery' as a potential employment opportunity.

The ODP has evolved and changed names over a long period of time. Historical accounts of this role from the 18th and 19th century used titles such as 'handlers' or 'surgeymen'. In 1947 St Thomas's started training 'theatre technicians'; however, the Lewin Report (1970) on operating theatre personnel shortages was a crucial event for the development of ODPs³⁵. With additional education, ODPs do work as first assistant to the surgeon³⁶.

Unfortunately, the title of NP is not protected in the UK and this leads to ambiguity with scope of practice being dictated by job description rather than national competencies or standards for practice. There is no national minimum educational requirement or set curriculum and so education supports the NPs specialisation to fill clinical gaps^{13,27}. It is difficult to establish what volume (if any) of NPs in the UK work in the NMSA role.

The Perioperative Care Collaborative (PCC) in the UK has identified three tiers of NMSAs⁵. In contrast to the role and curriculum of the NP in

the UK the SCP role and curriculum is highly structured with the Royal College of Surgeons contributing to the development of this role and endorsing the curriculum^{5,37,38}. A master's degree is now accepted practice for the SCP role^{7,39}. The SCP has a more invasive role than the role of the SFA. The SFA does not perform any surgical intervention and works under direct supervision of the surgeon⁴⁰. The PCC strongly recommends that entry to all academic programs for the roles of SCP and SFA be limited to applicants who are registered health care professionals but not exclusively nurses. Arguably, the most limited scope of practice of an NMSA is that of the Scrub Practitioner. This role is equivalent to an instrument nurse who provides limited surgical assistance for minor cases only⁵.

New Zealand

The role of the NMSA is at an early stage in New Zealand. A pilot initiative involving the role of the Registered Nurse First Surgical Assistant (RNFSA) was conducted in 2010–2011 and evaluated in 2011–2012. As a result of this evaluation, one course which is recognised by the Nursing Council of New Zealand is conducted at the University of Auckland. In 2015 this was offered as a three-phase graduate certificate, graduate diploma and master's degree specialising in Surgical Assist Nursing⁴¹. The framework and standards will be implemented nationally. Graduates have no facility to prescribe or order investigations. The role will be mostly performed in the intra-operative phase⁴². A pilot initiative and evaluation was also conducted for the role of Physician Associate and concluded in early 2015⁴³.

Nurse Practitioners (NPs) in New Zealand must have completed a Nursing Council approved master's degree^{26,27,34}. The perioperative NP's scope extended across a continuum

of all perioperative phases⁴². The NP in New Zealand has role title protection by law and practices independently. Practice incorporates prescribing medication, interventions and treatments^{27,34}.

Discussion

Of the two roles exclusive to nursing – NP and RNFA – the NP role is the only one found in all countries discussed in this paper. In all of the countries except the UK, the NP title is protected, the curriculum is delivered at master's level and practitioners are required to demonstrate an expanded scope of practice across a range of practice domains including clinical assessment and diagnosis, testing, prescribing and treatment.

The role of RNFA is found in the USA, Canada and NZ. In contrast to the NP in these countries, the RNFA does not possess title protection. The education programs and the curriculums are not standardised at a national level and the clinician does not work in an autonomous manner.

Physician Assistants/Associates are represented in the USA, Canada and the UK but the role is most successful in the USA. In the USA, unlike Canada and the UK, the educational program is delivered at master's level with a standardised curriculum and national regulation. PAs in the USA can assess, diagnose, order investigations and prescribe medication; PAs in Canada and the UK cannot.

The SCP role, which only exists in the UK, is the only other role that has a master's level of education, a standardised curriculum and national regulation but the SCP does not possess the same autonomy as the NPs and PAs as previously explained.

Implications for Australia

The salient points from this review of the NMSA is that a tertiary education at master's level, a

standardised curriculum and national regulation are the building blocks of an autonomous and professionally recognised NMSA role. The importance of education in underpinning role development and clinical safety is well established in the literature⁴⁴⁻⁴⁹.

In conjunction with these building blocks, the common denominator that the truly autonomous roles possess is title protection.

While scant literature suggests that only registered nurses are fulfilling the role of the NMSA in Australia, there has never been an audit of this role in Australia^{1,50-53}. Ensuring the safe practice of clinicians is vital to the perioperative nursing profession⁵⁴. As the role of NMSA is gaining momentum in Australia it would be timely to establish an overview of the personnel who perform this role with a view to developing a nationally agreed curriculum and standards from which role evolution can occur in a coherent, cohesive manner.

Conclusion

Internationally, the roles performed by NMSAs are as distinct as the titles they possess. The various scopes of practice and degrees of autonomy that practitioners have is supported or constrained by legislation as well as policies and procedures that are institutional, state or nationally founded. What is highlighted in the literature is the divergence between the professional privileges and level of autonomy enjoyed by roles that have professional standing, supported by a standardised curriculum, title protection, national legislation and peak body recognition and governance, compared to the roles that lack these supports.

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