JOGM
Journal of Global Medicine

REFLECTIONS

Reflections of an allied health professional in a surgical world

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Since the early specialisation of nurses working solely in theatre at the John Hopkings Hospital, Baltimore, USA in 1889 [1], the roles of nurses in theatres have evolved over the last 130 years. Apart from the traditional roles of theatre nurses, the roles of more senior nurses included assisting surgeons in those early years [1]. Their roles continued to evolve, and in the middle of the last century, the first documented nurse-surgeon was trained by an American missionary surgeon to perform obstetrics surgery in sub-Saharan Africa in the 1950s [2].

The nurse-surgeon performed 278 caesarean sections in 18 months with 0.72% mortality rate in Kawara Hospital in Zaire in the 1950s [2]. From the 1950s to early 2000s, nurse-surgeons have been used increasingly in many countries in African, Europe, Asia, North America and in most surgical and endoscopic specialties [3]. The first trained nurse endoscopist in the United Kingdom was reported in 1998 [4]. After completion of training, the nurse endoscopist's first 215 flexible sigmoidoscopy cases were reviewed. A total of 93% of the examination were judged successful and pathology was identified in 51%. All significant pathologies were identified, while barium enema failed to identify pathology in 12.5%. There were no complications [4].

In a scoping review of nurse-surgeon practice in 26 countries, over 5.5 million surgeries were performed by nurse-surgeons from simple biopsies to laparotomies with outcomes on par with physicians. A total of different types of surgeries in 24 specialties and subspecialties were performed by nurse-surgeons [5]. Major operations included appendicectomies, laparotomies for ectopic pregnancy, and Caesarean sections, but most of the procedures were of intermediate categories [5]. All these nurse-surgical procedures were performed in high-income, upper-middle-income and low- and lower-middle income countries [5]. Complications were comparable to those of surgeons and in the few articles that reviewed patients' satisfaction, patients were satisfied with nurse-surgeons performances [5].

In the United Kingdom

In the United Kingdom, the titles and terminology of the roles have evolved over time, from Operating Department Assistant in early 1970s to Theatre Practitioner in the late 1980s [6]. In the late 1990s, the Association for Preoperative Practice began to define the role, and in 1993, the first surgical care practitioner (SCP) was appointed in Oxford [7]. The SCP had trained in the USA where the practice predated the UK experience by over 20 years [7]. The support infrastructure for this role came in the form of the National Association of Assistants in Surgical Practice (NAASP) in 2002, and it was tasked with creating a curriculum and establish standards of practice [7]. In 2003, NAASP, in collaboration with the Royal College of Surgeons (RCS) renamed the surgeon's assistant to the surgical practitioner, and in 2004, it was renamed SCP [7].

The roles became important in this century because of the European Working Time Directive (EWTD), which became a law in the UK in 1998, was implemented in full in 2009. It limited the maximum weekly working hours of junior doctors to 48, with extra rest times between shifts [8] Black and Jones 2010. This EWTD led to the increased availability needed for non-medical practitioner roles. The UK minister of state for NHS delivery, Lord Warner told the Joint Consultants Committee in 2005 that, '*the future role of doctors cannot be considered without looking at the changing role of other health professionals*' [9]. Prior to the EWTD, the Calman reforms of 1993 shortened the training time of surgeons to 6 years, and this was further modified with the introduction of Modernising Medical Careers (MMC) in 2007 [9]. The combination of Calman, MMC and EWTD reduced the weekly working hours of surgical trainees from over a 100 h to 48 h per week [9].

In March 2005, the Department of Health released the *Curriculum Framework for the Surgical Care Practitioner* for consultation [10]. The guidelines were based on four pillars: education, research, leadership and clinical. It defined the role as, '*A non-medical practitioner, working in and out of the operating theatre, who performs surgical intervention under defined levels of supervision by a consultant surgeon*'. The role encompasses the provision of care and appropriate intervention within the operating room, in ward and in the clinic, usually within a specified surgical specialty [10]. The role was restricted to urology, trauma, orthopaedic surgery, cardiothoracic surgery, plastic and reconstructive surgery, neurosurgery, paediatric surgery, general surgery, vascular surgery, maxillofacial surgery,

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Citation: Journal of Global Medicine 2024, **4**: 239 - http://dx.doi.org/10.51496/jogm.v4.239
(page number not for citation purpose)

otorhinolaryngology, and gynaecology [11]. General paediatric and neonatal surgery, obstetrics, aesthetics and dental surgery are outside the scope of the curriculum.

The qualifications needed for SCP has gone from a Bachelor of Science degree prior to 2014, to postgraduate diploma between 2014 and 2022, and to a Master of Science (MSc) degree from 2023. All MSc degrees need accreditation by the Royal Colleges of Surgeons of England and Edinburgh [11]. The skills set level of a qualified SCP is expected to be at the level of the end of a core surgical training before the commencement of higher specialist training [10]. However, in the RCS's specialty specific syllabus, the expected knowledge, and many of the clinical and technical skills are higher, at the level of specialist trainees [11].

There is no mandatory register for SCPs, but the RCSEd and RCSEng hold a Managed Voluntary Register (MVR) for practicing SCPs, which allows a demonstration of that the SCPs are appropriately qualified and are working to standards expected by the two colleges. An audit of the MVR in 2022, showed that of the 92 respondents, 75% were registered nurses, 23% operating department practitioners (ODPs), and 2% were physiotherapists [12]. A total of 28% were based in trauma and orthopaedics, 21% in cardiothoracic, and 32% in general surgery (upper gastrointestinal, hepatobiliary, and colorectal) [12]. Overall, about 22% of SCPs spend most of their time in theatre, about 28% spend over 75% of their time in theatre, and 35% spend about 50% of their time in theatre [12].

Positive contributions of surgical care practitioner

An audit of 381 minor general surgical operations by SCPs, there were only 2.8% minor complications, and a 3-month patient perspective audit showed that 100% were satisfied with the care that they received; 98% were happy to see the SCP and 98% would recommend the SCP to others [13]. They concluded that SCPs contributed by reducing waiting times and were acceptable to patients. In another study, an SCP, in a structured programme performed all aspects of varicose vein surgery, 152 groin procedures, closed 191 groin wounds, and performed phlebectomies on 91 legs with excellent results and no difference in outcomes after a 6-week follow-up [14]. They concluded that the SCP can be used to improve theatre utilisation and efficiency with no obvious drawbacks. In a multicentre prospective study of 1501 total hip replacements, comparing the role of first assistance by an orthopaedic trainee or a SCP, there was no difference in patients' outcomes, but when the SCP was assisting, there was a reduction in the duration of surgery by 28 min compared to when the trainee was assisting [15]. No reasons were given for this difference.

In a study looking at the learning curve of a SCP over 360 hip aspirations, it found a decrease in aspiration failure rate from the initial 16.7% in the first 30 aspirations to 8.6% at completion in a linear fashion [16]. However, in the last 150 aspirations, the failure rate was 3.3% compared to a historical failure rate for consultants of 26.2% and for surgical trainees of 18.5%. The consultants' high failure rates were due to doing much fewer aspirations, between 6 and 28 aspirations each over 19 months. It showed that a dedicated SCP performing the procedures in greater numbers was better than multiple consultants performing fewer procedures [16]. Overall, the presence of the SCP as a member of the extended surgical team in cardiac surgery was found to be significant in improving clinical outcomes compared to surgical trainees, extremely helpful in assisting, and in teaching junior surgical trainees in the technique of conduit harvesting [17].

A recent review of prospectively collected data on 170 laparoscopic cholecystectomies performed by a SCP between 2015 and 2019 showed no major complications, no conversions, and only five (2.9%) readmission [18]. After acquiring expertise, some of these cases were done independently with varying levels of surgical trainee assistance without the consultant being present in theatre. The cases were selective to ensure surgically easy procedures. The authors argued that fully utilising the skills and abilities of all members of the extended surgical team will be integral to the effective delivery of healthcare in the future [18].

A scoping review has shown that nurse-surgeons are cost-effective because they cost less to employ than surgeons, and they could be used as alternatives to manage the shortfall arising from junior doctors' work-hour restrictions [5].

Negative impact of surgical care practitioner

In the wake of the EWTD, which arguably had a negative impact on the training of surgeons, combined with the reduction in the number of years of training introduced with MMC in 2005, there has been an 80% drop in training hours of surgeons. It has gone down from 30,000 to about 6,000 hours [9]. While the role of the SCPs has increased with the positive effects on service provisions [5, 13–16], the negative effects on surgical training have not been adequately assessed. However, the areas of possible conflicts include providing fewer operative opportunities for junior surgeons, less time for consultants to train surgical trainees if they are also training SCPs, and limited access to specific courses [7, 19].

The development of a professional relationship between the SCPs and the trainees can be challenging due to the misunderstanding of one another's role, in particular the potential overlap in the scope of practice and requirements for training. The supervision model for SCPs mirrors that of surgical trainees. The SCPs are expected to have an educational and clinical supervisor.

Citation: Journal of Global Medicine 2024, 4: 239 - http://dx.doi.org/10.51496/jogm.v4.239

However, specialist registrars undergo annual review of competency progression (ARCP) to assess satisfactory progress and competence unlike SCPs [7].

Another group that may have been negatively imparcted are patients. 82% of patients find the title SCP misleading and confusing, believing that they are medically qualified [6]. This issue has boiled over with the intended statutory regulation of physician associates, SCPs and the similar enhanced roles by the General Medical Council (GMC) since the end of 2024. This has led to opposition by the British Medical Association with an intention to launch legal action against the GMC [20]. Part of its concern is the use of 'medical professional' in GMC's guidelines to describe all of its future registrants: physician associates (PAs) and anaesthetist assistants (AAs) as well as doctors. The British Medical Association contends that the term should only be used for qualified doctors. Alongside this, anaesthetic group is also planning a separate legal action in relation to the lack of national regulations of scope of practice of PAs and AAs [20].

More recently, with regard to scope of practice, in the wake of the publication of an SCP who successfully performed 170 laparoscopic cholecystectomies [18], a major abdominal surgical procedure, the RCS of England Council wrote, '*SCPs should not undertake laparoscopic cholecystectomies with or without supervision*'. It reiterated its curriculum framework limiting SCPs' skill in this procedure to patient positioning, knowledge of common complications, and post-operative considerations [21].

Personal journey and reflection

I qualified as an ODP in 2007 with a diploma in Health Education. After completing my top up degree in acute and critical care pathway BSc (Hons) in 2013 I secured a surgical assistance post in colorectal surgery in a large district general hospital in the Northeast England. This was a new role within the department, materialising from the EWTD with reduced numbers of surgical trainees and more complex surgery needing second assistance, as major laparoscopic surgery was relatively new. Within my university accredited advanced scrub practice course and my role, I was allocated a colorectal consultant mentor. Their vision was to develop the role to meet the service needs. The university course competencies were generic, so we created more specific ones that mirrored the advanced scrub practice portfolio. Skills that usually a speciality registrar would carry out, for example, colostomy and ileostomy formation, firing rectal stapling devices in low bowel anastomosis. I led World Health Organization checklists and inserted rectus sheath catheters for post-operative analgesia. All of which were supervised by the consultant.

Some consultants, surgical registrars, and nursing staff were not sure how the role fitted into the theatre environment. As it was very new to the department that I worked in, and to the region as well. At first it seemed like there was no role for me, as traditionally the consultant always had a named registrar, and the scrub staff would carry out roles that the registrar would do if they were late to theatre, or the surgeon needed extra help during the operation. However, overtime the role became more established with the high demand for extra theatre lists and specific assistant competencies. This was managed by the consultant team I worked for and they encouraged expansion of the role to be more specific to colorectal and emergency surgery. They managed the expectations of surgical registrars and theatre staff that having surgical practitioner was beneficial to all parties. With the passage of time, the surgical team welcomed the role, bringing the team together. This benefitted the surgical registrar training as the trainees could operate with a surgical practitioner's assistance without the consultant being scrubbed or even in the operating theatre. The trainees, depending on their competence and seniority, could complete major laparoscopic colorectal resections with the surgical practitioners as the first assistant giving them ownership of the operation.

The role had an educational element, delivering teaching content to the theatre team about new techniques or equipment. I was also involved in teaching medical students and foundation doctors advancing surgical skills such as catheterisation and suturing. I also guest lectured ODP's at a local University. My role advanced again in 2016, when I completed my physical assessment skills at level 6 of the University Certificate of Professional Development (UCPD) and my advanced clinical skills and disease management at UCPD level 7 in 2017. My mentor was a pelvic floor colorectal consultant, and I joined him in the anorectal physiology clinic, which I was able to take on later. Using the advanced scrub practice portfolio model, we created specific ano-rectal physiology competencies, and I attended an external anorectal ultrasound course. I continued my academic path, as funding was an issue at that time and I wanted to be what is now known as an SCP. I used the four pillars of advanced practice as my guide. In 2020, I completed my evidence-based practice at level 7 and continued in 2021 to pass my personal effectiveness in leadership level 7. I also did my clinical practice satisfactorily and became associate principal investigator for an National Institute for Health and Care Research (NIHR) study and I have been an author in peer and non-peer reviewed articles.

It was agreed under the supervision of my mentor that I could advance my role to outpatient clinics and start my own minor operating lists, including inserting temporary sacral nerve stimulators (SNS) and their removal, in relation to pelvic floor. Using a portfolio competency model and practicing on cadavers we continued our work.

However, I changed my career in 2022 and became an ODP lecturer and course lead. I'm currently a senior lecturer and I commence my doctorate degree in September 2024.

There were a lot of barriers being an ODP in an advanced role, a major one being that we cannot prescribe as a profession. The other is the issue of nomenclature, regulation and wider acceptance of the role and scope of practice that makes it a viable choice for practitioners. There is a legitimate fear by doctors, that these roles are a means of replacing doctors by non-doctors by the government [22], the general practitioners have called for a halt to the recruitment of PAs, which the BMA has also called for [23]. From the theatres, the Royal College of Anaesthetists (RCoA) called for a freeze on recruitment of AA, and ruled that local hospitals' opt out of the position of the college on supervision of AAs is not approved by the college [24]. There was a robust response from the RCS England when an article was published about an SCP performing major abdominal surgery, albeit with good outcome [18]. The GMC is facing legal actions by both the BMA and anaesthetists on the use of word practitioner and also about its role in regulating the allied health professionals [20]. The controversy about the scope of practice is unlikely to see a quick resolution, as in a communication by the GMC to the anaesthetists, the GMC is reported to have written, that prohibiting AAs or PAs from undertaking certain kinds of work is setting '*limits*' rather than setting '*standards*', which is what a regulator does [25].

My experience of advancing my role was positive, I learned so much from the surgical team and my mentor. There was initial resistance to change, which was not surprising as the role was new. I believe that consultants need to encourage the advancement of the role of the practitioners to meet the service needs and manage the expectation of their team. With the surgical trainees needs at the front, which creates a great working environment, but the existential headwind faced by our profession is all too clear from the discussions in the last paragraph.

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