

# Riding the waves: Challenges to medical specialty training during the COVID-19 pandemic in South Africa

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Registrar training has traditionally relied on achieving practical workplace-based competencies together with the theoretical knowledge necessary to obtain a specialist qualification. However, in the last year, the healthcare setting has been transformed into a landscape of overworked staff, increased patient care demands and strained resources. In the face of these challenges, the registrar training programme finds itself in peril. The present article focuses on the adverse effects of the COVID-19 pandemic on the education and training of registrars in South Africa.

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It has been well over a year that South Africa (SA) identified its first COVID-19 case. Since then, the country has battled two COVID-19 waves and multiple levels of lockdowns with devastating effects on healthcare and the economy. At the time of writing this article, SA is battling a third wave of SARS-CoV-2 infections which is fuelled by a more transmissible variant coupled with a slow vaccine rollout. The COVID-19 pandemic has challenged and, in many cases, exceeded the capacity of South African hospitals. Although the focus has largely been on the burden borne by the public and private healthcare sectors, a much more insidious fallout is taking place; this centres on the unprecedented disruption in the education of registrars across various disciplines who are serving in the frontline of public sector hospitals since the start of the pandemic. The unparalleled burden on our healthcare system has created an extraordinary situation in which educational requirements could be superseded by more pressing patient care needs. This article examines the adversities facing the registrar training platform in SA and offers novel solutions that could ameliorate these challenges.

## Medical specialty training in SA

The path to becoming a medical specialist varies by country; however, there are generally shared standards for teaching and learning followed by registration with an accredited body. In SA, the registrar training programme is a full-time degree and spans an average of 48 months, depending on the individual specialty requirements. In-service training is spent at a Health Professions Council of SA (HPCSA) -approved discipline-specific training post where stringent training requirements are fulfilled, followed by a final board examination administered by the Colleges of Medicine of SA (CMSA). In 2010, a research project was introduced as a mandatory component of specialist training in SA and registrars who have passed the final exam must complete the research project before registration as a specialist with the HPCSA is finalised. During this time, a registrar is required to attain the knowledge, skills and professional attributes ascribed to by both the HPCSA and CMSA. Registrars are employed by the National

Department of Health or, in the case of pathology registrars, by the National Health Laboratory Service. Over the four years of study, a registrar is expected to provide clinical services while simultaneously participating in an approved academic programme. Registrarship is thus a critical period, where doctors are required to vigorously apply themselves in a particular field of medicine.

## Apprenticeship as a traditional model for specialty training

As early as the fifth century BC, Hippocrates, the paragon of modern medicine, based his practice and teachings largely on observation and bedside experience. This type of practical training continued through history, with trainee doctors serving as apprentices who were taught medical and surgical skills by their older, more experienced peers. Modern medical education, while heavy in its theoretical content, has expanded to include both didactic and clinical education. Inevitably, it is through interactions with patients and their diseases that a competent doctor is created. Workplace learning is therefore a critical component that provides context, an authentic experience, and has greater relevance to medical learners than textbook learning.<sup>[1-3]</sup> Additionally, it is through patient interactions that doctors are simultaneously afforded the opportunity to garner clinical skills, critical thinking, clinical reasoning, communication skills, empathy, and professionalism.<sup>[4]</sup>

## COVID-19 pandemic has disrupted workplace learning

The COVID-19 pandemic has created a seismic shift in this traditional model by disrupting the hospital-based teaching environment so that urgent care is assigned to COVID-19 patients while temporarily halting other, non-urgent clinical services. As a result, trainees are no longer attending outpatient clinics, elective surgeries and multi-disciplinary meetings. Below we set out the impact that the pandemic has had on registrar training and registrars.

## 1. Redeployment of registrars

Ideally, registrars should be working within their chosen speciality in an acute setting.<sup>[5]</sup> Globally, however, a state of disaster has compelled all doctors to assist in fighting the pandemic where they are most needed, i.e. supporting frontline specialties. For example, doctors in the UK were informed that they should respond 'rapidly and professionally' to the challenge of COVID-19 and may be required to work in areas outside their usual practice.<sup>[6]</sup> This rapid redeployment has affected most registrar trainees in academic hospitals where, for instance, an ophthalmology registrar would be assisting with calls in the internal medicine COVID-19 unit. The increase in service demands and on-call duties coupled with a reduction in bedside teaching, surgical exposure and clinical rotations are bound to have a deleterious effect on registrar training. These findings were affirmed by an Italian study examining the effect of the pandemic on plastic surgery residents, where it was found that while there were increased didactic activities compared with pre-COVID levels, most respondents reported them as insufficient. Moreover, a majority reported their preparedness for operations as either 'Not at all' or 'Not much.'<sup>[7]</sup> COVID-19 regulations restricting personnel in operating theatres has also reduced surgical training opportunities.<sup>[8,9]</sup> Furthermore, a shortage in personal protective equipment (PPE) has resulted in rationing of resources, while limiting a surgical registrar's opportunities to observe, assist or learn surgical techniques.<sup>[10]</sup>

This lack of practical experience has also affected other medical specialties outside surgery; a recent UK survey focusing on the impact of the global pandemic on radiology residents found that 70% reported decreased subspecialty experience, and 19% reported a complete lack of subspecialty training. About a quarter of trainees were redeployed from radiology to clinical ward-based work.<sup>[11]</sup> These issues have stirred fears regarding a deficiency in practical skills, clinical acumen and readiness to practise, resulting in 'impostor syndrome'.<sup>[12,13]</sup> The lack of practical exposure bodes poorly, not only for a registrar's future career but also contributes to the trepidation and uncertainty around exam preparation and readiness.

## 2. Academic activities

One of the first changes in medical education at the start of the pandemic was the cancellation of in-person medical meetings and conferences, which were replaced by narrated lectures, online meetings or webinars. In-person ward rounds and bedside discussions gave way to virtual meetings which have become the primary form of collaboration between registrars and consultants. While becoming the norm, this medium is not without its challenges. Given the high current workload of senior staff, clinical supervision has become near impossible. For consultants involved with academics, work-life balance issues have emerged, whereby online teaching of medical students and the time taken to acclimatise to this new pedagogy has become an addition to the extensive clinical workload.<sup>[14]</sup> Moreover, history-taking and physical examination is a crucial aspect of specialist training and provides real-world exposure to common diseases and rarer clinical presentations. As SARS-CoV-2 becomes an endemic respiratory virus, we may face the problem of doctors who were trained in the 'virtual world' without honing soft skills such as bedside manner and professionalism.

Registrar research projects may also be affected by the increased clinical workload, burnout and limited supervision. Delays in recruiting study participants, processing regulatory forms, a lack of staffing, and

concerns around grant suspensions or termination all play a role in the inconvenience and frustration experienced by many researchers during the pandemic.<sup>[15,16]</sup> Other research-based learning activities such as conferences and workshops have been cancelled or moved to an online platform, jeopardising collaborating and networking opportunities.

## 3. Mental health and burnout

Working under unfamiliar conditions and within the context of grave resource shortages and reduced senior support, registrars are often required to make difficult decisions, further contributing to the anxiety and emotional distress of working in the pandemic.<sup>[17]</sup> Many doctors have reported burnout syndrome during the pandemic, and registrar training itself can cause a significant degree of burnout.<sup>[18]</sup> This has the potential to affect a registrar's ability to establish communication with the patient, solve diagnostic dilemmas, and prescribe correct treatment. Burnout has a variety of negative consequences including depression, risk of medical errors, and negative effects on patient safety. Moreover, physical fatigue, mental stress associated with possible infection, concern around family and friends, and feelings of isolation and loneliness have contributed to a lack of wellness among registrars.<sup>[19]</sup> Future career uncertainty owing to the instability and precarious position of the national health system amidst a pandemic has added to this problem.

## Ensuring that registrars thrive – not just survive - in a pandemic

The first approach to mitigate pedagogical difficulties in a pandemic scenario is to anticipate the impact. This stance will maintain education integrity through training and educational activities. While redeployment and cancelled rotations will affect training, flexibility and clear communication with registrars are key. As educators, we need to address registrar expectations within a changing clinical learning landscape, which will ensure both patient and registrar safety. Accepting a work environment with much lower clinical volumes, requires an adjustment to teaching and training objectives. This will include virtual patient assessments and participation in virtual training rounds. Registrars should also support each other by way of smaller groups working asynchronously through cases or topics which are presented at bigger online meetings. This tactic can facilitate regular and meaningful connection at a time of increased isolation. Engaging with coaches or academic mentors may also assist.<sup>[20]</sup> National collaboration across training institutions, through the sharing of resources, can enrich the range and quality of learning opportunities and foster collegiality. Harnessing e-learning resources through national and international organisations may also be leveraged for this purpose.

The Colleges of Medicine of South Africa examinations have been rescheduled over the COVID-19 pandemic period and there have been discussions around waivers for certain training requirements and extension of training time; however, the importance of assessments for learning should be highlighted. Many of the traditional methods of registrar assessment, such as multiple-choice exams, oral exams and workplace-based assessments, can still be used to measure competence. However, one may need to adjust the scenarios in which they are used; for example, moving certain assessments to less risky environments, such as simulation-based activities.<sup>[21]</sup>

Finally, to enhance mental wellbeing for registrars, we need to introduce peer and faculty support systems and convey positive messaging such as

prioritising relationships and maintaining healthy routines. Additional resources such as counselling and crisis services may prove extremely useful.

## Conclusion

The present paper opens discussion focusing on the current plight of registrars during the COVID-19 pandemic. It further highlights key concerns around the attainment of clinical and academic competencies during a disaster. At a time when we are forced to maintain social distancing, the proverbial 'human touch' in medicine should never be forgotten. Now, more than ever, we are compelled to adopt novel and innovative solutions to overcome potential shortfalls and safeguard the integrity of medical specialist training in SA.

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