

Navigating COVID-19: Preparing medical students in a time of pandemic

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The COVID-19 pandemic has resulted in an upheaval in health sciences education.^[1] Globally, training of medical students on university campuses and clinical platforms was suspended and rapidly transitioned to online learning.^[1,2] In some countries, graduation of senior medical students was expedited in order to contribute to a health workforce in crisis.^[1,2] The transition to online learning has been particularly challenging in low- and middle-income countries where access to remote learning opportunities is limited for some students and further widens societal inequities.^[1] The pandemic, however, also provides an opportunity to re-imagine clinical learning and develop innovative ways to strengthen the clinical training platform and health system.

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At the University of Cape Town (UCT), academic activities were temporarily suspended on 16 March 2020 in response to the anticipated national COVID-19 pandemic. Health sciences educators were tasked with adapting teaching to an online platform, with an expected return to the clinical platform at a later stage. Reasons for suspension of clinical teaching included safety of students, concerns that students may themselves be vectors of transmission, limited learning opportunities on a clinical platform overwhelmed by the outbreak response, and pressured clinical staff who may struggle to balance both teaching demands and service on an overburdened clinical platform.^[1,2] The President of South Africa had declared a national state of disaster on 15 March, followed by a national lockdown, commencing 27 March. By May 2020, after extensive stakeholder engagements, final-year medical students were invited to return to the clinical platform in order to support learning and timely graduation by the end of the year. At the time of this invitation, the Cape Town metro was experiencing an increase in COVID-19 case numbers and approaching the peak of the epidemic. On return to campus, a mandatory two-week quarantine period was instituted by UCT for all 216 final-year medical students. This quarantine period was identified as an opportunity to prepare students for return to the clinical platform. The challenges of delivering remote learning were ameliorated through the more reliable network provided on the university campus compared with variable home circumstances.

As at many universities, the traditional 'clinical years' of training at UCT include rotations or clinical clerkships through different clinical specialties.^[3] This practice is against a backdrop of a more integrated 'pre-clinical' approach that uses medical education strategies such as problem-based learning.^[4] The well-described divide between pre-clinical and clinical years often results in more discipline-based approaches in the latter years of training.^[3,4] Learning areas such as public health often lose relevance in the latter years owing to the 'siloed' approach to teaching. The COVID-19 pandemic has forced health professionals and systems to consider the

multiple dimensions of planning and resource management, prevention, clinical management, as well as surveillance and tracing of possible contacts. COVID-19 has provided an illustrative example of a major public health crisis, exacerbated by existing socioeconomic inequities and affecting all aspects of society, being not limited to any one sector or discipline. As students were being prepared to return to a clinical platform transformed by the pandemic, they reflected similar anxieties prevalent in society towards the risks associated with the pandemic. A clear need was highlighted to prepare students more holistically to function as learning professionals within the conditions of the pandemic.

An interdisciplinary and interprofessional team of educators prepared a two-week course to facilitate the re-entry of final-year students into clinical learning contexts. The Navigating COVID-19 online course was thus conceived, embracing an integrated approach to learning and building on learning from earlier years of study.

A key consideration for the course was to include students in the shaping of content areas. The first day of the course focussed on asynchronous student discussion about their fears, anxieties and learning needs. This feedback was used to shape and adapt content areas. Given the limited time to prepare the course, content included a combination of existing pandemic resources supplemented by newly developed learning resources in response to student needs. Time was dedicated to review resources for specific content areas, as well as consolidation and assessment (Table 1).

Assessment was intentionally limited in order to encourage learning without the additional pressure of formal assessment. Core assessments included personal protection equipment (PPE) competency and completion of a COVID-19 training module developed for primary healthcare settings.^[5] Three synchronous activities were scheduled in the form of live webinars. Speakers included a healthcare worker recovering from COVID-19, hospital managers, faculty leadership, different medical specialists, registrars, interns and final-year students themselves who had volunteered as contact tracers

Table 1. Navigating COVID-19 course: Content areas

Epidemiology, transmission and pathogenesis of COVID-19
Impact of COVID-19 on the population
Pandemic management
Approaches to managing patients during COVID-19 across clinical specialties
Coping mechanisms, including mental health and well-being and coping with loss and grief
Principles of interprofessional practice
Personal and team safety and competency in use of personal protective equipment (PPE)

during the initial pandemic response. The webinars focussed on critical aspects raised by students in earlier engagements:

- What happens if I get COVID-19?
- Being a healthcare worker in a time of pandemic
- Public health and clinical considerations in the management of COVID-19.

The varied array of speakers prompted active student engagement and further discussion of concerns originally presented on the first day of the course. Many of the invited speakers were recent graduates. Engagement with these young professionals as teachers appeared to appeal to students as their experiences were more relatable and the traditional power dynamic between educator and learner was attenuated.

The largely positive reception of the course prompted adaptation and delivery of the course to a wider student base, not limited to medical students, as well as staff.

While the COVID-19 pandemic presents many challenges in health sciences education, the Navigating COVID-19 course has provided a glimpse into the potential of integrated learning in a clinical environment. The integrated approach relies heavily on teamwork and integration among

educators themselves and strong support from faculty leadership. As educators, it is important to be flexible in adapting teaching methods and responsive to student needs, to reshape curricula and strengthen known weaknesses. By adopting such approaches to education, we can better support the development of integrated healthcare practitioners who can provide safe patient care, strengthen the health systems that they work in, and advocate for improved health for all of society.

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