

DOI: 10.1111/medu.14512

# Virtual COVID rounds: A curricular enrichment program for pre-clinical medical students

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## 1 | WHAT PROBLEMS WERE ADDRESSED?

The COVID-19 pandemic has placed considerable constraints on medical education, with early clinical experiences for first- and second-year students particularly limited. In the midst of personal protective equipment (PPE) shortages and an overwhelmed workforce, telehealth offers an opportunity to enrich clinical education without the risk of COVID-19 exposure. In May 2020, we published a report on the successful implementation of 'Virtual Bedside Teaching Rounds' among third-year medical students. Through this pilot program, students remotely attended COVID rounds via iPad-enabled videoconference, gaining powerful experiences with COVID-19 patients.<sup>1</sup> While medical institutions have developed a variety of such innovations for third- and fourth-year medical students, pre-clinical students have been largely excluded from the COVID-19 care environment. Below, we demonstrate how an adaptation to the pre-clinical curriculum addresses this unmet need and profoundly humanises the COVID-19 pandemic.

## 2 | WHAT WAS TRIED?

First- and second-year medical students gain most of their clinical education through 'Clinical Foundations', a longitudinal curriculum emphasising patient history and physical examination, clinical decision making, basic disease management and the art of doctoring. In this curriculum, we incorporated an optional introductory COVID-19 training via virtual bedside teaching rounds.

Sixty-six students remotely joined rounds with the attending physician and the care team via Zoom, a Health Insurance Portability and Accountability Act (HIPAA)-compliant video conferencing service displayed on an iPad Pro mounted to a computer cart. The accompanying computer was also connected to the videoconference, enabling access to relevant patient laboratories and imaging. All involved patients provided verbal consent prior to rounds.

During virtual rounds, students observed routine COVID-19 medical management, PPE protocol and the patient-provider

relationship; they also had the opportunity to interview patients and their family members. Following the experience, students completed a brief survey to offer feedback.

## 3 | WHAT LESSONS WERE LEARNED?

Survey results demonstrated that virtual COVID rounds provided memorable insight into the clinical management and human experience of COVID-19. Of the 27 students who completed the survey, 100% agreed that COVID rounds improved their medical knowledge of COVID-19 and that they would recommend the experience to their peers. Similarly, 89% and 81% 'strongly agreed' that they would like to participate in additional virtual rounds and that they felt engaged during the exercise, respectively. The most memorable moments reported by students included seeing the severity of the disease first hand and recognising the profound isolation felt by patients. As one student wrote, 'When we read papers, the patient is sometimes diminished to a statistic, but seeing the patient and hearing their stories is so meaningful'.

Taken with our prior report, these findings demonstrate that telehealth can provide a vivid clinical experience for students across the medical education continuum. For pre-clinical students in particular, this experience sheds light on a world that has been otherwise inaccessible due to the safety constraints of the pandemic. Beyond COVID-19, this technological framework offers ample opportunity for similar academic enrichment in settings such as flight medicine, prison health care and global health.

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### REFERENCE

1. Hofmann H, Harding C, Youm J, Wiechmann W. Virtual bedside teaching rounds with patients with COVID-19. *Med Educ.* 2020;54(10):959-960. <https://doi.org/10.1111/medu.14223>