# **Opinion Article**



ISSN: 2514-3700

# Virtual education during COVID -19

## Renu Bhupathy<sup>1\*</sup> and Fauzia Nausheen<sup>1,2</sup>

<sup>1</sup>Department of Medical Education, California University of Science and Medicine, School of Medicine, San Bernardino, USA <sup>2</sup>Department of Biomedical Education, California Health Science University-COM, USA

#### Introduction

COVID-19, along with the associated mandated stay at home orders and social distancing, has affected all facets of society, including medical education. Although this is an unwelcomed pandemic, medical educators have been afforded a unique opportunity to investigate virtual learning options to deliver their customarily in-person curricula. The following is an insight from clinical educators about the adoption, transition, and challenges of clinical medical education in the virtual space.

As clinical educators in a new medical school, we faced the same challenges as many other schools who scrambled to move from traditional in-person clinical teaching to an acceptable virtual mode of education across several curricular elements with the unexpected arrival of the COVID-19 pandemic [1].

#### Clinical educator's transition

Within two weeks of acknowledging the need to disassemble group gatherings, we observed every aspect of our traditional medical education model transform with the help of staff, IT, faculty, and our leadership. During this rapid transition, our school discovered individual and team creativity, resilience, and a new way of delivering and receiving medical education with challenges, opportunities, and benefits that enabled us to study, evaluate, and share our experience along with other schools [1,2].

E-learning has already disrupted medical education with blended models of teaching and is not new to this setting [3]. Creating a totally new virtual learning environment while maximizing learner participation and engagement was the priority. At our facility, faculty and staff established work from home protocols by ensuring connectivity to all the school resources through training sessions conducted prior to leaving the physical building site. Several practice sessions were conducted to test the use of Microsoft Teams as a venue for small group sessions, including clinical cases and clinical skills. Student-faculty groups were established, including IT support within each group, so all sessions could continue during the usual scheduled time by inviting the groups for each event to maintain a regular routine.

Challenges that were anticipated included technical difficulties such as internet connections and equipment failure; the loss of inperson connection, support, and coping strategies; maintaining control of the online environment; clinical case reasoning and presentations; and clinical skills including OSCEs (objective structured clinical examination). Most of these were offset with appropriate interventions. IT support was available anytime during virtual activities by sending a chat message for connectivity or technical complications. The opendoor policy was readily implemented with MS Teams chats or video calls allowing interaction of students with their peers, faculty, and other academic and social resources to offset the impact that physical and social distancing may have on the feeling of isolation [4]. Although the online environment was at times difficult to control in terms of professionalism, our leadership was able to provide a mandatory professionalism session to include appropriate etiquette in the virtual setting. MS Teams small classroom groups were essentially as functional as in-person small group sessions to work through clinical case reasoning and weekly student presentations; however, a major challenge was teaching clinical skills in the virtual environment.

For the case-based clinical reasoning, MS Teams meetings provided a similar small group environment with the added benefit of a chatbox on the side. Students were able to ask questions, add websites, documents, or other useful information that aided in learning without interrupting the session. Attending the sessions was also much easier as students did not have to drive to school to attend, but simply joined the meeting from wherever they were, providing flexibility with more time to study or for personal time (Table 1).

The effect on clinical skills was probably the most profound because of the challenging task of teaching physical exam techniques in a virtual environment. To overcome this barrier, several different methods were utilized, including a virtual simulation program, videos showing various techniques, and pictures to demonstrate physical exam methods and findings. Students were exposed to telemedicine and writing patient notes during this time, which was an added benefit of the virtual sessions. The usual OSCE for testing skills was also difficult and resulted in one history taking station rather than the usual history, physical exam, and procedure stations (Table 1). Augmented reality could disrupt the current modified methods of implementing clinical skills [5].

## Conclusion

Overall, we adopted and transitioned to a virtual medical curriculum encompassing clinical reasoning and clinical skills. Although we encountered several challenges, we also experienced many benefits of a virtual educational delivery platform. Student evaluations and feedback will help provide further insight as to the benefits and challenges of the newfound educational delivery method. As a result of this unexpected opportunity to discover virtual teaching methods, we may have uncovered a potential hybrid model to deliver medical education in the future.

Received: May 05, 2020; Accepted: May 25, 2020; Published: May 27, 2020

<sup>\*</sup>*Correspondence to*: Renu Bhupathy, MD, MSc, Assistant Professor of Medical Education, Clinical Family Medicine, California University of Science and Medicine, School of Medicine, 217 E. Club Center Drive Suite A, San Bernardino, CA 92408, USA, Tel: 909-490-5031, E-mail: bhupathyr@cusm.org

 Table 1. Consequences of disruption in traditional teaching strategies

Pre-pandemic teaching strategies	Disruption	Challenges	Coping	Pros	Cons
Case-based learning: in-person small group sessions with students and faculty	MS Teams meetings	A limited number of students are visible on the screen at one time, so it is difficult to tell which students are engaged	Everyone has their video on during the session, and microphone on only when speaking.	100% Student attendance; more participation and sharing of information through chat boxes	Less personal interaction in the virtual environment. Screen share for presentations, so less control
Clinical skills: in-person sessions with standardized patients (SPs), faculty, students, task trainers, simulation	MS Teams meeting	No direct contact with the SPs. Unable to conduct a physical exam on SPs or task trainers	Encouraging interaction with faculty to discuss physical exam findings and laboratory results. Integrated a simulated physical exam program.	History taking works well and simulates telemedicine. Students worked on patient notes.	Unable to learn actual physical exam techniques
OSCE examination: in-person testing with standardized patients (SPs), faculty, students, hall monitors, and task trainers	MS Teams meeting	Unable to test students on physical exam techniques.	One station for a detailed history with an SP and faculty grader in one MS Teams session.	Able to test the students' history taking in a manner similar to an in-person OSCE	Unable to test the students' ability to conduct an appropriate physical exam

#### References

- 1. Rose S (2020) Medical Student Education in the Time of COVID-19. JAMA. [Crossref]
- Mulla ZD, Osland-Paton V, Rodriguez MA, Vazquez E, Plavsic SK (2020) Novel coronavirus, novel faculty development programs: rapid transition to eLearning during the pandemic. J Perinat Med 48: 446-449. [Crossref]
- 3. Huynh R (2017) The Role of E-Learning in Medical Education. Acad Med 92: 430. [Crossref]
- Murphy B (2020) Online learning during COVID-19: Tips to help med students succeed. American Medical Association. [https://www.ama-assn.org/residentsstudents/medical-school-life/online-learning-during-covid-19-tips-help-med-students]
- Hilty DM, Randhawa K, Maheu MM, McKean AJ, Pantera R, et al. (2020) A Review of Telepresence, Virtual Reality, and Augmented Reality Applied to Clinical Care. J Technol Behav Sci 5: 178-205.

**Copyright:** ©2020 Bhupathy R. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.