

REVIEW ARTICLE

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Impacts of Novel COVID-19 Pandemic on Furtherance of Medical Education: Challenges and Possible Solutions

Oluwatosin Imoleayo Oyeniran 

Department of Physiology, College of Health Sciences, Basic Medical Sciences, Nile University of Nigeria, Abuja, Nigeria

The novel coronavirus disease 2019 (COVID-19) pandemic has changed education globally, compelling most educational institutions comprising medical schools to shut down. This alteration has fetched grave consequences for numerous public establishments and raises specific demands for medical education. The bulk of medical schools have transitioned from the in-person classroom to online and virtual classes. As universities remain closed, medical training of students will suffer if administrators and educators do not develop actions and creative initiatives to provide continuing education.

Keywords: COVID-19; Education; Health; Medical education; Pandemic

Introduction

The novel coronavirus disease 2019 (COVID-19) outbreak is caused by the recent severe acute respiratory syndrome coronavirus (SAR-CoV-2), which first emanated from China in late December 2019. The swift progression of the outbreak caused the World Health Organization (WHO) to declare it as a Public Health Emergency of International Concern on 30 January 2020 (1) and a pandemic on 11 March 2020 (2). This spread of the pandemic has posed adverse effects worldwide, making it intensely clear to all and sundry why it is

supreme to know the pathogenesis and health consequences connected to the disease.

The COVID-19 pandemic is currently ravaging the whole world and bringing the globe to a standstill with over 65,408,787 confirmed cases and 1,509,743 deaths as of 4 December 2020 (3). This unprecedented pandemic has had significant influences on global populations, economies, and health care systems. The prohibition of activities in several sectors, the constraint of movements, and the restriction of public gatherings, among other actions, are the

Corresponding Author: Dr. Oluwatosin Imoleayo Oyeniran;
Department of Physiology, Basic Medical Sciences, College of
Health Sciences, Nile University of Nigeria, Abuja, Nigeria
ORCID ID: 0000-0001-6720-8453

E-mail: tosinoyeniran1@gmail.com

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outcome of the daily surge in COVID-19 cases, to curb its further spread after the WHO recommendations and standards (4-10).

Though the health care settings in many countries are constantly adjusting and reacting to the management of the outbreak in the face of stringent public health measures, the severity of the pandemic is enormous, with widespread consequences amid the medical education system (11-16). The educational sector was among extremely affected sectors. A majority of the learning institutions have stopped academic activities globally as of March 2020, and nearly 850 million students were lockdown at home (17,18). Worldwide, health implications and deaths documented are devastating, resulting in the disruption of the classroom and in-person teaching in educational institutions, and medical education is currently modified due to this global jeopardy.

Challenges facing the furtherance of medical education amid COVID-19 pandemic

The effects of COVID-19 on medical education cannot be overstated, as most schools are shut down, and classroom learning has transited to online mode, alongside the apparent radical modifications that have met medicine's learning and practice globally (13,14,16,19). This shift has left millions of medical students to either suspend learning or continue remotely (11). The resultant consequence is that medical trainees had missed several months of professional experiences central to their training and career. Before the pandemic, the learning style in medical education is chiefly the traditional didactic and conventional cookbook system; nevertheless, this learning mode has been ferociously challenged recently by the stringent public health measures to curtail COVID-19 spread (20). Consequently, these interruptions

have demanded dominant and swift attention by medical administrators and educators globally. While the pandemic perseveres, faculty members and medical students across the globe endure to cope with the existing variations and fight to combine them with their projected plan of career development (21).

The previously normal learning sequences and practices in medical schools such as classroom teaching, laboratory practical and research, chospital rotations, attending conferences and workshops amongst others have been altered by COVID-19 (16). Replacement of conventional face-to-face classes and learning with online and virtual equivalents (recorded or live-stream lectures) is an obvious need now. However, it brings about a loss of collaborative experiences that inclines to be a vital shortcoming to medical education. Therefore, while engaging technology to help resolve these difficulties is a distinctive method of helping students advance their skills, it is now essential for medical students to show the same set of skills that they ought to have started in a new and ground-breaking style (21). Although the pandemic is yet to recede in most parts of the world, certainly, the deep impacts of coronavirus disease 2019 might unendingly alter how upcoming doctors and healthcare professionals are educated (22).

Unfortunately, many students and learners in most training institutions were held in the act of attempting examinations that require clinical exposure, hence making enormous effects on their academic and career advancement (23). In a bid to lessen the risk of contracting the SARS-CoV-2 infection, the majority of medical institutions and establishments cut clinical exposures across numerous specialties (16). This position is challenging and might

also have in-depth consequences on students' performances and skill levels.

Possible Prospects

The possible prospects for the continuation of medical education amid the COVID-19 pandemic are as follows;

1. The termination of in-person classes resulting from the COVID-19 pandemic has called for a rapid migration to online equivalents. Consequently, there is a need to initiate strategies to guarantee a smooth shift to online learning. More so, standards required to mimic the collaborative deliberations related to face-to-face classes online ought to be put in place to guarantee that the online learning experiences are adequate in preparing learners for examinations and clinical clerkships amid others. Such actions or strategies may include; formation of small group meetings in online forums and webinars.

2. The short-term cancellation of conferences, meetings, and workshops has impacted medical education. The majority of medical trainees and students will not be fortunate to partake and gain valuable skills from presentations, clinical rotations, and shared experiences, which are vital to their training and education. Nevertheless, the preparation and establishment of online conferences are greatly encouraged. There is an increasing necessity to integrate technology and online learning platforms (webinars, teleconferencing) into health care delivery and the propagation of medical information inventively.

3. Engaging technology and online learning in medical education in a unique way will permit learners to make collective capacities and increase flexibility, determination, and novelty. Learners' capacity to adapt to the confounding

times will empower them to reason outside of the box. Additionally, this will help students develop methods to showcase their abilities, work code, teamwork, and encouraging inter-professional collaboration.

4. There is also a dire need to revise and improve the existing medical curricula globally to integrate new online and virtual teaching methods.

5. Novel approaches to delivering practical skills and hands-on classes (laboratory experiments, researches, or procedures) to students and trainees should be immediately considered.

6. Medical educators must guarantee ongoing and continual engagement with students using present online learning systems and platforms while looking for novel and ground-breaking teaching methods.

7. It is important to look into how online systems may be integrated into providing practical and clinical skills to medical students remotely, relative to what is obtainable during in-person classes.

Conclusion

Conclusively, as the unique pandemic lingers and continues to disturb education globally, medical educators must constantly endeavor to guarantee that learners move on with their studies. Howbeit, interferences in conventional learning approaches have forced many universities to result in providing medical education and training through the use of novel methods of modalities (24). This continuous learning will help to safeguard the training of future health care professionals and workers.

Conflicts of Interest

The author has declared no conflict of interest for the present article.

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Contact Details

Oluwatosin Imoleayo Oyeniran, MD

Department of Physiology, College of Health Sciences, Basic Medical Sciences, Nile University of Nigeria, Abuja, Nigeria

E-mail: tosinoyeniran1@gmail.com

ORCID: 0000-0001-6720-8453

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