

1 **Title:** COVID-19 Pandemic: Medical and Pharmacy Education in Nigeria

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- 30 1. How is COVID-19 affecting medical and pharmacy students in Nigeria?

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1 **THE EXPERIENCE**

2  
3 Coronavirus Disease (COVID-19) pandemic poses a major threat to education globally and medical and  
4 pharmacy education in Nigeria is not an exception. Although the focus has been to treat the infected persons  
5 and reduce the spread of the virus as much as possible, the emergence of COVID-19 has disrupted education  
6 and this requires prompt attention from stakeholders.<sup>1,2</sup> The pandemic effect on healthcare students'  
7 education would be more pronounced because of its peculiarities as it involves clinical rotation exposure,  
8 laboratory experiences, internships, in-person didactic lectures and tutorials, presentations, clinical clerkship,  
9 observing and assisting relevant medical and surgical procedures.

10  
11 A good number of healthcare students including medical and pharmacy students are in the process of  
12 preparing for or undertaking assessments that require clinical exposure. The effect of COVID-19 pandemic on  
13 healthcare students' education in Nigeria could therefore be considered significant, causing a disastrous effect  
14 to performance in examination post-pandemic and competency of these future healthcare professionals. As  
15 students, we cannot help but concern ourselves with how COVID-19 pandemic will affect our career  
16 trajectories. The pandemic has equally reiterated the value of the skills and trainings that we gain in school.  
17 We are happy and proud to see healthcare students including medical and pharmacy students starting and  
18 organizing different programs aimed at improving public understanding and supporting responses to the  
19 COVID-19 outbreak.

20  
21 Medical and pharmacy education were halted as a proactive measure to further curtail the spread of the virus.  
22 The National Universities Commission has ordered universities in Nigeria to close for a month beginning from  
23 23 March 2020.<sup>3</sup> As there is an upsurge in number of COVID-19 confirmed cases on a daily basis, schools  
24 across the country are likely to be closed indefinitely until there is a standard treatment option or vaccine for  
25 COVID-19. Consequently, medical training has been invariably affected, however, some private universities  
26 have explored the use of virtual platforms like Zoom, Telegram, WhatsApp, Google Classroom, and emails for  
27 academic activities. The effectiveness of these learning platforms in Nigeria has been questioned because of  
28 poor internet connectivity, relatively expensive out-of-pocket spending on internet data bundle and epileptic  
29 power supply.

30  
31 Additionally, COVID-19 pandemic has also affected proposed examinations in medical schools across the  
32 country. For instance, Progress Agboola's Bachelor of Medicine Part 2 assessment was postponed few days  
33 to the exam due to the COVID-19 pandemic. It is without a doubt that this will have impact on students  
34 ranging from competency, mental health status to academic performance.

35  
36 Crises like this provide opportunity for educators to leverage technology to sustain undergraduate and  
37 postgraduate medical education.<sup>4</sup> To leverage on these opportunities, e-learning platforms can be utilized to  
38 deliver lectures remotely at one's convenience. Faculty, instructors and medical educators, residents, and  
39 students can then log in at scheduled time for discussions, which can be facilitated live using video and audio  
40 conferencing. In addition to lectures, video conferencing can also be leveraged to teach medical procedures

1 and surgical techniques.<sup>5</sup> However, required facilities to cope with these modern teaching approaches in  
2 Nigeria remain a major challenge.

3  
4 Also, the COVID-19 pandemic has had its toll on pharmacy education globally and Nigeria is not left out. The  
5 pharmacy practice is continuously evolving worldwide and so is the need for a corresponding evolution of  
6 learning methods,<sup>6</sup> which is especially crucial at this period of crises. The unprecedented nature of the  
7 pandemic has led to the unanticipated closure of all pharmacy schools in Nigeria thereby causing disruption  
8 and interruption of the pharmacy curriculum and examinations. For instance, Melody Okereke's exam was  
9 suspended indefinitely. This present situation has challenged the pharmacy education sector to also devise a  
10 coordinated response and deploy feasible interventions that will ensure uninterrupted learning and student  
11 assessment in case of any unforeseen crises.

12  
13 The benchmark for pharmacy education in Nigeria encourages the use of lectures, tutorials, case studies,  
14 presentations, and practical sessions as methods of imparting knowledge to pharmacy students.<sup>7</sup> The most  
15 commonly used method is didactic method. While e-learning methods are employed in some pharmacy  
16 schools,<sup>8</sup> the reality is that not all pharmacy schools are equipped with the necessary infrastructure and  
17 technological innovations to strive in the face of the pandemic. This, however, is due to the fact that  
18 infrastructure, access to teaching resources, development of academic staff, and quality research remain  
19 persistent challenges to the delivery of quality pharmacy education in Nigeria and other developing countries.<sup>9</sup>  
20 While the e-learning approach seems to be plausible, some practical courses in both pharmacy and medical  
21 curriculum require a hands-on approach.

22  
23 The lockdown policy and the need to practice physical distancing also have a significant effect on clinical  
24 rotations, internships and graduation of pharmacy and medical students as they are forced to remain at home  
25 until the pandemic is over. For instance, Yusuff Adebayo Adebisi completed his final examinations on 25  
26 February 2020 but his induction into pharmacy profession was halted due to the COVID-19 pandemic. Him  
27 and his classmates are in state of dilemma whether they are still a student or graduate. This disruption has  
28 also cost some students opportunities to advance their career. Going forward, this trend may also lead to a  
29 possible decline in the pharmacy workforce capacity, which has been documented in literature as one of the  
30 major challenges facing pharmacy practice in Nigeria.<sup>10</sup>

31  
32 The COVID-19 pandemic creates a complex mixture of threats and opportunities for medical and pharmacy  
33 education in Nigeria and globally. The need to encourage e-learning in the modern world of education  
34 becomes clearly evident.<sup>11</sup> In light of this, COVID-19 crisis makes it much-needed for the academic  
35 community, stakeholders and the Nigerian government to learn from this unprecedented pandemic to further  
36 review the future of medical and pharmacy education in Nigeria because there is no better time than now.

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