- 1 Title:Response to the Letter to the Editor Regarding "Survey among Medical Students during COVID-
- 2 19 Lockdown: The Online Class Dilemma"

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## **Authors Contribution Statement:**

Contributor Role	Role Definition	Aut	Authors				
		1	2	3	4	5	6
Conceptualization	Ideas; formulation or evolution of overarching research goals and aims.	Χ					
Data Curation	Management activities to annotate (produce metadata), scrub data and maintain research data (including software code, where it is necessary for interpreting the data itself) for initial use and later reuse.						
Formal Analysis	Application of statistical, mathematical, computational, or other formal techniques to analyze or synthesize study data.						
Funding Acquisition	Acquisition of the financial support for the project leading to this publication.						
Investigation	Conducting a research and investigation process, specifically performing the experiments, or data/evidence collection.						
Methodology	Development or design of methodology; creation of models						
Project Administration	Management and coordination responsibility for the research activity planning and execution.	Х		Х			
Resources	Provision of study materials, reagents, materials, patients, laboratory samples, animals, instrumentation, computing resources, or other analysis tools.		Х	Х			
Software	Programming, software development; designing computer programs; implementation of the computer code and supporting algorithms; testing of existing code components.	Х	Х	Х			
Supervision	Oversight and leadership responsibility for the research activity planning and execution, including mentorship external to the core team.			Х			
Validation	Verification, whether as a part of the activity or separate, of the overall replication/reproducibility of results/experiments and other research outputs.						
Visualization	Preparation, creation and/or presentation of the published work, specifically visualization/data presentation.						
Writing – Original Draft Preparation	Creation and/or presentation of the published work, specifically writing the initial draft (including substantive translation).	Х	Х	Х			
Writing - Review & Editing	Preparation, creation and/or presentation of the published work by those from the original research group, specifically critical review, commentary or revision – including pre- or post-publication stages.	Х	Х	Х			

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## Response to the Letter to the Editor Regarding "Survey among Medical Students during COVID-19 Lockdown: The Online Class Dilemma"

We would like to thank Akshara et al from Al Azhar Medical College and Super Specialty Hospital for their interest in our survey regarding online classes among medical students and for taking time to commend our work. We agree with the authors on unpreparedness. A well-designed course and availability of online training materials are some of the important pre-requisites for conducting an effective online class<sup>1</sup>. No one anticipated this pandemic; therefore teachers were not prepared for any alternative teaching modalities.

The authors have also pointed out a lack of sufficient internet data for participation in online classes and recommended the provision of free data to students. While providing free data definitely would help, there are other things to be considered. Most private medical institutions are now struggling to keep up with the economic consequences of the pandemic and so, providing free data is simply not possible in many institutions. Also, majority of the students in our survey used only mobile phones which are not optimal for participating in online classes. The internet coverage rate is 50% in India<sup>2</sup>. Thus, accessibility to internet itself is lacking among students, especially those in remote places<sup>2</sup>. So, providing free data to all students is likely not going to cause any significant difference in the outcome.

Even before the COVID-19 pandemic, doctors were over-worked. They work in high stress environments and are expected to be available 24-7<sup>3</sup>. On the other hand, these same doctors are also teachers in clinical subjects who teach medical students on top of their clinical works. The authors have rightly highlighted that females are facing more difficulty. They are even more so overworked and underpaid.

The author highlights about students' concern on acquiring practical skills. While they are right in saying this can have negative impact on confidence of medical students, clinical skills can be taught through online learning<sup>4-8</sup>. This might not be as effective as regular hospital postings, as Sir William Osler once said "he who studies medicine without books sails an uncharted sea, but he who studies medicine without patients does not go to sea at all"<sup>9.</sup> However, when a pandemic is in progress it would be unwise for an institution to advise their medical students to approach patients and learn basic clinical skills.

Students can learn methods of examining different organ systems using video demonstration<sup>8,10</sup>. They can practice these skills on fellow colleagues. During 8 years of war in Syrian US based online platform, Osmosis, helped medical students with videos, clinical cases diagnosis and flash cards<sup>4</sup>. COVID-19 pandemic has given us an opportunity to explore newer modalities in education<sup>5</sup>. We should never hesitate to incorporate better modalities into our curriculum.

We do not concur with the author's statement that "universities have failed to provide any meaningful clarity in their communiqués". Government and universities are providing regular updates and guidelines on the implementation of examinations and classes, both during and after the pandemic. We believe universities and the government are working on ways to avoid unnecessary extension of the courses. Lastly, the author talks about inclusion of "pandemic/crisis specific" content in the medical curriculum. While these contents are

already taught throughout the undergraduate education, 11 we believe more emphasis should be put on public
health and research, in order to make future doctors more capable in times such as during the COVID-19
pandemic.

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