

Editorial for Advances in Human Biology

The impact of the Covid-19 pandemic on medical and health professions' education: Thoughts and reflections

Corresponding author:

Professor Judy McKimm

Professor of Medical Education and Director of Strategic Educational Development
Programme Director MSc in Leadership for the Health Professions
Swansea University Medical School
Swansea University
Swansea
Wales
SA2 8PP
UK

Mobile 0044 (0)7805 632354

Email j.mckimm@swansea.ac.uk

Twitter: <https://twitter.com/jamckimm>

LinkedIn: www.linkedin.com/pub/judy-mckimm/10/98a/a47

ORCID identifier: 0000-0002-8949-5067

Co author:

Dr Mohammed Hasseinen

Associate Professor of Medical Education and Clinical Biochemistry

Consultant of Vice President for Educational Affairs, King Abdulaziz University

Vice presidency for Educational Affairs and College of Pharmacy, King Abdulaziz University, Saudi Arabia and College of Medicine, Tanta University, Egypt.

It is with great pleasure that we accepted the invitation to write the editorial for this issue of the journal on the impact of the COVID-19 pandemic on medical and health professions' education. As we write this in early September 2020, we face an uncertain new academic year in the northern hemisphere, whilst the southern hemisphere heads into a winter like no other in living memory.

Over the last few months, we have seen campuses close and many have not yet re-opened fully, education shifting to online and remote learning, and assessments cancelled, postponed

or run online. However, with the resilience and flexibility that humans possess, educators around the globe are working collaboratively to share challenges, solutions and new best practices. Earlier on in the pandemic, many people were talking about returning to a 'new normal' as it was felt the pandemic would run its course and we would learn to live with it with universities running as they did before. However, it has become apparent as it moves in waves and spikes around the world that universities will not be the same as they were before for the foreseeable future. International students and faculty are hesitant or not allowed to travel to new countries to learn and study; quarantine arrangements or border closures can change overnight, and local lockdowns or restrictions will impact on the way students live and learn and how universities run (McKimm et al 2020). Given the impact of the pandemic on social and health services, the climate crisis and a global economic downturn, leadership is required that is cognisant of these factors, is adaptive and takes an eco-ethical approach (McKimm and McLean 2020).

Many prestigious universities decided early in the pandemic that they would shift all their education online, however this takes significant resources and many universities do not have the capacity or infrastructure to manage this. However, as I write, huge concerns are being expressed in the media that universities are already becoming new hotspots for viral transmission and that students (and faculty) should only be attending face to face classes if absolutely essential. Traditional campus design relies on large groups of people coming together in crowded places, such as lecture theatres, or canteens, and physical distancing will not be possible in many instances. So, it seems inevitable that universities will have to invest in providing a stable and functional infrastructure to facilitate remote and online learning and for 'knowledge-based' teaching this is fairly straightforward. Educators need to make decisions on what will be synchronous (i.e. in real time) and what will be provided for learners to study in their own time (asynchronous). Learning in real time, when faculty and learners come together, is the most precious commodity and so should be targeted at that learning where there is real added value for meeting in real time to discuss, learn from one another and establish a community. A recent post from Daniel Levy on Harvard University's 'Faculty Lounge' blog (www.thefacultyounge.org) suggested that teachers use the 'laundry test' to decide what should be synchronous or asynchronous: ask yourself, could a student fold the laundry whilst attending this session? If yes, then do not make it a live session. So this is one set of decisions that individual educators and course directors will have to make, aiming to achieve a balance between live communications and self-study, sustaining a community of learners, and keeping students motivated for what might be many months, even the whole year.

However, the shift on online learning poses the greatest problems for professional and practical courses, where students need to learn practical skills (such as physical examination of a patient or a laboratory technique) and around the world, educators are devising innovative ways of overcoming these problems. For example, a 'virtual microscope' enables

users to access many specimens (e.g. pathological specimens or rocks and minerals), a 'virtual lab' provides a series of interactive learning events for learners to develop laboratory skills such as operating a microscope or undertaking science experiments using an on-screen simulator or calculator, and 'virtual patients' can be used for medical and health professions' learners to examine, order and analyse test results and investigations, and make diagnostic and management decisions. It is worth exploring what innovations are being developed, not only in your own organisation or country, but on a global basis – the beauty of the virtual world is that access can be from anywhere in the real world.

For those working in the biomedical and clinical sciences, research has been impacted greatly as many individuals and groups have responded to calls for urgent research into developing our understanding of this novel virus and its impact on human health and behaviour, as well as identifying effective treatments and vaccines. We have also seen a proliferation of publications, partly as a consequence of lockdowns, where researchers with outstanding writing projects have used the time opportunistically to write up their work. Some of these articles relate to the virus itself, others are write-ups of existing research. Publishers too have responded flexibly, with increased publication turnaround times, early online articles and additional issues created. So, for some, new research opportunities as well as funding have emerged, whereas other groups and PhD students have struggled to continue with their research as campuses closed down and funding priorities shifted.

It is important then that we pay good attention to learners and faculty wellbeing throughout these upheavals. For the 'sociable introvert' living in a good space, working from home for the foreseeable future might feel fine but for others who are isolated, have poor living conditions or mental health problems, living with high ongoing uncertainty might be very damaging. So, we need to look out for one another and be prepared to take action if we are worried or concerned about others. However, whilst the pandemic initially thrust higher education into a tailspin, gradually as a community we are starting to adapt and even thrive in this new virtual setting and way of working. Other positive aspects relating to the global educational community include another proliferation, this time of virtual webinars, workshops and conferences. This has had unintended consequences, particularly for those from low or middle income countries or low resource settings as access to these virtual meetings has been greatly increased. Many webinars or other virtual 'classes' are free or relatively cheap compared to the costs of attending in person and have expanded scope to include mentoring as well as other support topics (e.g. Ramani et al 2020; Yarris et al 2019). Of course, access to a stable internet connection is needed and this has led many governments and agencies to see internet access as not just a luxury, but a basic utility, such as electricity or water.

Finally, we wish you well in your educational endeavours as we work and learn together through the pandemic. There is much we can do collaboratively and continue to provide an

excellent educational experience for our learners, whilst continuing to explore new opportunities and learn new skills. Maintain a positive optimistic mind set, take care of yourselves and those around you and we will come out the other side as people who have grown through this once-in-a-lifetime (hopefully) event.

References

McKimm J, McLean M. 2020. *Rethinking health professions' education leadership: Developing 'eco-ethical' leaders for a more sustainable world and future*. Med Teach. Epub date: 2020/04/15(DOI: 10.1080/0142159X.2020.1748877):1-6.

McKimm J, Al-Youbi A, Al-Hayani A et al. (2020) *Perspectives in Higher Education: Impact of the COVID-19 Pandemic*. Independently Published, ISBN-13: 979-8672669083

Ramani S, Thampy H, McKimm J, et al. 2020. *Twelve tips for organising speed mentoring events for healthcare professionals at small or large-scale venues*. Med Teach. Epub date: 2020/03/27(DOI: 10.1080/0142159X.2020.1737323):1-8.

Yarris LM, Chan TM, Gottlieb M, Juve AM. 2019. *Finding Your People in the Digital Age: Virtual Communities of Practice to Promote Education Scholarship*. J Grad Med Educ. 11(1):1-5