COVID-19 and medical education in a Brazilian medical school: how to deal with the current complex problems happening in the world? “When life gives you lemons, make lemonade”

Patricia Cury[1], Felipe Colombelli Pacca[1], Sandrine da Silva Miranda [1], Andreia Etsuko Ishii [1], Norma Barbosa Novaes Marques[1], Toufic Anbar Neto[1]

Corresponding author: Prof Patricia Cury pmcury@hotmail.com
Institution: 1. FACERES Medical School
Categories: Comparative Medical Education, Educational Strategies, Professionalism/Ethics, Teaching and Learning, Undergraduate/Graduate

Received: 18/06/2020
Published: 15/09/2020

Abstract

The COVID global pandemia affected all the medical educational system. In Brazil, less than one month after the first case detected, the government confirmed the existence of sustained community transmission of the virus in the country and social distance was imposed, closing all Universities. Virtual learning, through technological advancements and its multiple resources, has been considered as an alternative to mitigate such impact, but it is also possible to develop other skills and medical competencies such as empathy, finitude, ethics and other questions related to the moment in the future doctor. Finally, it is important to take care of mental health of those who work in the medical profession, reinforcing the care and the need to teach academics coping strategies to face stressful situations.

Keywords: medical education; empathy; profissionalism; ethics; COVID-19 pandemic times; medical student mental health

Introduction

The new coronavirus, named SARS-CoV-2, which causes the disease COVID-19, was first detected in humans in December 2019, in the city of Wuhan, China and has since then spread throughout the globe. On January 30th, 2020, the World Health Organization (WHO) declared a Public Health Emergency of International Concern (PHEIC). As a result of that, all countries in the world were asked to prepare themselves to contain the spread of the
virus through active early detection, isolation and proper case management and adequate investigation and notification processes. On March 11th, the World Health Organization declared the disease a global pandemic.

In Brazil, the first case of COVID-19 was confirmed on February 26th, 2020 and in less than one month, on March 20th, the government confirmed the existence of sustained community transmission of the virus in the country (Brasil, 2020).

The new coronavirus pandemic requires that all areas of society create strategies to circumvent the negative impacts of the disease. In the educational system, virtual learning, through technological advancements and its multiple resources, has been considered as an alternative to mitigate such impacts, since social distance has been used as the main measure to fight the virus.

The state of São Paulo, on March 13th, 2020, adopted temporary and emergency measures against to contain the spread of the virus, recommending gradual suspension of higher education classes in private educational institutions (São Paulo, 2020). FACERES Medical School, located in São José do Rio Preto, in the state of São Paulo, implemented a contingency plan and suspended all academic activities on March 16th, even when there was just one case of COVID-19 confirmed in the area. In the following week the Institution started classes online. Even in such a turbulent time in the world, and politically in our country, we were able to organize the studies in medicine in an innovational way, which can contribute to the education of future doctors that will graduate after such a critical time in our society, with skills and knowledge that will help to develop new "ingeniuities for medical education" (Ahmed, Allaf and Elghazaly, 2020). There is a proverbial phrase that says "when life give you lemons, make lemonade". The idea is that even in extremely challenging times it is possible to achieve your goals and that is our recipe for success.

About the transition process from classroom to virtual learning

The learning process was developed with the use of communication and information Technologies. Bearing in mind that COVID-19 was already present in China and other parts of the world, as suggested by Hall et al. (2020), the preparation to virtual learning started two weeks before classes were suspended, with the purchase of online platforms and medicine videos, followed by training of teachers and students.

We did not experience any difficulty or resistance to the adoption of virtual learning, due to the fact that the teaching staff is relatively young and we didn't have any technical problems.

Even the classes that used interactive methodology continue to be taught, with virtual sessions in small groups of "PBL", for instance.

In parallel, we develop a contingency plan to communicate the Academic Institution’s decisions regarding the pandemic not only to students, teachers and staff, but families and other institutions.

About the reorganization of the planning of contents of the medical course

During the planning of the contingency plan of remote activities, we discussed which themes should continue, which should be adapted and which would have to be cancelled (Cleland et al., 2020), such as the practical classes with patients. Although many subjects and topics originally taught were kept, we have sought whenever possible, to correlate topics with current situation and aspects of the COVID-19. For example, in pneumonia classes, explanation of how the infections affects the lungs; in basic science classes, the characteristics of the virus; in epidemiology, the pandemic issue; in research classes, the search of information and selection of information relevant to the disease.
Improvement of learning on ethical matters

In medical anthropology classes, we discussed the scarcity of Personal Protective Equipment (PPE) and difficulties in purchasing medical supplies, political interference, those in vulnerable position (homeless, transgender people, indigenous people, those who live in slums), poverty, racism (such as the "chinese virus" expression) and ethical dilemmas (who should have priority to ICU). In the classes with focus on plurality in health and medical ethics, films and debate were used, as well as discussions about human rights: what are the rights that are being violated during the pandemic? What is the bearing of a doctor in a situation of a pandemic with scarcity of resources?

Development of ability to communicate and empathy

The pandemic provided a good reason to develop in future doctors more empathy and better communication skills, with the activities with first person narratives (as if the student was an elderly person in isolation), reflections and other assignments with the use of images found in the media that show the increase in empathy and compassion.

The written reflections showed that this practice allowed students to become more aware of the feelings that permeate the mind of the elderly, showing a sensitivity that can collaborate for the training of a doctor with a more humanized professional performance, as shown in this example: "With this distance, I was able to get a taste of the feeling that many of my friends must have when not even having news of the family. It is a mixture of feelings, concern, longing, loneliness and guilt for not being more useful in anything, because my greatest happiness as a mother is to be necessary, it is still to have a little knowledge to pass on, to have something that only we can do for children. And to live without it, is to live without purpose”.

Development of better questions about death

In palliative care classes, discussions about death, mourning, spirituality, also relating to the commotion with the pandemic; in forensic medicine, ethical and legal discussions about the differences in burials under normal circumstances and during the pandemic. Questions were also raised about mass graves, suspension of funerals and the distancing from loved ones in the moment of their death.

Management of mental health of students and teachers

As a result of the changes and limitations in people’s lives (students, teachers, staff, family and wider community) and the stress generated by the pandemic, we incorporated themes such as mental health and resilience in the medical and student mental health classes and activities. The students discussed strategies to cope with isolation and questions related to medical staff exposure to infection and its dangers, via "webinars", with teachers, psychologists and guests. As extracurricular activities, the Institution's education and psychological support group provided mentors and individual sessions for students, as well a virtual group meeting for teachers and staff, to discuss questions related to stress and challenges of the current environment. Those strategies were designed to address mental health and resilience in all involved, talking into account the students’ fragility regarding those topics, as observed by us and other authors (Tempski, Martins and Paro, 2012; Ceratti et al., 2020; Wald, 2020). The students created role-play activities based on reality shows, where they used social media with humor, to simulate a house full of medical students in isolation. Some students were chosen to be the characters of the house and produce videos for the ones "outside the house". The remaining students each week, after reviewing the footage, would vote to decide who would remain in the house one more week.
Encouraging solidarity

Our medical school promoted solidarity campaigns for blood donation by students, due to the lack of volunteers for the blood bank because of social isolation, contributing to neglected issues in pandemic times.

Practical activities

Our Medical School offers two years of internship program, in the 5th and the 6th year of the medical course. After 6th years, Brazilian legislation allows that they can practice medicine even if they do not go to residence programs. This fact makes practical activities during under graduation curriculum very important to take care. Internship practical activities were initially interrupted due to the fact that it was not possible to place students in hospitals for their own safety. At first, virtual lessons on generic themes were provided, but because legally only 20% of internship in Brazil can be theoretical, we have to offer students another alternative. For the students in their 5th year of studies, we anticipated the school holidays, to minimize the impact of the interruption of studies; for 6th year students we created a "telemedicine" project in two fronts: 1) monitoring and tracking of 45 nursing homes in partnership with the Municipal Department of Health: a daily remote tracking was performed by the students and supervised by teachers over the phone, when they actively tracked residents, staff and collaborators with flu symptoms, with the aim of detecting early situations of COVID-19 considered high risk, implementing actions to stop the transmission of the virus and worsening of health condition of patients with symptoms; 2) search for patients with underlying conditions such as diabetes and hypertension, that had their routine appointments cancelled due to the pandemic: the students contacted the patients to ask them about their health, answer any questions that may have and refer them to a doctor at a health unit if needed. This work was supervised by doctors associated with the university, through video conference. Those Telehealth activities were not allowed by the Brazilian medical associations before the pandemic but now are legally accepted. They will for sure contribute hugely to medicine in the future, after the pandemic, even with the technological challenges that students will face in several parts of the country.

Conclusion

The COVID-19 pandemic was something unimaginable by doctors. Teaching medicine at this moment is complicated and requires us to reinvent ourselves as institution and teachers, in the face of so many uncertainties and limitations. On the other hand, it is also an opportunity to develop different skills and medical competencies, from clinical reasoning skills, use of new technology and even humanitarian questions, such as empathy, spirituality and resilience.

Take Home Messages

- Medical schools will not be the same in the post-pandemic: traditional classes will have to be replaced by modern technology and virtual platforms
- It is possible to develop skills and medical competencies even remotely, stimulating reflections on empathy, finitude, ethics and other related questions
- It is important to take care of mental health in the medical profession, reinforcing the need to teach academics coping strategies to face stressful situations

Notes On Contributors

Patricia Maluf Cury, Ph.D. is a Professor and Medical Coordinator at Faceres Medical School, São José do Rio Preto, São Paulo, Brazil. Advisor, literature review, data collection, results analysis and final correction. ORCID
Felipe Colombelli Pacca, Pedagogue, Master, teach research methodology at Faceres Medical School and coordinate general assessment. Helped with data collection and discussion. ORCID ID: https://orcid.org/0000-0001-5528-1223

Sandrine da Silva Miranda is a 5th-year Medical student, Faceres Medical School. Bibliographic review, data collection and drafted the manuscript. ORCID ID: https://orcid.org/0000-0001-6319-9641

Andrea Etsuko Ishii is a 5th-year Medical student, Faceres Medical School. Bibliographic review, data collection, and drafted the manuscript. ORCID ID: https://orcid.org/0000-0002-3860-3718

Norma Barbosa Novaes Marques, Ph.D. teach communication skills and coordinate humanity disciplines at Faceres Medical School, São José do Rio Preto, São Paulo, Brazil. Helped with data collection and discussion. ORCID ID: https://orcid.org/0000-0001-5738-236X

Toufic Anbar Neto, MSc, is the Director at Faceres Medical School, São José do Rio Preto, São Paulo, Brazil. Collaborate with the final text review.

Acknowledgements

The authors would like to sincerely thank all the staff and students of Faceres Medical School.

Bibliography/References


### Appendices

None.

### Declarations

*The author has declared that there are no conflicts of interest.*

*This has been published under Creative Commons "CC BY 4.0"* (https://creativecommons.org/licenses/by-sa/4.0/)

### Ethics Statement

We described our experience in teaching during pandemic times, we did not make any interference in the curriculum for the research.

### External Funding

This article has not had any External Funding

---

MedEdPublish: rapid, post-publication, peer-reviewed articles on healthcare professions’ education. For more information please visit [www.mededpublish.org](http://www.mededpublish.org) or contact [mededpublish@dundee.ac.uk](mailto:mededpublish@dundee.ac.uk).