

# VIRTUAL LEARNING IN MEDICINE DURING THE COVID-19 PANDEMIC

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**Introduction.** The SARS-CoV-2 (COVID-19), which was first diagnosed in the end of 2019 in China has rapidly grown to a world-scale pandemic. The high transition rate and lethality of the novel virus led to the significant difficulties for the public organizations and influenced the medical schools, especially due to the increased rate of staff rotations between the medical institutions and hospitals.

Hence, the emerged pandemic significantly increased the demands and pressure on the medical staff, as well as influenced medical education. The risk of COVID-19 transmission led to a massive-scale cancelation of conferences and round tables, as well led to a limited level of personal interaction in accordance to the Centers for Disease Control and Prevention's recommendations, which, in its order, endangered the usual model of in-class education [1].

The online tools have been used for educational purposes as a supplement to classical in-person education prior to the COVID-19 pandemic. For instance, messengers, like WhatsApp, Telegram, WeChat, etc. had been used for online collaboration and share of knowledge and experience in the field of medicine [2]. Social media networks, like Facebook and Twitter, have been a strong online tool both to learn and spread important information.

However, as was said before, these methods have been only supplementary tools to the classical way of learning, since the use of such networks is limited in their organizational capabilities and lack of depth, thereby limiting their ability to be integrated into the educational systems.

**Education process during COVID.** The emergence and rapid spread of the COVID-19 created the necessity of education transition to innovative solutions. A lot of educational programs have implemented the new technologies and software solutions to provide a safe learning environment, including the most widespread solutions as Zoom, Microsoft teams, Google Classroom, WebEx, etc.

Our university implemented an online format of learning, transforming its curriculum to a “non-clinical” approach, as the faculty extensively has been using the online platforms and video conferencing both for lecturing and simulations. Such an approach despite being effective in times of social distancing has several critical issues. Firstly, the lectures and simulation do not satisfy all needs and criteria of the existing curriculum, thereby limiting the amount of delivered knowledge, as not enough materials were produced to satisfy a full clerkship. Secondly, the rapid pace of changes associated with pandemic limited the ability of faculty to effectively change the curriculum and create an appropriate level of educational content. Hence, the student-led discussions and activities replaced classical approaches to maintain student involvement in the learning process. Video conferencing vastly replaced classical resident meetings and lectures.

Despite, the full-scale implementation of online learning on all levels of medical education and training can fulfill the educational demands and needs of medical students during the times of pandemics. Firstly, the institution that relies heavily on instructors from different parts of the world is able to spend certain resources to implement a curriculum that an individual institution is not able to develop and integrate in a limited timeframe. Secondly, as it was mentioned before, online learning in medicine can be a safe replacement to in-class resident learning in accordance with recommendations and requirements of health organizations, international and governmental bodies, as well as allow a certain level of flexibility in the period of constant and rapid changes in guidelines and timelines.



Hence, the education process experienced a rapid and fundamental change in light of the COVID-19 crisis, similar to many other aspects of our lives. The changes caused by the novel coronavirus led to the implementation of various innovative technologies, which, in turn, create a sense of the impossibility of status quo return after the end of pandemics. Hence, while classical resident learning will likely remain to be a core component of medical education, virtual learning has the potential to become an effective, efficient, and flexible alternative of it. The ongoing pandemics, in turn, created a crisis that could give a boost for developing virtual learning techniques and create further incentives to utilize distanced learning in medicine. Thereby, it is necessary to enhance this process and implement further online technologies in a short term, as preparation and enhancement of the medical education system.

**Conclusion.** Hence, the use of tele-technologies and augmented reality has a strong potential to provide a unique and valuable experience for medical students, as well as change the process of surgical training, as the education process can potentially include live proctoring by surgeons and allow remote interactions for an in-depth experience [3]. Such practice is especially valuable in the times of pandemics, as tele-technologies allow social distancing and replaces in-class training as required by the public health policy.

Thereby, the ongoing pandemics can be a valuable lesson for the medical community, serving as an example of difficulties for medical education during the periods of panic. The virtual learning in medicine has significantly transformed the medical training process during the novel coronavirus pandemics. Furthermore, the implementation of tele-technologies allowed the medical community to continue its enhancement and education, strengthening the sense of a unified community during the period of non-alternative social distancing. Thus, to sum up, the virtual learning platforms have the full potential to improve and enhance the process of medical training and education, in general.

### References

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