Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Medical education in the COVID-19 era: Impact on anesthesiology trainees

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Anesthesiologists have been on the frontlines of the COVID-19 pandemic as airway, Intensive Care Unit (ICU), and Perioperative Medicine specialists [1]. At most Academic Anesthesiology Programs, trainees account for a significant proportion of their workforce. Although COVID-19 has perturbed Graduate Medical Education (GME) in all specialties [2], hands-on disciplines (including Anesthesiology) have been affected the most [3]. Herein we briefly explore the impact of COVID-related changes on Anesthesiology training. The pandemic has strained the emotional wellbeing of trainees as training in didactic, clinical, and scientific settings adapts to the new normal. The pandemic also provides its share of new opportunities, but standards and guidelines for training in the new era are warranted.

The trainees themselves have experienced unique stressors. The feeling of loss of control over the situation and disruption of daily schedules and routine patient care has added a lot of emotional burden. In addition, the possibility of accidental COVID-19 exposure without proper personal protective equipment, lack of uniform testing protocols, financial and job security during and after their training and possibility of starting independent practice during a pandemic have all added to the overall anxiety. In particular, there has been anxiety amongst trainees with dependents and pre-existing conditions. This compounds with broad concerns over job markets in the upcoming hiring season.

Beyond stresses felt by trainees, the Anesthesiology GME apparatus has responded to stressors of its own. Specifically, programs conformed to social distancing standards by moving virtually all didactics, conferences, grand rounds, and meetings to online formats. Some have used “virtual classrooms” where instructors and learners can videoconference, view recorded videos and written materials, submit their own materials, and view shared schedules. Others, much like the American Society for Anesthesiologists (ASA) in its weekly COVID town-halls, have relied principally on video conferencing alone.

Clinical training, particularly important to specialties heavily utilizing manual skills, has also changed. Clinical volume declined sharply after the cancellation of elective surgeries at most medical centers in March 2020 [4]. Role switching and cross-training for deployment to new practice settings created training objectives beyond those germane to the field of Anesthesiology. COVID-related practice changes have also impacted many procedural skills. Even simulation sessions, a hallmark of hands-on training, have moved to virtual sessions with unmeasured efficacy. The American Board of Anesthesiology (ABA) is awarding clinical training credit to quarantined trainees and postponing/canceling multiple accrediting examinations (e.g. ABA Basic exam postponed five months in hopes of test centers reopening), but the gap in clinical education remains [5].

Training programs have responded with a wave of pandemic driven research, education, and wellness initiatives [3,6,7]. Laboratories were closed and research conferences cancelled, however COVID-19 provided new avenues for resident exposure to research. Most residents have never experienced a pandemic, largely thanks to successful public health measures, and thus pandemic education in disaster response, resource stewardship, and departmental coordination are all areas of growth. New skills in telemedicine, committee participation, simulation of pandemic-specific skills and communication, and even the professional use of social media are being absorbed by our trainees. Meanwhile, wellness initiatives encourage residents to leverage quiescent interests beyond medicine to form peer-to-peer support networks.

It is our hope that this pandemic, despite its many costs, has provided an avenue of rapid growth in Anesthesiology training. Engaging online learning environments may supplant the banal slide presentation. System-level committee participation and the structured wellness of our trainees may remain central foci of residency training. Our trainees are uniquely positioned to lead in this pandemic (and the next). Training programs have responded broadly to the stresses of COVID-19, and these actions should serve as guides for needed national standards and objectives that will guide the future of Anesthesiology training.

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Declaration of competing interest

None.

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