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My Thoughts/My Surgical Practice

## Global surgery in the time of COVID-19: A trainee perspective



To the Editor

We read with great interest a number of recent articles by L Ferrario et al.,<sup>1</sup> AN Martin & RT Petroze,<sup>2</sup> C Shao<sup>3</sup> and Chen et al.<sup>4</sup>; we would like to thank the authors for sharing their perspectives. We echo the authors' concern that the COVID-19 pandemic has presented unprecedented challenges to surgical training at all levels and support their desire to identify opportunities for trainees interested in surgery. Eager to continue the conversation, we provide suggestions for continuing education for trainees interested in global surgery (GS) during this pandemic (see [Table 1](#)). The acquisition and application of principles learned through GS, such as health economics, ethics, and health equity, are particularly pressing now for surgical trainees, as the recent health crisis exposed health disparities and resource scarcity in health systems worldwide.<sup>2,3</sup> As described by C Shao, "scarcity [on multiple fronts] has become a reality" for surgeons and doctors facing the COVID-19 crisis in the U.S. and abroad, which has forced physicians to make challenging healthcare decisions.<sup>3</sup> Additionally, the rise in COVID-19 cases in the U.S. unleashed an ugly tide of anti-Asian sentiment, seen both in healthcare and in society at large.<sup>4</sup> These phenomena further reinforce the importance and profound necessity of promoting GS principles to surgical trainees, so that they are equipped with the tools to address healthcare crises, both locally and globally. As North American medical students and residents passionate about GS, we offer these reflections on opportunities for continued and meaningful participation in GS for trainees during this time.

### Online opportunities and web-based learning in global surgery

While the COVID-19 pandemic has significantly impacted medical trainees and GS, efforts have not come to a complete halt. As suggested by L Ferrario et al., video-conferencing and virtual lectures have been particularly important educational tools for students of GS during this time.<sup>1</sup> Numerous trainee-led organizations continue to remain active via web-based modules. For example, the International Student Surgical Network (InciSioN) has hosted webinars on various topics since the beginning of the pandemic.<sup>5</sup> InciSioN led a webinar with surgeons from the U.S., Germany, Italy, U.K., and the Netherlands regarding the impact of COVID-19 on surgical training.<sup>5</sup> Similarly, a more recent webinar in June 2020 discussed strategies for healthcare professionals in trauma and critical care to provide safe and effective care during this pandemic.<sup>5</sup> A recent panel of physicians from Germany, Kosovo, Croatia, and Iran discussed the impact

on medical education during the pandemic.<sup>5</sup> In addition, since the beginning of this crisis, the Global Surgery Student Alliance (GSSA) has hosted ten free GS webinars on a variety of topics.<sup>6</sup> These topics include leadership in GS, anesthesiology, obstetrics and gynecology in a global arena, the importance of checklists in surgery, global neurosurgery, and capacity-building during short-term medical missions.<sup>6</sup> Although these webinars do not provide the same on-the-ground experiences as GS missions, they inform trainees about fundamental principles and skills needed to continue their training in GS.

Social media also plays an important role in engaging trainees in GS, while practicing physical distancing. For instance, ReSurge Global Training Program (RGTP) launched a Facebook group to deliver weekly lectures and clinical case presentations.<sup>7</sup> This group enrolled 103 members from 14 different countries to educate trainees on global reconstructive surgery.<sup>7</sup> Additionally, Twitter has facilitated many discussions around GS. Physician-led case studies, journal clubs, or "tweetorials" allow trainees to join a global platform and interact with leaders in various areas of surgical interest. Specifically, the use of hashtags, such as #GlobalSurgery, #COVID19training, or #medtwitter reinforce a sense of virtual community.

### The role for collaboration

With global health efforts focusing more on equity and bidirectional relationships, the transition to online learning during the COVID-19 crisis presents a novel chance for similar international collaboration. As U.S. medical schools have rapidly adopted remote learning modules, an opportunity exists to extend online learning to global partners. This avenue has been explored in a GS context, with simulations and curriculums created for U.S. medical students being disseminated via online web-based platforms.<sup>8</sup> Increased online learning during and after the current pandemic allows for the sharing of lecture materials between medical schools around the world, creating a "more global classroom."<sup>2</sup> A basic international medical school curriculum could be considered, allowing movement toward basic common knowledge and skills for future physicians and surgeons worldwide.

### Conclusions

While travel restrictions interfering with GS electives may persist indefinitely, trainees at all levels can continue to engage with GS and may even be able to enhance their participation through online platforms. With freely accessible online lectures through video-conferencing software and social media platforms,

**Table 1**  
Various platforms for trainees to engage in global surgery during the COVID-19 pandemic.

Organization or platform	Example of how involvement in global surgery has continued
International Student Surgical Network (InciSioN): <a href="http://incisionnetwork.org">incisionnetwork.org</a>	Hosted educational webinars on a variety of topics including trauma and critical care, medical education, etc.
Global Surgery Student Alliance (GSSA): <a href="http://www.globalsurgerystudents.org/webinars">www.globalsurgerystudents.org/webinars</a>	Led ten free webinars on various medical and surgical specialties
ReSurge Global Training Program (RGTP): <a href="http://www.facebook.com/ReSurge">www.facebook.com/ReSurge</a>	Developed a Facebook group to facilitate collaboration among surgeons in LMICs and experts from around the globe
Harvard Program in Global Surgery and Social Change (PGSSC): <a href="http://www.pgssc.org">www.pgssc.org</a>	Assembled a panel of experts to deliver an online discussion on surgical capacity-building in LMICs as pandemic readiness strategy
InterSurgeon: <a href="http://intersurgeon.org">intersurgeon.org</a>	Platform where members can create an offer either to provide or receive education, clinical assistance, or additional surgical training
CovidSurg: <a href="http://globalsurg.org/covidsurg/">globalsurg.org/covidsurg/</a> Social Media (e.g. Twitter)	International collaborating group that strives to understand surgical outcomes of patients with COVID-19 Case studies, journal clubs, “tweetorials,” and hashtags (such as #COVID19, #Global Surgery, and #MedTwitter) can be used to engage a global audience
Remote educational modules	Online learning can promote sharing of educational materials among medical schools across the world

the COVID-19 pandemic presents an opportunity to amplify the involvement of medical trainees in GS worldwide. The increased use of online learning will likely allow for a greater number and diversity of trainees to participate in GS, facilitating more robust and meaningful bi-directional learning. Engaging with these resources will create better informed trainees and will equip them with the global perspective and GS education needed to be leaders in surgery.

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