



ACADEMY OF MASTER SURGEON EDUCATORS™

AMERICAN COLLEGE OF SURGEONS
DIVISION OF EDUCATION

Special Committee of the ACS Academy of Master Surgeon Educators to Address Challenges and Opportunities Relating to Surgery Residency Training during the COVID-19 Pandemic, Division of Education

Article from the Survey Subcommittee: Assessing the Impact of the COVID-19 Pandemic on
Surgical Education

It is a cold spring morning and the sun is just rising as I prepare for a morbidity and mortality (M&M) conference and Grand Rounds. Rather than going to the hospital, I get my coffee and turn on my computer and hit the videoconference link in the calendar invite. I am taken to a virtual conference. I say to myself, "Make sure you know if your camera is on or off and keep the microphone muted unless you want to speak." M&M is moderated by our program director. Discussion is verbal or through the chat function. There are 80 attendees and no medical students. Two cases are thoroughly discussed with PowerPoint, images, and a literature review. The meeting is adjourned and we move into Grand Rounds on topics in colorectal surgery with a panel of experts from our hospital and two professors from outside universities to discuss cases presented by the surgical residents. All were engaged and people did not want to leave the meeting when it was time to adjourn lest they would need to don their mask and maintain physical distancing. Although it was a Thursday morning, the staffing of the hospital was like a weekend. There was no elective surgery and only a few emergencies. Is this the new norm? How will this pandemic transform surgical education?

We have all been affected in many ways by the COVID-19 pandemic. Our principal focus is and always will be our patients. Yet, it has become increasingly apparent that an innocent bystander caught in the virus surge is surgical education. We are used to having robust surgical education programs, including teaching rounds with teams of residents, students, and attendings; a busy operating room day with multiple rooms where surgical teams perform open, laparoscopic, and robotic procedures; residents learning to operate; and students learning essential skills and interacting with surgeons enticing them with the professional rewards of a surgical career. Yet with the surge of COVID-19, our educational programs have changed drastically overnight.

How have they changed? What innovative adaptations have taken place? How can residents achieve their minimum case requirements with the current reductions in elective and emergency surgery? What adjustments can we make as surgical educators? With the foresight of the Steering Committee of the

American College of Surgeons Academy of Master Surgeon Educators, a Special Committee was appointed for the following purposes:

1. Identify major challenges that surgery residency programs, surgery faculty, and surgery residents are facing across all surgical specialties in the rapidly changing health care environment.
2. Define opportunities and solutions to address these challenges.
3. Design innovative residency training models that would be helpful in addressing the current complexities and, in the long term, transforming residency training across all surgical specialties.
4. Share scarce resources, provide valuable guidance, and disseminate novel educational methods and tools to positively impact surgery residency training across the surgical specialties.
5. Address key issues relating to governance of residency training programs and work collaboratively with national regulatory organizations to achieve the best outcomes.

Under the guidance of Drs. L.D. Britt and Ajit Sachdeva, it was recognized that the committee would need to collect information from surgical educators. A Survey Subcommittee was appointed with the following members (all MD, FACS): E. Christopher Ellison (Chair), Haile Debas, Timothy Eberlein, Diana Farmer, Jeffrey Matthew, Mohsen Shabahang, Kathryn Spanknebel, and Steven Stain.

Over the past two weeks, a survey was created to assess the impact of COVID-19 on surgical education programs. The committee was assisted by Alisa Nagler, JD, MA, EdD, who prepared the survey with the committee, as well as the robust review and modifications by Ms. Patrice Blair and Dr. Sachdeva. The survey is comprehensive yet flows easily and will capture the impact of the pandemic on didactic and operative educational programs and innovative adaptations that evolved in response to the challenges.

This voluntary survey is specifically designed to yield the following information:

1. Determine the frequency of Accreditation Council for Graduate Medical Education (ACGME) Pandemic Stage and how this is related to educational impact.
2. Determine how ACGME Pandemic Stage changes over time and the recovery period for educational programs.
3. Determine if educational leaders were aware of their institutional disaster plan and if it included a section about continuation of regular educational activities and if the latter should be a standard.
4. Determine the extent of the frequency of infection with COVID-19 for faculty, surgical trainees, and medical students and the impact of educational programs by ACGME Stage, hospital type, and size.
5. Identify specific adaptive steps, innovations, and effectiveness for educational conferences (by type, M&M, Grand Rounds, Tumor Board, etc.) that were taken in response to the pandemic. What worked and what did not?
6. Determine the impact of the COVID-19 Pandemic on:
 - a. Elective and emergency surgery volume, achievement of minimum case numbers and corrective actions by Stage, hospital type, size, and program size
 - b. Clinical rotations and adaptive strategies
 - c. Didactic educational programs and outside rotations and the effect of various adaptive strategies
 - d. Learner evaluation
 - e. The medical student clerkship and Sub-I and identify any corrective actions, if any

- f. Overall learner physical health, emotional health, and sense of physical safety and the effect of institutional actions to support the learner

The initial survey and a check-in survey were reviewed by the American Institutes for Research Institutional Review Board and determined to be exempt, and we received word that we could begin circulation and data collection. The first survey is 36 questions and takes about 20 minutes to complete.

About two weeks after completing the initial survey a short check-in survey will be sent to query educational leaders about ACGME Pandemic Stage progression or regression with a recovery process. Once approved by the various ACGME-approved constituent groups, the survey will be ready to be sent to department chairs and program directors in General Surgery and surgical subspecialties (Bariatric Surgery, Minimally Invasive Surgery, Cardiothoracic Surgery, Colon and Rectal Surgery, Critical Care, Neurological Surgery, Obstetrics and Gynecology, Ophthalmology, Otolaryngology, Orthopaedic Surgery, Pediatric Surgery, Plastic and Reconstructive Surgery, Surgical Oncology, Transplantation, Urology, and Vascular Surgery), and clerkship directors in General Surgery. By mid-summer 2020, we hope to have the aggregate data analyzed so we can determine the educational challenges created by the pandemic, how surgical ingenuity responded, an assessment of what worked and what did not, and what strategies we might continue to use in our playbook going forward.