

Report of APDS Taskforce on the Medical Student Experience

Chair: Jennifer LaFemina, M.D., FACS

Committee Members: Vance Sohn, M.D., FACS; Mo Shabahang, M.D., FACS; David Farley, M.D., FACS; Vanita Ahuja, M.D., FACS; Marcus Balters, M.D., FACS; Clarence Clark, M.D., FACS; Keith Delman, M.D., FACS; Daniel Relles, M.D., FACS; Karen Brasel, M.D., FACS; Adnan Alseidi, M.D., FACS

Consensus Statement Ideal MS3-MS4 Experiences for Preparedness for General Surgery Internship

Summary of Recommendations

- The goal of this consensus is to provide guidance on the minimum standard for senior medical student (third and fourth year) experiences to address essential General Surgery curriculum components and to assist with identification of students who may have an aptitude for pursuing a General Surgery residency.
- Experiences on General Surgery rotations should mirror the learning and working environment of a surgical intern. Such opportunities mimic the next phase of learning and therefore, help guide informed decisions regarding entrustability for entry into residency training.
- We strongly encourage medical schools to adopt a curriculum that integrates the Core Entrustable Professional Activities (EPAs) with the modified ABS EPAs, targeting essential components of a General Surgery.
- We strongly encourage medical schools to require night, holiday, and weekend shift experiences for senior medical students considering a General Surgery internship.
- We strongly encourage medical schools to require a dedicated Critical Care experience for senior medical students considering a General Surgery internship.
- We strongly encourage that senior students entering a General Surgery internship partake in a skills preparatory curriculum prior to graduation to ensure entrustability at the appropriate level of nontechnical and essential technical skills for all graduating medical students. While we cannot dictate or mandate UME curriculum design, General Surgical programs will more strongly consider candidates who have participated in a skills preparatory course.
- We support that the presence of Surgical Interest Group and Surgical Honors/Specialty tracks offer opportunities for more focused subspecialty exposure to achieve additional General Surgery-specific needs identified by General Surgery Program Directors.
- Such activities will provide undergraduate and graduate medical education programs and individual learners vital opportunities to create individual learning plans aimed to improve preparation for matriculation into residency.
- A strength of the current recommendations is that the proposed strategies may and should be considered for all senior medical students pursuing a procedural specialty.

Rationale for a Consensus on Ideal Senior Medical Students Experiences

In light of increasing concerns that some medical school graduates are not prepared at the time of graduation (1-4) and concerns regarding objective identification and selection of allopathic and osteopathic medical students (herein termed medical students) who are suited for and have an aptitude to be successful General Surgery residents, the General Surgical Education Communities strive to improve preparation of medical students pursuing a General Surgery internship.

There has been debate around the importance of USMLE in the selection of students for training programs. While it did provide important information about academic performance, the USMLE Step I, which is now graded on a Pass/Fail system, was not intended to be an examination of aptitude nor a confirmation that a trainee would be a successful technical physician in General Surgery.

This APDS statement identifies what the General Surgery Program Directors consider to be ideal experiences for third and fourth year medical students (herein termed senior medical students), focused around what is considered to be essential for an intern entering a General Surgery training program. This consensus is not intended to be the maximal standard to which all students pursuing surgery should be trained. This statement instead provides guidance about the minimum standard that should be achieved for senior medical students pursuing a General Surgery internship.

Integration of Undergraduate and Graduate Medical Education Entrustable Professional Activities for Essential General Surgery Content

Medical schools are committed to teaching medical students essential content in all spheres of medicine, including content considered to be essential for General Surgery and Surgical subspecialties. Entrustable Professional Activities (EPAs) are designed to assess essential activities to guide entrustment decisions (see Appendix). The Association of American Medical Colleges (AAMC) guides that Core EPA for Entering Residency can serve as the basis around which additional specialty-specific EPAs may be built. For all learners, EPAs offer a vital opportunity to design medical curricula that can be longitudinal and foster ongoing lifelong learning, particularly if integrated with the graduate medical education (GME) EPAs.

The American Board of Surgery (ABS) has defined five EPAs for General Surgery Residents (Table A1, (5)). The AAMC has similarly adopted 13 Core EPAs for Entering Residency (Table A2), with a goal for full compliance in undergraduate medical education (UME) by 2023(6). These EPAs delineate “those activities that all entering residents should be expected to perform on day 1 of residency without direct supervision, regardless of specialty. Data suggest there is a large gap between students and the General Surgery Program Directors regarding confidence to perform the Core EPAs without supervision.(7)

Table 1 summarizes the proposed integration of UME and GME EPAs for essential General Surgical content. The ABS EPAs are modified to reflect consensus on what is considered to be essential general surgical knowledge for a senior medical student.

We strongly encourage medical schools to adopt a curriculum that integrates the Core EPA with the modified ABS EPAs. Such integration facilitates the longitudinal learning plan for future surgical trainees in a manner that will allow graduated entrustability across spheres of training.

One available resource that integrates the Core EPAs with the essential General Surgery topics is the American College of Surgeons (ACS) and the Association of Surgical Education (ASE) Medical Student Core Curriculum (<https://www.facs.org/education/program/core-curriculum>). This online resource is free of charge and represents the consensus of stakeholders in the UME and GME spheres.

Night, Holiday, and Weekend Shift Experiences

Night, holiday, and weekend shifts are expected of residents within all surgical specialties and are a component of a General Surgery practice after graduation. Data reveal that the number of medical student nonsurgical call nights correlates with junior resident confidence in management of acute on call problems.(8) Beyond the benefits of affording confidence in patient care, it is the expectation of Program Directors and Surgical training programs that students will have adequate preparation and exposure to the rigors of the learning and working environment in a General Surgery residency program and beyond to obtain objective evidence about a career choice in General Surgery, personal resilience, and durability. In the same way that EPAs are designed to ensure that learners are entrustable to perform at the next phase in their training, creating a work environment structure in medical school that simulates the next phase of training in residency will be an important step in achieving and ensuring entrustability. We support that this will better inform and solidify students' choice to pursue General Surgery. These experiences will provide realistic exposure to stressful conditions, which are acceptable and necessary and assist students to develop strategies for fatigue mitigation and burnout, components that are essential in the pursuit of any training program.

We strongly encourage medical schools to require night, holiday, and weekend shift experiences for senior medical students considering a General Surgery internship.

Dedicated Critical Care Experience

Critical care exposure, including an Intensive Care Unit (ICU) rotation, is a mandatory component of the General Surgery training, though only a small portion of medical students are required or participate in an ICU rotation.(9) Many surgical disciplines, extending beyond General Surgery, involve the care of patients whose illnesses are of significant acuity and severity.

Knowledge gained during a critical care experience specifically related to working in interprofessional care teams, understanding complex physiology, identifying patients requiring urgent or emergent care, initiating evaluation and management, collaborating with interprofessional care teams, and performing general procedures of a physician (e.g., airway management) align with the core EPAs to strengthen core knowledge and decision-making skills within high-intensity scenarios that would resemble those in which entrustability would need to

be assigned in residency. This benefit can be achieved in many intensive care settings, and the exact experience should be guided by the learner’s goals.

We strongly encourage medical schools to require a dedicated Critical Care experience for senior medical students considering a General Surgery internship.

Skills Preparatory Course

Students and residency program directors have reported that the fourth year of medical school should be used to prepare for and transition to chosen specialties.(10-12) While preparatory courses, particularly in General Surgery, have historically focused on technical skills, a survey distributed to General Surgery Program Directors by the Association of Program Directors in Surgery (APDS) demonstrated that most General Surgery program directors felt a greater need for incoming interns to receive nontechnical skills training, particularly for common patient care issues that an intern might encounter on the ward (Personal communication, Keith Delman, MD). Such data echoes the need for all entering residents to have a skills preparatory course prior to graduation to ensure a baseline skill set in nontechnical and essential technical skills: in short, leveling the playing field to address common problems and scenarios an intern might encounter at the time that they enter residencies including but not limited to General Surgery.

The Core EPAs and APDS Survey results reiterate similar needs that should be prioritized for implementation of a skills preparatory course, focused primarily on nontechnical skills (Table 2). Additional areas of need identified by program directors are summarized in Table A3.

Table 2. Recommended Aspects of a Skills Preparatory Course

Identified Skill	Core EPA	APDS Survey
Writing Orders for hospitalized patients	x	x
Transitions of care and patient handoffs	x	x
Informed Consent: Identify components and apply the concepts in a standardized patient for basic procedures	x	x
Impact of Communication Breakdowns: Identify, respond, and correct a series of communication failures	x	x
Disclosing Adverse Events: Disclosing adverse events, errors, or near misses	x	x
Discharge Planning: Duties associated with the discharge of a patient from the hospital	x	x
Management of Shock: Burn, STEMI, hemorrhage, sepsis, pneumothorax	x	x
Introduction to Radiologic Imaging: Abdominal, chest, and hepatobiliary imaging, radiographic appearance of tubes, lines and drains, and contrast utilization	x	x
Mock Pages: Typical pages from nurses and calls from patients to surgical interns	x	x
Fluids and Electrolytes: Common IV fluids, electrolyte derangements and their management	x	x

The ABS, American College of Surgeons (ACS), APDS, and Association of Surgical Education (ASE) issued a joint statement in 2014 endorsing the adoption of medical school preparatory courses that allowed arriving interns to have improved training in essential clinical and technical skills that could be performed safely and effectively on arrival. Data on course implementation suggest that participants outperform their nonparticipating peers early in training, have improved confidence, and demonstrate accelerated learning curves.(2, 13-16)

The importance of understanding student preparedness at entry is increasingly important for individualized learning plan (ILP) development, which should start during undergraduate medical education and must extend, under the ACGME Common Program Requirements, through graduate medical education.(17) Knowledge of areas of strength and improvement in a skills preparatory course (among other data points) can allow for a collective opportunity for the medical schools, residency programs, and incoming interns to develop longitudinal ILP. Prior to or at arrival, we suggest that incoming interns review and forward their fourth year ILP to their incoming program directors. Such information will provide immediately available and actionable data to individualize onboarding needs. As a starting point, applicants will now be asked about skills course participation, beginning in the 2020-2021 Match cycle.

We strongly encourage that senior students entering a General Surgery internship take part in a skills preparatory curriculum prior to graduation to ensure entrustability in nontechnical skills and essential technical procedures. While we cannot dictate or mandate UME curriculum design, General Surgical programs will more strongly consider candidates who have participated in a skills preparatory course.

Recognizing the challenges that institutions and individual learners might face to take part in such programs and understanding that entrustability of General Surgery interns for specialty-specific technical skills additionally is the responsibility of the residency programs, here we provide some additional examples of how such a longitudinal approach might be achieved.

Many institutions may choose to incorporate institution-specific preparatory courses. Organization and outcomes of these have been increasingly reported.(18) Consideration should be given to regionalize such courses. An alternative option includes a standardized national residency preparatory curriculum, called the Resident Prep Curriculum, developed by the ACS, APDS, and ASE. The curriculum involves 11 scenarios that map to seven of the AAMC Core EPAs for Entering Residency. A survey of General Surgery Program Directors evaluating the pilot program reported that incoming participating interns had a global advantage of 25% with significant improvements in technical skills and a trend to improvement in other competencies.(19)

Further, the ACS administers the Entering Resident Readiness Assessment (ERRA) to assesses resident preparedness for clinical decision-making at entry. Built within this is a process to create an ILP. Currently, this is administered to interns at the time of their matriculation to residency. In the future, shifting this program's availability to an earlier time period may allow

learners and program directors data in advance of arrival, such that ILP may be in place during the months prior to matriculation.(20)

Other Experiences

We encourage the presence of a Surgical Interest Group and a Surgical Honors/Specialty Track as we support that these experiences have benefit to students in terms of increased exposure, experience, and mentorship. With nearly half of the US Medical Schools having a surgical interest group, these opportunities represent a clear advantage for students pursuing a surgical residency.(21, 22) These experiences may also allow for opportunities, possibly in collaboration with the institutional Department of Surgery, in specialty-specific additional training identified by the APDS Program Director needs assessment survey, beyond the essential components of medical education defined by the Core EPAs (Table A3).

Conclusions

The goal of this consensus is to provide guidance on senior medical student (third and fourth year) experiences to address essential General Surgery curriculum components and to assist with identification of students who may have an aptitude for pursuing a General Surgery residency. We support that experiences on General Surgery rotations should mirror the learning and working environment of a surgical intern. These experiences are intended to inform the minimum standards that should be achieved by a senior student pursuing a General Surgery internship.

We strongly encourage medical schools to adopt a curriculum that integrates the Core EPAs with the modified ABS EPAs.

We strongly encourage medical schools to require night, holiday, and weekend shift experiences and require a dedicated Critical Care experience for senior medical students considering a General Surgery internship. Such opportunities mimic the next phase of learning and therefore, help guide informed decisions regarding entrustability at entry into residency training.

We strongly encourage that senior students entering a General Surgery internship should take part in a skills preparatory curriculum prior to graduation to ensure entrustability in nontechnical skills and essential technical procedures.

We support that the presence of Surgical Interest Group and Surgical Honors/Specialty tracks to offer opportunities for more increased subspecialty exposure, possibly in collaboration with institutional Surgery Departments. Such experiences would help address additional needs identified by General Surgery Program Directors.

These opportunities will support longitudinal ILPs aimed to improve preparation for matriculation to residency and support lifelong learning.

Table 1: Proposed Integration and Mapping of Core and Essential* General Surgery Entrustable Professional Activities

	Gather a history/Perform a Physical Exam	Prioritize a Differential Diagnoses	Recommend and interpret common diagnostic and screening tests	Enter and discuss orders and prescriptions	Document a clinical encounter in the patient record	Provide an oral presentation of a clinical encounter	Form clinical questions and retrieve evidence to advance patient care	Give or receive a patient handover to transition care responsibility	Collaborate as a member of an interprofessional team	Recognize a patient requiring urgent/emergent care and initiate evaluation/management	Obtain informed consent	Perform general procedures of a physician**	Identify system failures and contribute to a culture of safety and improvement
Evaluate patient with an inguinal hernia	X	X	X	X	X	X				X	X		
Evaluate patient with right lower quadrant pain	X	X	X	X	X	X	X	X		X	X		
Evaluate patient with gallbladder disease/right upper quadrant pain	X	X	X	X	X	X	X	X		X	X		
Evaluate patient with blunt trauma	X	X	X	X	X	X	X	X	X	X		X	X***
Evaluate patient with penetrating trauma	X	X	X	X	X	X	X	X	X	X		X	X***
Conduct general surgery consultation to other health care providers	X	X	X		X	X	X						

*Modified to reflect specialty-specific application to medical student; **Cardiopulmonary resuscitation, bag/mask ventilation, venipuncture, intravenous line placement, as defined by Core EPA; ***Debriefing

References

1. Naylor RA, Hollett LA, Castellvi A, Valentine RJ, Scott DJ. Preparing medical students to enter surgery residencies. *American journal of surgery*. 2010 Jan;199(1):105-9.
2. Okusanya OT, Kornfield ZN, Reinke CE, et al. The effect and durability of a pregraduation boot cAMP on the confidence of senior medical student entering surgical residencies. *J Surg Educ*. 2012 Jul-Aug;69(4):536-43.
3. Lyss-Lerman P, Teherani A, Aagaard E, Loeser H, Cooke M, Harper GM. What training is needed in the fourth year of medical school? Views of residency program directors. *Acad Med*. 2009 Jul;84(7):823-9.
4. American Board of S, American College of S, Association of Program Directors in S, Association for Surgical E. Statement on surgical pre-residency preparatory courses. *JAMA surgery*. 2014 Nov;149(11):1198-9.
5. Brasel KJ, Klingensmith ME, Englander R, et al. Entrustable Professional Activities in General Surgery: Development and Implementation. *J Surg Educ*. 2019 Sep - Oct;76(5):1174-86.
6. Colleges AoAM. Core Entrustable Professional Activities for Entering Residency: Faculty and Learners' Guide. 2014.
7. Lindeman BM, Sacks BC, Lipsett PA. Graduating Students' and Surgery Program Directors' Views of the Association of American Medical Colleges Core Entrustable Professional Activities for Entering Residency: Where are the Gaps? *J Surg Educ*. 2015 Nov-Dec;72(6):e184-92.
8. Zeng W, Woodhouse J, Brunt LM. Do preclinical background and clerkship experiences impact skills performance in an accelerated internship preparation course for senior medical students? *Surgery*. 2010 Oct;148(4):768-76; discussion 76-7.
9. Fessler HE. Undergraduate medical education in critical care. *Crit Care Med*. 2012 Nov;40(11):3065-9.
10. Walling A, Merando A. The fourth year of medical education: a literature review. *Acad Med*. 2010 Nov;85(11):1698-704.
11. Langdale LA, Schaad D, Wipf J, Marshall S, Vontver L, Scott CS. Preparing graduates for the first year of residency: are medical schools meeting the need? *Acad Med*. 2003 Jan;78(1):39-44.
12. Benson NM, Stickle TR, Raszka WV, Jr. Going "Fourth" From Medical School: Fourth-Year Medical Students' Perspectives on the Fourth Year of Medical School. *Acad Med*. 2015 Oct;90(10):1386-93.
13. Antonoff MB, Swanson JA, Green CA, Mann BD, Maddaus MA, D'Cunha J. The significant impact of a competency-based preparatory course for senior medical students entering surgical residency. *Acad Med*. 2012 Mar;87(3):308-19.
14. Miller S, Shipper E, Hasty B, et al. Introductory Surgical Skills Course: Technical Training and Preparation for the Surgical Environment. *MedEdPORTAL*. 2018 Nov 28;14:10775.
15. Parent RJ, Plerhoples TA, Long EE, et al. Early, intermediate, and late effects of a surgical skills "boot camp" on an objective structured assessment of technical skills: a

randomized controlled study. Journal of the American College of Surgeons. 2010 Jun;210(6):984-9.

16. Brunt LM, Halpin VJ, Klingensmith ME, et al. Accelerated skills preparation and assessment for senior medical students entering surgical internship. Journal of the American College of Surgeons. 2008 May;206(5):897-904; discussion -7.
17. ACGME. ACGME Common Program Requirements (Residency), Effective July 1, 2019. 2018.
18. Laack TA, Newman JS, Goyal DG, Torsher LC. A 1-week simulated internship course helps prepare medical students for transition to residency. Simul Healthc. 2010 Jun;5(3):127-32.
19. Stewart MK, Henry RC, Ehrenfeld JM, Terhune KP. Utility of a Standardized Fourth-Year Medical Student Surgical Preparatory Curriculum: Program Director Perceptions. J Surg Educ. 2018 May - Jun;75(3):639-43.
20. Surgeons ACo. ACS Entering Resident Readiness Assessment (ACS ERRRA). Available at: <https://www.facs.org/education/resources/acs-erra>. Accessed March 21, 2020.
21. Goldin SB, Schnaus MJ, Horn G, et al. Surgical interest and surgical match for third-year students: results of a prospective multivariate longitudinal cohort study. Journal of the American College of Surgeons. 2012 Nov;215(5):599-606.
22. Goldin SB, Wahi MM, Wiegand LR, et al. Perspectives of third-year medical students toward their surgical clerkship and a surgical career. The Journal of surgical research. 2007 Sep;142(1):7-12.
23. Gauer JL, Jackson JB. The association between United States Medical Licensing Examination scores and clinical performance in medical students. Adv Med Educ Pract. 2019;10:209-16.

Appendix

As opposed to milestones, Entrustable Professional Activities (EPA) take a more holistic approach and address some of the limitations of competencies, which have been summarized in prior work.(5) EPAs are observable work units of essential activities that can be assessed in real time in the workplace and integrate competencies and subcompetencies(6) (Figure A1)

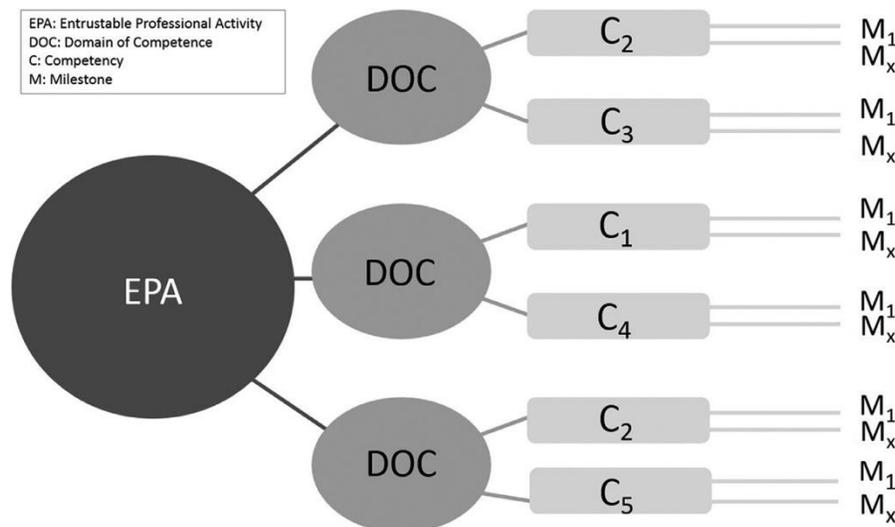


Figure A1. Integration of EPA and ACGME Competency, Subcompetencies, and Milestones.(5)

Table A1: GME EPA(5)

Evaluate and manage a patient with an inguinal hernia
Evaluate a patient with right lower quadrant pain and manage appendicitis
Evaluate and manage a patient with gallbladder disease
Provide general surgery consultation to other health care providers
Evaluate and initial management of patient presenting with blunt or penetrating trauma

Table A2: AAMC Core EPAs for Entering Residency(6)

Gather a history and perform a physical examination
Prioritize a differential diagnosis following a clinical encounter
Recommend and interpret common diagnostic and screening tests
Enter and discuss orders and prescriptions
Document a clinical encounter in the patient record
Provide an oral presentation of a clinical encounter
Form clinical questions and retrieve evidence to advance patient care
Give or receive a patient handover to transition care responsibility
Collaborate as a member of an interprofessional team
Recognize a patient requiring urgent or emergent care and initiative evaluation and management.
Obtain informed consent for tests and/or procedures
Perform general procedures of a physician: Basic cardiopulmonary resuscitation, bag and mask ventilation, venipuncture, inserting an intravenous line
Identify system failures and contribute to a culture of safety and improvement

Table A3. Additional Cited Needs from Program Directors for Incoming Interns

<p>Suturing and Knot Tying</p> <ul style="list-style-type: none"> • Knot Tying: 2-handed, 1-handed, instrument • Simple interrupted, running simple, running subcuticular, vertical and horizontal mattress and interrupted subcuticular • Tie on a Pass: Tie a suture around a clamp
<p>Essential Procedural Presence</p> <ul style="list-style-type: none"> • Scrub, gown, and identify basic instruments • Solo Sterile Setup for Minor Procedure: Setup instruments and equipment in a sterile manner to perform a minor procedure • Surgical Olympics: OR fire, time out, skin staples, gown and glove independently, and set up electrocautery
<p>Procedures</p> <ul style="list-style-type: none"> • Urethral Catheterization • Chest Tube Insertion • Central Line Insertion: Ultrasound guided internal jugular and subclavian • Excision, Debridement, and Local Anesthesia: Administer local anesthetic and then

perform excision of a lesion and drainage of an abscess from skin
Death Certification: Duties associated with the death of a patient in the hospital
Social Media and Online Professionalism: Guidelines to maintain online professionalism and introduction to prevalence and importance of social media in surgical education
Chronic Wound Care: Principles, recognition, and treatment
Ventilators 101: Recognizing and responding to decreasing oxygen levels and/or inadequate ventilation, and responding to common problems with ventilated patients

Task Force Members

Jennifer LaFemina, MD, FACS

Task Force Chair

Program Director, General Surgery Residency Program, University of Massachusetts Medical School

Associate Professor of Surgery

Vanita Ahuja, MD, MPH, MBA, FACS

Chief of General Surgery- VA Connecticut Healthcare

Associate Professor of Surgery

Surgery Quality Liaison

Yale School of Medicine

Adnan Alseidi, MD Ed.M

Vice Chair Education, Dept of Surgery, UCSF

ASE Vice President

Professor of Surgery

Marcus Balters, M.D., F.A.C.S.

Associate Professor of Surgery

Division of Cardiovascular Surgery

Department of Surgery

Vice-Chair of Surgical Education

Program Director, General Surgery Residency Program

Surgery Clerkship Director

President, Gold Humanism Honor Society, Creighton Chapter

Creighton University School of Medicine

Creighton University Medical Center

Karen Brasel, MD, MPH

Professor of Surgery, Division of Trauma, Critical Care and Acute Care Surgery, School of Medicine

Assistant Dean for Graduate Medical Education, Office of the Dean, School of Medicine

Clarence Clark, III MD, FACS, FASCRS

Program Director, General Surgery Residency Program, Morehouse University

Associate Professor of Colon and Rectal Surgery

Keith A. Delman, MD
Program Director, General Surgery Residency Program, Emory University
Professor of Surgery
Associate Chair, Faculty and Clinical Affairs, Department of Surgery
Carlos Professor of Surgical Anatomy and Technique
Director, Carlos and Davis Center for Surgical Anatomy and Technique

David Farley, MD
Emeritus Professor of Surgery
Mayo Clinic-Rochester

Daniel Relles, MD
Program Director, General Surgery Residency Program, Lehigh Valley Health Network

Mohsen Shabahang, MD, PhD
Program Director, General Surgery Residency Program, Geisinger

Vance Sohn, MD, FACS
Program Director, General Surgery Residency Program, Madigan Army Medical Center
Associate Professor of Surgery, Uniformed Services University

Task Force Advisory Members

Brenessa Lindeman, MD, MEHP, FACS
Assistant Professor of Surgery
Chief Wellness Officer
Associate Program Director, University of Alabama General Surgery Residency
Associate Designated Institutional Official, University of Alabama Graduate Medical Education

Additional Advisor Members: Involved in compilation, but due to COVID19, did not at time of submission approve final draft

Henri R. Ford, MD, MHA, FACS, FRCS, FAAP
Dean and Chief Academic Officer
University of Miami Miller School of Medicine
Professor of Surgery

Final Approval

JL	x
VA	
AA	x
MB	x

KB	x
CC	
KD	
DF	x
DR	
MS	
VS	x

Disclaimer: This is submitted in the middle of COVID19 and reflects the recommendations prior to the shifting educational paradigm during a pandemic. However, it could possible inform on aspects on how to quickly onboard senior students during disasters.