

The Impact of COVID-19 on Endoscopic Training

Shria Kumar, MD¹, Stacey Prenner, MD¹ and Michael L. Kochman, MD, AGAF¹

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The COVID-19 pandemic has caused massive shifts in health care delivery (1). To preserve personal protective equipment and minimize exposure, many fellowship programs are prohibiting fellows from participating in endoscopy (2). Gastroenterology fellowship is unique in its need to teach both procedural and cognitive skills, and minimum procedural numbers are needed before competency can be assessed (3). In academic programs where fellows pursue research endeavors after a clinically heavy first year, the impact of missed procedures and consequent educational gaps during the pandemic may be amplified.

By identifying the procedures performed by previous fellows between March 20 and May 1 (the “COVID-19 period”) of their first year and by analyzing what percentage of their first-year procedural total this period comprised, we quantified the impact of COVID-19-associated restrictions on current fellows. At our institution, fellows were not involved in endoscopic procedures from March 20, 2020, until at least May 1, 2020. Using Provation MD (Minneapolis, MN) and educational training logs, we identified dates and procedures completed by first-year gastroenterology fellows at the Hospital of the University of Pennsylvania (Philadelphia, PA) over the past 2 academic years (2017–18 and 2018–19). The Institutional Review Board at the University of Pennsylvania approved this study.

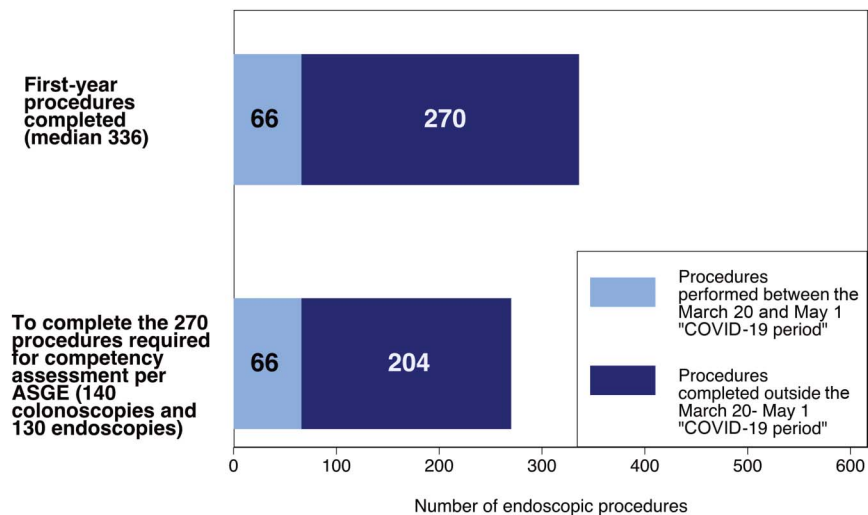


Figure 1. Bar graph displays the number of median procedures that have been performed during and outside the March 20–May 1 “COVID-19 period” by prior first-year fellows, in comparison to total first-year procedures performed and to number of procedures required for competency to be assessed.

During their respective March 20–May 1 periods, 11 fellows performed median 66 procedures (IQR 61–79). In total, over the first year, median 336 (IQR 263–383) procedures were performed per fellow. Figure 1 displays the procedures performed during the March 20–May 1 “COVID-19 period” in previous years in comparison to the total first-year procedures and the 270 procedures required for competency assessment (140 colonoscopies and 130 endoscopies) (3).

In their entire first year, fellows performed median 25 cases with active bleeding (IQR 22–28). Cumulatively, through their current year of fellowship (second or third), fellows have performed a median of 29 active bleeding cases (IQR 22–32). First-year hemostasis cases comprised 86% of the total fellowship active bleeding cases.

This demonstrates a significant disruption of first-year endoscopic training: current first year fellows will not perform an anticipated 20% of their total first-year endoscopic procedures during the pandemic and will miss almost a quarter of endoscopic procedures that they would have otherwise performed in their first year to achieve a level at which competency can be assessed, delaying this milestone.

Procedure volume has been associated with procedural competence by both trainees

and program directors, and this suggests that current fellows may be at a marked disadvantage (4). Fellows will have to make up a substantial case burden, and programs will have to provide opportunities for them to do so and pay particular attention to hemostasis experience.

Although this is a single center study of current fellows at an academic medical center (limiting size and generalizability), we demonstrate a marked disruption of endoscopy education to be incurred during the current period, and this should be of high concern, particularly in academic programs. Fellowship programs and fellows should be aware of the educational consequences of the COVID-19 pandemic and anticipate the needs of their individual programs, given the uncertain nature and duration of this pandemic.

CONFLICTS OF INTEREST

Guarantor of the article: Shria Kumar, MD.

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¹Division of Gastroenterology and Hepatology, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, Pennsylvania, USA.

Correspondence: Shria Kumar, MD. E-mail: Shria.kumar@uphs.upenn.edu.