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Letter to the Editor

"*This above all: to thine own self be true…*" the effects of the COVID-19 pandemic on surgical residency training and education

Sir,

"This above all: to thine own self be true…"- Polonius (Hamlet).

We will be discussing our readiness and response to the current COVID-19 pandemic for years to come; however, we remain amidst a crisis whose time geography continues to evolve. There are backlogged cases, deferred screening procedures, and fermenting pathology in face of public reservation and fear.

COVID-19 has drastically affected the current surgical training paradigm. Fellows anticipate a 10-25% decrease in procedural volumes for this year because of the pandemic.[1] With a reduction in elective cases, surgical programs have transitioned to resident coverage cutbacks and/or reassigning trainees to non-surgical wards to assist with pandemic relief.[2,3]

The ACGME instituted the 80-hour work week to improve patient safety, resident education, and well-being with a reduction in resident workload.[4] Standardized work week limitations, it has been suggested, diminishes crucial training requirements, necessary diversity of encounters, and standardized competencies for proceduralist-based training.[4]

To answer the call for general surgery residency training during the pandemic, several surgical training programs have responded by restructuring, reducing resultant quarantine/isolation and allowing residents to remain on their assigned surgical services, avoiding limitation in surgical experiences.[5]

This sort of flexibility has been suggested historically as well. The flexibility in duty hour requirements for surgical trainees (FIRST) trial, predating the pandemic, sought to evaluate an alternative to standardized resident duty hours (RDH). It compared conventional restrictions to a novel flexible duty hour system where patient care and resident experiences served as end points. Participating program directors perceived an overall improvement in patient safety, continuity of care, participation in educational activities, and improved resident well-being.[6]

In response to the impact of COVID-19 on surgical training, The American board of surgery (ABS) has announced it will accept less time and fewer cases for 2019-2020; however, residents are encouraged to assess progress towards requirements and propose remediation with their program directors.

Nonetheless, 80% of graduating surgical chief residents continue to go onto advanced fellowship training, COVID-19 notwithstanding. Many suspect RDH restrictions, with resultant impact on the volume and breadth of clinical encounters, continues to negatively impact graduating surgical resident confidence, especially with increasing operative complexity and decreasing autonomy.[7] This will only be amplified throughout the pandemic.

The urgency of these long-standing concerns over surgical resident training requires consideration of substantive changes to resident training including deferral to the discretion of fellowship programs to address remediation necessary where possible; delayed graduation of surgeons in training not yet ready to tackle standard operations in the aftermath of COVID-19; enforcement of strict post-graduate mentoring with facility/system-based incentives so that younger surgeons may apprentice with "seasoned' practitioners; public disclosure regarding how training may have significantly been affected compared to historically "traditional" surgical experiences, and how this could impact outcomes; specialty board discretion as to the unique implications of fellowship training during the pandemic, and how to remediate these notably in the context of one- and two-year programs; other proactive measures towards enhancing education and experience, while promoting patient care, embracing, at its core, exactly what RDH was meant to achieved.

Khorfan et al, recently examined long-term outcomes of the FIRST trial and flexible duty-hour policies on surgical resident trainees.[8] This 4-year follow-up revealed there was a trend towards fewer work week violations, higher resident satisfaction, fewer lapses in continuity of care, less transfer of either active and/or critically ill patients, and fewer missed operations with flexible duty-hours.

Surgical services are being challenged to develop specialty specific guidelines to accommodate the surgical needs of their patients during the COVID-19 pandemic. This has significantly altered the assortment of cases, operating room workflow, proportion of open versus minimally invasive approaches, patient and staff safety concerns, and surgical resident training.[9]

At present, surgical residency training does not seem appropriately malleable to accommodate these challenges. It is encouraging to see that the FIRST trial offers an alternative solution. An additional adjunct to fill the void of surgical training amid the COVID-19 pandemic is surgical simulation.

Agha et al, showed that simulation can be both a standardized and safe method for training and assessing surgeons.[10] This is especially important because of reduced elective surgical cases and the shift of surgical training from a traditional apprenticeship model, towards a competency-based model.[10] The benefits of surgical simulation are especially noted with respect to both laparoscopic and robotic techniques where these skills are transferable to clinical scenarios.[10]

In addition to embracing increasingly flexible duty-hour policies and surgical simulation, active surgical mentorship, above all, is imperative, now more so than ever. Current surgical training requires increased support of active mentors towards bridging the gaps left by decreasing clinical interactions. We should stand available, attentive, and avoid hiding behind a curtain of disinterest in heralding this new decade of surgical education.

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