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Maximizing Cardiothoracic Surgery Training During the COVID-19 Pandemic: The Resident Perspective



To the Editor:

There is no doubt that the coronavirus disease 2019 pandemic has resulted in disruptions to cardiothoracic surgical training. We applaud Fuller and colleagues¹ in highlighting the vital role of educators in providing safe, feasible, and equitable solutions to respond to these challenges. As trainees, we assert that now, more than ever, we must take responsibility and ownership of our education, both as individual learners and members of our training programs.

We need to be “affable, available, able,” proactive in seeking learning opportunities, and to practice both inside and outside the operating room for technical and nonoperative technical skills.² Furthermore, we must be meticulous and accurate in characterizing our operative experiences and communicate with our educators as they help identify methods for trainees of all levels to address educational gaps exacerbated by the pandemic, recognizing that case volume is not equivalent to competence. With limited opportunities in the operating room, learners have a duty to maximize each operation, not only for oneself but to also endeavor to establish equity among trainees of all levels. Multi-institutional collaboration and sharing of curricular resources, often through online platforms, can help transcend geospatial and temporal limitations to standardize trainee learning and obtain objective data of trainee knowledge gaps and proficiency.

As the pandemic uproots the operative training experience of surgical specialties,³ it also prompts us to reflect on our role as future cardiothoracic surgeons beyond the operating room. In this time of health care crisis and social unrest, the pandemic can be an opportunity for us to cultivate our skills as communicators and stewards of scientific information, as well as leaders, collaborators, innovators, and advocates to meet the challenges and demands of tomorrow.⁴

Although physically distant, we must remain socially connected in our collective learned experiences to become better together. In doing so, we can turn challenges and crises into opportunities to innovate within our current training paradigms, improve the efficiency and quality of cardiothoracic surgical education today, and create a sustainable path to face global health crises in the future.

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Surgical Training in the Era of COVID-19



Reply

To the Editor:

I thank Luc and colleagues¹ for their reply to our article.² As an educator, I greatly appreciate the notion that residents assume ownership in acquiring an education as “affable, available and able” learners. The historical hierarchical relationship between mentor and mentee must be modified.³ Like any skilled apprenticeship, the relationship between attending and resident becomes one of mutual respect, learning, and determination to succeed. After all, learning surgery and exercising safe and effective judgment is still as much of an art as it is a science.

We must accept that learning style has evolved, both naturally and out of necessity as a result of the coronavirus (COVID-19) pandemic. As attendings, adaptability to different learning styles, forums, and pace is necessary. Not one teaching model will fit all residents. While some will easily assimilate, others may not; hence, we must ensure that individual training is not compromised.

Importantly, the demand for presence and accountability on the side of both educator and resident should never be diminished. Faculty development programs are necessary to focus on technical skill building, ensure success as a clinical educator, and enhance mentoring strategies.⁴ It is important to create a supportive work environment for academic faculty that rewards teaching, innovation in education, and attention to remediation when necessary.

By providing both opportunity and expertise in education, we attract the best and the brightest of medical students to pursue this life-long learning specialty. As Luc and colleagues elegantly state, challenges become opportunities for improvement within training programs. As educators, we must remain committed to the future of cardiothoracic surgery.

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Hybrid Surgeons Play a Mainstay Role in the Endovascular Era



To the Editor:

We read the article by Ikonomidis and colleagues¹ with great interest. Many cardiac surgeons in Taiwan, like members of The Society of Thoracic Surgeons, also perform vascular surgery in addition to open-heart surgery, especially in the era when endovascular intervention is prosperous. We refer to cardiac surgeons who perform endovascular surgery as “hybrid surgeons.” The scope of work of the hybrid surgeons caught our attention.

We searched the Taiwanese National Health Insurance Research Database and excluded endovascular surgery performed by interventional cardiologists and interventional radiologists. We found that, after the take-off of endovascular surgery since 2011, the volume decline of coronary artery bypass graft surgery (CABG) seems to have slowed down. The hybrid surgeons performed the mainstay of CABG in Taiwan (Figure 1). The proportion of CABG performed by hybrid surgeons has increased significantly, from 32.9% to 81.9% from 2008 to 2016. The hybrid surgeons also contributed the majority of

endovascular surgery operations, 72% to 78.2% from 2008 to 2016. By 2016, whether it is endovascular surgery or CABG, hybrid surgeons are the leading players.

Our research shows that endovascular surgery is not detrimental but beneficial to slow down the decline of CABG volumes. This phenomenon provides an essential inspiration for cardiac surgeons around the world. In other words, endovascular surgery is not a natural enemy of open vascular or cardiac surgery. Conversely, it may extend the lifespan of traditional cardiac surgery. We should allow a new generation of cardiovascular surgeons to be familiar with the two aspects of the skills, contribute to both areas, and further integrate the surgical techniques in a unique way of thinking.

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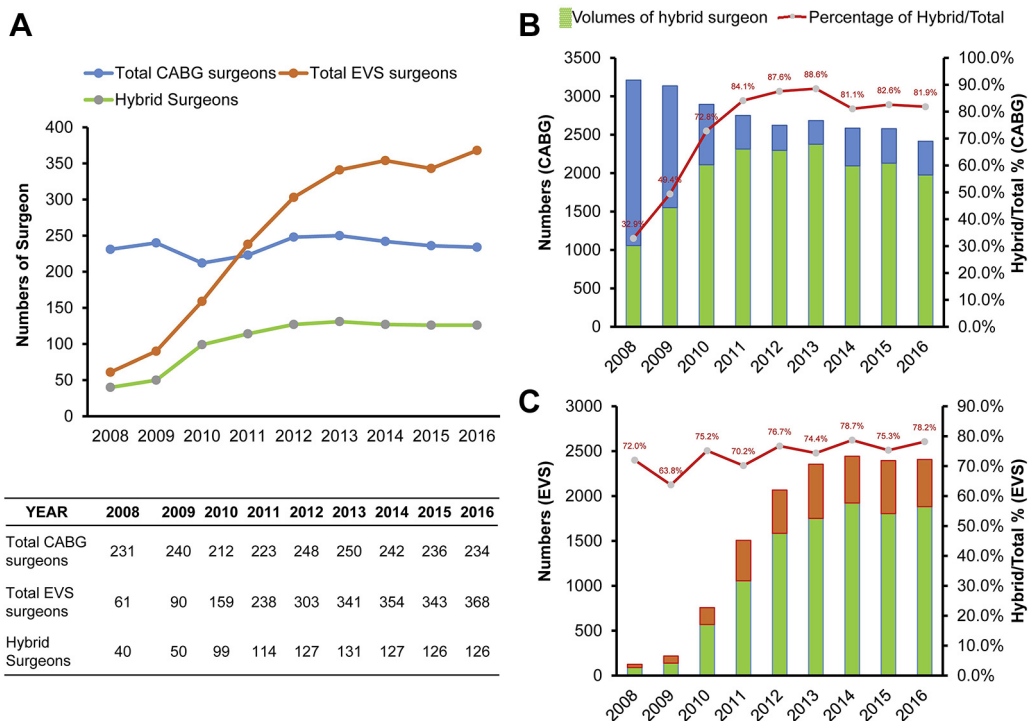


Figure 1. Performance of hybrid surgeons in coronary artery bypass graft surgery (CABG) and endovascular surgery (EVS). (A) Trends in number of CABG surgeons (blue line), EVS surgeons (orange line), and hybrid surgeons (green line). (B) Contribution from hybrid surgeons (green) in CABG; blue indicates CABG surgeons. (C) Contributions from hybrid surgeons (green) in EVS; orange indicates EVS surgeons. Orange line in (B) and (C) indicates percentage of hybrid/total.

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