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INNOVATION IN CARDIOTHORACIC SURGERY: A TEAM-BASED RECIPE FOR SUCCESS

To the Editor:

We were pleased to read the insightful work by Badhwar and colleagues, reported in the Journal, on contemporary consensus recommendations that address the challenges and opportunities for team-based training in robotic cardiac surgery. We commend the authors for attempting to establish pathways for implementation. From the perspectives of both educators and students, it is essential to understand these principles to successfully educate and prepare up-coming generations of cardiothoracic surgeons.

In their study, Badhwar and colleagues reported that robotic team members, including cardiac anesthesiologists, scrub technologists, circulating nurses, and perfusionists, can be highly effective if they are dedicated to the program, establish verbal communication protocols and checklists, and designate individual roles for each team member. Furthermore, they delved deeper into the vitality of understanding the nomenclature related to the core competency training levels, minimum surgeon experience for autonomous competence, and institutional resources necessary for ensuring the reproducibility and continued success of a robotic cardiac program without disrupting case workflow or putting patient safety at risk.

Several critical caveats emerge from this article, emphasizing the recognition that new standards are emerging and many of the recommendations suggested are true not only for robots but also for any novel technology that may be introduced into cardiothoracic surgery—whether it is a hybrid operating room suite, navigational bronchoscopy, or anything else new. Likewise, Vaporciyan and colleagues emphasize the significance of incorporating novel instructional techniques for today’s trainees to be effective, as well as the need for iterative changes based on ongoing evaluation. The principles proposed by Badhwar and colleagues also can be used to improve training paradigms, introduce innovative instructional and evaluation techniques, and facilitate faculty development in cardiothoracic surgery.

As technology continues to advance, these principles may be invaluable tools for the success of any programs striving to keep up with the cutting edge. Given the dynamic nature of cardiothoracic surgery, our current training paradigm may not be adequate for us to gain the necessary knowledge and skills required within the finite period of dedicated graduate medical education. To ensure that surgical practitioners in cardiothoracic surgery stay up-to-date with technological innovations and advancements in best practices, it is essential that structured methods of learning are provided so they can further develop their expertise.

Badhwar and colleagues endorse the importance of a harmonious collaboration between the institution and the surgical team of providers. As it stands, cardiothoracic surgery is an ever-evolving field that continuously requires successful cooperation among a team of professionals to ensure that patients receive treatment based on current standards with uncompromised quality. These evidence-based, informative principles offer guidance when considering implementing any changes or updates to an organization’s practices, because they will help minimize potential issues while maximizing results over time. As such, we highly recommend adoption of the team-based paradigm described by Badhwar and colleagues not only for new cardiac robotic programs but also for the successful introduction and implementation of all future innovations in cardiothoracic surgery.

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