special interest and skill in coronary surgery and concentrate the practice experience with complex arterial revascularization in these individuals so that expertise can be developed and maintained, much as we do for surgeons with special interest in valve repair. These local experts should be key members of the coronary heart team and encourage, direct, and champion best coronary surgery practices in their medical centers.

In the last 25 years, subspecialized cardiac surgeons have pioneered new operations like valve-sparing aortic root replacement, mitral valve repair, and left ventricular assist device implant and have improved the care of their patients and many others immeasurably in the process. The subspecialization of coronary surgery is already well underway. The steps all cardiac surgeons take to speed this process will lead to faster innovation and improved standard of care for our patients with coronary artery disease.

References

Commentary: Coronary artery bypass grafting as a subspecialty: Hype or reality

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Coronary artery bypass grafting (CABG) has been around for more than 50 years, yet its basic construct has evolved little over time with the exception of the incorporation of the internal thoracic artery.1 In line with recent developments in other cardiac disciplines, this relative status quo is being challenged, with the goal of moving the needle on CABG without compromising safety and efficacy. Recognition of CABG as a subspecialty and the creation of dedicated training programs as proposed by Rosati and colleagues2 are steps in the right direction. The passion in their manuscript is palpable and will undoubtedly be a draw for the coronary subspecialty.

The “unmet need” for a CABG subspecialty is a plausible assessment, but it is impossible to quantify. In addition, some of the arguments made by the authors in favor of certain revascularization strategies are opinion-based and not always backed by robust evidence. Nevertheless, it is worth focusing on some of the opportunities identified for improving CABG practice and education.

A dose–response relationship exists between the myocardial mass supplied by arterial grafts and patient survival.3 However not all coronary targets are created equal, and patient comorbidities and life expectancies are variable.3,4 Such variations, coupled with surgeon inexperience, can dilute the incremental benefit of
multiarterial grafting (MAG) and could explain the negative findings of randomized trials. Ideally, all patients who undergo elective CABG should be considered for MAG as a default strategy. Having more surgeons with MAG expertise within the workforce will make such an approach a reality. By the same token, it is important to acknowledge that some patients may not be suitable candidates for MAG and may be operated on by a generalist in the field without compromising outcomes.

With regard to less-invasive strategies, off-pump coronary artery bypass grafting (OPCAB) is physiologically less invasive than on-pump CABG and can benefit select high-risk patient subgroups not typically enrolled in trials. Surgical experience is critical in mitigating reduced graft patency and incomplete revascularization associated with OPCAB. Thus, specialized training in OPCAB is warranted for dedicated subspecialists, but widespread adoption is ill-advised, and indeed use of OPCAB has declined. As for anatomically less-invasive CABG with or without robotic assistance, lack of robust clinical and angiographic data coupled with technological, logistic, and cost-related barriers have hindered widespread adoption. Innovator surgeons should partner with industry to overcome the technology lag and advance the field.

The curriculum proposed by the authors for a structured training pathway is thoughtful, and its incremental design is appropriate. It should not function as a rigid curriculum to be completed from A to Z over a prespecified duration of time. Instead, it is best implemented as a flexible modular format that is competency-based. Some modules such as basic MAG techniques are more scalable than others. Not specifically mentioned, but important modules to incorporate include high-risk CABG in failing hearts and redo CABG when experience is paramount.

The role of professional and regulatory bodies and payors in promoting best practices in CABG and in turn cementing it as a subspecialty is important but beyond the scope of this commentary.

In conclusion, the time is ripe for the next CABG evolution and it starts with the long overdue recognition of CABG as a subspecialty. A reality that will translate into improved patient outcomes.

References