

See Article page 297.



Commentary: Inside out

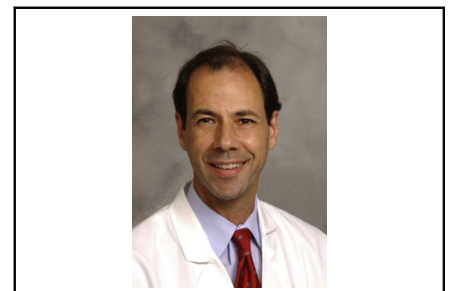
Thomas A. D'Amico, MD

Indeed, as Dr Baker asks: what is the optimal cardiothoracic surgery residency model?¹ The issue is critical to the training and practice of cardiothoracic surgery and ultimately to the goal of optimizing patient care, safety, and outcomes.² I believe that the question, however, should be modified to address the fact that programs are diverse (to which Dr Baker alludes), and that training program paradigms should not be thought of as static.

To summarize the training paradigms, there are 3 possible pathways for American Board of Thoracic Surgery certification:

1. Independent (often referred to as traditional) Program: 2 or 3 years of fellowship after an approved introductory training program (usually 5 years of general surgery in the United States or Canada).
2. Integrated Program (I-6): 6 years of clinical training after graduation from medical school.
3. Joint Training Program (JTP; also referred to as “fast track”): 7 years of clinical training at the same institution, consisting of 3 years of general surgery, followed by 2 years that include both general and cardiothoracic, followed by 2 years of cardiothoracic surgery.

Dr Baker identifies numerous important issues that a program and program director should consider in selecting and designing a program, including the fact that his program includes both independent and I-6 pathways. There are other issues that may be considered as well. For context, our training program added the JTP to our independent program in 2007, and we added the I-6 program in 2013; I was a training program director for 18 years; and I served on the



Thomas A. D'Amico, MD

CENTRAL MESSAGE

The ACGME Self-Study is an excellent process for programs considering the transition to an I-6 pathway. This decision is complex, and the most relevant factors already lie within the program.

Accreditation Council for Graduate Medical Education Thoracic Surgery Review Committee for 6 years.

First, the I-6 pathway is still considered experimental. Most I-6 programs have not yet graduated a resident, and the efficacy of the strategy is not yet established. While I have no doubts about the I-6 strategy, it may not be the best pathway for all programs, evidenced by the observations that not all I-6 programs (all of which were developed in programs with existing independent training programs) have been successful and that some programs that transitioned completely to I-6 have re-established the independent pathway as well. As program directors consider adding an I-6 program, looking outward to assess the success of those who have already graduated other programs is of little importance.

Second, the cost difference is not trivial. In a 2-year independent program that graduates 2 residents each year, there are 4 residents; in an I-6 program that graduates 2 residents each year, there are 12 residents. While some institutions may easily finance the difference, it is an important internal consideration in a decision regarding training strategy.

Third, I do not believe that the I-6 strategy will be as successful for residents interested in a career in general thoracic surgery. While paradigms and block diagrams can certainly be developed, many agree that there is substantial benefit in the general surgery rotations, the chief resident year in general surgery, and ultimately American Board of Surgery

From the Division of Thoracic Surgery, Department of Surgery, Duke University Medical Center, Durham, NC.

Disclosures: The author reported no conflicts of interest.

The *Journal* policy requires editors and reviewers to disclose conflicts of interest and to decline handling or reviewing manuscripts for which they may have a conflict of interest. The editors and reviewers of this article have no conflicts of interest.

Received for publication Feb 1, 2021; revisions received Feb 1, 2021; accepted for publication Feb 12, 2021; available ahead of print July 27, 2021.

Address for reprints: Thomas A. D'Amico, MD, Section of General Thoracic Surgery, Duke University Medical Center, DUMC Box 3496, Duke South, White Zone, Room 3589, Durham, NC 27710 (E-mail: thomas.damico@duke.edu).

JTCVS Open 2021;7:306-7

2666-2736

Copyright © 2021 The Authors. Published by Elsevier Inc. on behalf of The American Association for Thoracic Surgery. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

<https://doi.org/10.1016/j.xjon.2021.02.013>

certification. The JTP may be the optimal pathway for residents with established interest in general thoracic surgery by the first 3 years of general surgery residency.

Fourth, the development of a successful I-6 training program is largely dependent on a strong relationship between the training programs and departments in general surgery and cardiothoracic surgery. In institutions in which the relationship is not strong, I-6 residents in the first 2 years of training may be relegated to rotations with inferior operative experience or may receive suboptimal experience in other aspects of training. Program directors in thoracic surgery have little influence on this internal issue.

Finally, I hope that all program directors agree that the 3 current paradigms should at best be considered “adequate” training programs, and that the development of “optimal” training programs awaits successful innovation. Programs that are in compliance, as assessed by the Thoracic Surgery Review Committee, have the ability to suggest and develop modifications or advances in training paradigms. Several changes are likely to develop in the future. Currently, there are 2 possible case log pathways: cardiac and cardiothoracic. It is predicted that this distinction will continue to grow, which may eventually change training paradigms for those focused on adult cardiac versus general thoracic versus congenital heart surgery. While this change may

improve training overall, I hope that there will remain enough flexibility to accommodate residents who are not yet committed to a specific discipline at the time of application for training. As well, it is likely that time-based training will eventually be replaced by competency-based training. Another probable change is that the education of faculty as educators will continue to develop, which will certainly improve training.

In summary, program directors should deeply consider all aspects of their training program on a regular basis. The Accreditation Council for Graduate Medical Education Self-Study is an excellent process, and a program does not need to wait until it comes up in their own cycle for it to be used.³ More relevantly, the Self-Study is also an excellent process for programs considering the transition to or addition of an I-6 pathway. As I hope it is clear, this decision is complex and the most relevant factors already lie within the program.

References

1. Baker CJ. What is the optimal cardiothoracic surgery residency model? *J Thorac Cardiovasc Surg Open*. 2021;7:297-301.
2. Common program requirements. Available at: <https://www.acgme.org/What-We-Do/Accreditation/Common-Program-Requirements>. Accessed February 1, 2021.
3. Self-study. Available at: <https://www.acgme.org/what-we-do/accreditation/self-study>. Accessed February 1, 2021.