

Congenital cardiac surgery fellowship training: A status update

Brian Kogon, MD,^a Tara Karamlou, MD,^b William Baumgartner, MD,^c Walter Merrill, MD,^d and Carl Backer, MD^e

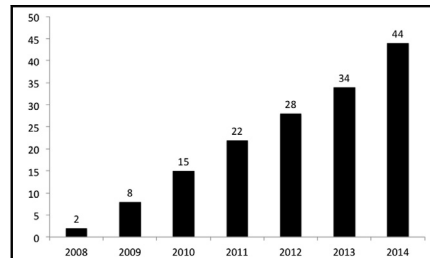
ABSTRACT

Background: In 2007, congenital cardiac surgery became a recognized fellowship by the Accreditation Council of Graduate Medical Education (ACGME) and leads to board certification through the American Board of Thoracic Surgery (ABTS). We highlight the strengths and weaknesses in the current system of accredited training.

Methods: Data were collected from program directors, the ACGME, and the ABTS. In addition, surveys were sent to training program graduates. Topics included program accreditation status, number of fellows trained per year and per program, match results, fellow operative experience, fellow satisfaction, and post-fellowship employment status.

Results: There are twelve active accredited fellowship programs, and 44 trainees have completed accredited training. Each active program has trained a median of 3 fellows (range: 0-7). Operative logs were obtained from 38 of 44 (86%) graduates. The median number of total cases (minimum 75) was 136 (range: 75-236). For complex neonates (minimum 5), the median number of cases was 6 (range: 2-17). Some fellows failed to meet the minimum requirements. Thirty-six (82%) graduates responded to the survey; most were satisfied with their overall operative experience, but less with their neonatal operative experience. Of this total, 84% are currently practicing congenital cardiac surgery, and 74% secured jobs prior to completing their residency.

Conclusions: Since 2007, congenital cardiac surgery training has been accredited by the ACGME. In general, the training is uniform, the operative experience is robust, and the fellows are satisfied. Although shortcomings remain, this study highlights the many strengths of the current system. (*J Thorac Cardiovasc Surg* 2016;151:1488-95)



Cumulative number of congenital cardiac surgery trainees since ACGME accreditation began in 2007.

Central Message

With ACGME accreditation, congenital cardiac surgery training is robust; most graduates are well trained, satisfied, and thriving.

Perspective

Since ACGME accreditation began, congenital cardiac surgery training has been standardized. Fellows are operating and satisfied. A good balance has been achieved between the number of job openings and the number of graduating trainees. Recent graduates seem to be thriving in practice. Nonetheless, shortcomings remain, and our intention with this study is to highlight these issues and stimulate future improvements.

See Editorial Commentary page 1496.

The training of congenital heart surgeons is extremely complex. In 2005, we surveyed graduates of congenital cardiac surgery training fellowship programs.¹ The number of operations performed by the fellows during their training was underwhelming, and most of the fellows were dissatisfied with their operative experience.¹

From the ^aDepartment of Cardiothoracic Surgery, Emory University, Atlanta, Ga; ^bDepartment of Cardiothoracic Surgery, University of California San Francisco, San Francisco, Calif; ^cDepartment of Cardiothoracic Surgery, Johns Hopkins University, Baltimore, Md; ^dDepartment of Cardiac Surgery, Vanderbilt University Medical Center, Nashville, Tenn; and ^eDepartment of Cardiothoracic Surgery, Northwestern University, Chicago, Ill.

Read at the 41st Annual Meeting of The Western Thoracic Surgical Association, Whistler, British Columbia, Canada, June 24-27, 2015.

Received for publication April 22, 2015; revisions received Sept 9, 2015; accepted for publication Feb 7, 2016; available ahead of print March 18, 2016.

Address for reprints: Brian Kogon, MD, Emory University, Egleston, Atlanta, GA (E-mail: Bkogon@emory.edu).

0022-5223/\$36.00

Copyright © 2016 by The American Association for Thoracic Surgery

<http://dx.doi.org/10.1016/j.jtcvs.2016.02.039>

In 2007, congenital cardiac surgery became a recognized fellowship by the Accreditation Council of Graduate Medical Education (ACGME). Program and fellowship training requirements are now in place, and training leads to American Board of Thoracic Surgery subspecialty certification. We aim to highlight the strengths and weaknesses in the current system of congenital cardiac surgical training, as well as compare specific metrics of the pre- versus post-accreditation training eras.

Specific topics include the following: program entrance and exit into providing accreditation; number of

Scanning this QR code will take you to the article title page.



Abbreviations and Acronyms

ACGME	= Accreditation Council of Graduate Medical Education
CI	= confidence interval

fellows trained per year and per program; match results; fellow operative experience; fellow satisfaction with training; and postfellowship employment status and case mix. Although congenital cardiac trainees who are in ACGME-accredited training programs typically are referred to as residents, we refer to them as fellows in this article, in keeping with historical precedent.

METHODS

Data were collected from various sources to address each topic. The ACGME website provided a list of accredited programs, the dates of program entrance and exit into accreditation, and the names of the program directors.²⁻⁴ The individual program directors provided the names of the fellows, as well as the number trained per year and per program. The Thoracic Surgery Directors Association provided results from the congenital cardiac surgery match, and the American Board of Thoracic Surgery provided board certification status. Individual fellows and/or program directors provided operative logs.

A survey sent to all 44 graduates provided information regarding demographics, satisfaction with training, and postfellowship employment status. The online, cross-sectional survey included nominal and ordinal polytomous, dichotomous, and bounded continuous response formats. An initial letter was sent to the graduates, as a preamble to the survey, as a mechanism to increase participation. The surveys were first sent on October 31, 2014; subsequent reminders were sent to nonresponders on November 8 (n = 26), December 6 (n = 13), and January 25, 2015 (n = 10). The survey was closed on January 30, 2015, with a total of 8 nonresponders.

For data collection and presentation, anonymity was promised and delivered to the fellows and program directors; the primary author, however, had participant identifier information access, for cataloguing reasons only. Summary statistics were applied throughout. When appropriate, specific tests for correlation were performed.

RESULTS

Program Status Entrance and Exit, and Number Trained

Twelve accredited programs are currently active (13 gained accreditation over the course of 8 years; 1 later withdrew; [Table 1](#)). The timeline of cumulative program accreditation is shown in [Figure 1](#). Forty-four trainees have completed an accredited fellowship program. Of the active programs, each has trained a median of 3 fellows (range: 0-7). The timeline of cumulative fellow graduation is shown in [Figure 2](#).

Match Results

In the match for the 2014-2015 academic year, 6 of 12 programs waived participation. Three individuals applied for the 6 available positions, all of whom were successfully

matched, leaving 3 participating programs without a matched applicant. In the match for the 2015-2016 academic year, 7 of 12 programs waived or withdrew from participation. Seven individuals applied for the 5 available positions, 5 of whom were successfully matched, leaving 2 unmatched applicants and no participating programs without a matched applicant. In the match for the 2016-2017 academic year, waiving the match will not be allowed. A summary of these results is shown in [Table 2](#).

Board Certification Status

Details surrounding the fellows' eligibility and process toward certification are shown in [Figure 3](#). Of the 44 graduates, 8 are not eligible, or have not applied for board certification. Of these, 4 have not yet completed the requirements for primary thoracic board certification; 3 have completed primary certification, but their current status is unknown, and 1 died. Thirty-six have applied for certification. In total, only 22 of 44 (50%) are certified, meaning they have passed both the written qualifying and oral certifying examinations.

Fellow Operative Experience

Operative logs were obtained from 38 of 44 (86%) graduates. Twenty-nine logs were received from the program directors, and 14 from the individual fellows, resulting in dual reporting for 5 of the graduates. A summary of the fellows' operative logs ([Table 3](#)) shows that the median number of total cases (minimum requirement of 75) was 136 (range: 75-236). The median number of specific qualifying cases (minimum requirement of 32) was 63 (range: 39-148). For complex neonates (combined minimum requirement of 5), the median number of cases was 6 (range: 2-17).

Some residents failed to meet the minimum requirements. Failure to meet operative requirements occurred in each of the following categories: atrioventricular septal defect repair, arch reconstruction including coarctation procedures, systemic-to-pulmonary artery shunt procedures, and complex neonatal procedures. No correlation was found between program volume (median 850; range: 350-1250) and fellow case volume ($r = 0.23$; $P = .17$, 95% confidence interval [CI]: -0.11 to 0.53).

Fellow Survey

Demographics and pre-fellowship. A total of 36 (82%) graduates responded to the survey. Men comprised 83%, and the median age at graduation was 40 (range: 35-48) years. Identifying with a mentor was the most common initial experience that motivated graduates to pursue a career in congenital cardiac surgery ([Table 4](#)).

Download English Version:

<https://daneshyari.com/en/article/5987724>

Download Persian Version:

<https://daneshyari.com/article/5987724>

[Daneshyari.com](https://daneshyari.com)