

**ACGME Program Requirements for Graduate Medical Education  
in Pediatric Cardiac Anesthesiology  
Summary and Impact of New Specialty Requirements**

1. Describe the scope of practice of the new specialty, as well as the process involved in development of the requirements (e.g., date of recognition of the specialty by the ACGME Board, involvement of specialty boards/organizations, etc.).

Pediatric cardiac anesthesiology has developed as a sub-subspecialty of anesthesiology over the past 50 years. In 2010, leaders in pediatric cardiac anesthesiology recognized the need for a standardized educational approach to training of pediatric cardiac anesthesiologists and accordingly program guidelines were developed. In 2014, the Pediatric Anesthesia Leadership Council (PALC), in conjunction with the Congenital Cardiac Anesthesia Society (CCAS), recognized the need for a formalized education and training pathway. They specifically recommended that pediatric cardiac anesthesiology be a second-year advanced fellowship following pediatric anesthesia, consisting of 12 additional months of education and training in pediatric cardiac anesthesiology. This recommendation clearly recognizes that attaining skills to become a competent pediatric cardiac anesthesiologist requires education and training beyond a standard pediatric anesthesia fellowship. In 2018, specific education and training milestones required during this fellowship were established by the CCAS leadership.

Pediatric cardiac anesthesiology is devoted to the pre-operative, intra-operative, and post-operative care of patients with congenital heart disease undergoing congenital cardiac surgery and related invasive and diagnostic procedures.

The clinical education involves caring for pediatric patients in the operating room, non-operating room anesthetizing locations, and intensive care units. It includes experience providing anesthesia for cardiac, non-cardiac thoracic, and intrathoracic vascular surgical procedures, as well as for non-operative diagnostic and interventional cardiac and thoracic procedures.

The proposal for a new subspecialty in pediatric cardiac anesthesiology was submitted to the ACGME by CCAS in October 2020, and the proposed subspecialty was approved by the ACGME Board in February 2021.

The proposed Program Requirements for Graduate Medical Education in Pediatric Cardiac Anesthesiology were developed by a work group made up of three pediatric cardiac anesthesiologists, one pediatric anesthesiologist, and two adult cardiothoracic anesthesiologists.

2. How will the proposed requirements improve resident/fellow education?

There are currently 19 non-accredited fellowship programs in pediatric cardiac anesthesiology. The number of pediatric cardiac anesthesia programs offering pediatric cardiac anesthesiology education and training has also grown from two in 2000, to eight in 2010, to 19 in 2020, and becoming 21 programs in 2022. In the last six years, 62 pediatric cardiac anesthesia fellows have completed 12-month academic education and training programs. The majority of these fellows (75 percent) work either exclusively as pediatric cardiac anesthesiologists or divide their time as both general pediatric anesthesiologists

and pediatric cardiac anesthesiologists. Seven percent work in a combined pediatric cardiac and adult cardiac anesthesia program. The remaining 15 percent are working in a combination of anesthesia and critical care, adult cardiac anesthesia, or other settings. The Review Committee believes that providing a path to accreditation will help define and develop standardized clinical, didactic, and scholarly experiences that support the fellow, the community, and the subspecialty.

3. How will the proposed requirements improve patient care and patient safety/quality?

The proposed requirements will improve patient care and patient safety/quality. An estimated 40,000 live births per year in the United States are affected with congenital heart disease (CHD). Increasingly, anesthesiologists are called upon to provide peri-operative care to patients with CHD ranging in age from premature neonates to adults. The intellectual, cognitive, and technical demands of providing care to this group of patients is rigorous and unique. Development of the interpersonal skills and confidence to manage complex physiological and patient safety issues is critical. Acquisition of this skill set can only occur within the context of a well-defined, milestone-oriented pediatric cardiac anesthesia program.

Given the increasing demands for well-educated and well-trained pediatric cardiac anesthesiologists, it is essential that a cohort of comprehensively prepared practitioners of this craft be consistently produced. This is the only viable pathway to further advance the key objectives of providing improved clinical care and enhanced patient safety. Now is an ideal time for recognition of the discipline given there is clear acknowledgement on the part of cardiology and surgical colleagues that the skill set possessed by pediatric cardiac anesthesiologists is an essential component of procedural success and enhanced patient safety. ACGME recognition of an official educational pathway will further advance the mission of ensuring that individuals with the requisite skill set are available to care for this unique patient population.

4. How will the proposed requirements impact continuity of patient care?

The patient care competencies of pediatric cardiac anesthesiology are built on the six foundational Core Competencies; there will be no change to the delivery of continuing patient care.

5. Will the proposed requirements necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

The number of applicants seeking education and training in pediatric cardiac anesthesiology has steadily grown. It is anticipated that most fellowship programs in pediatric cardiac anesthesiology will be small, each with fewer than five fellows. The cost of fellowship education and financial support will vary from program to program.

6. How will the proposed requirements impact other accredited programs?

Pediatric cardiac anesthesia experience is a core requirement for the pediatric anesthesiology fellowship program. Each fellow must participate in 20 cardiac cases (15 with bypass, five without bypass). The addition of an accredited pediatric cardiac

anesthesiology fellowship program requires the institution/department to consider the balance between the core pediatric anesthesiology fellowship and the pediatric cardiac fellowship to support the needs of all learners. Given the size of current pediatric cardiac anesthesiology programs, impact on pediatric anesthesiology fellows is not anticipated.