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TRAINING STATEMENT

Task Force 5: Pediatric Cardiology Fellowship Training in Critical Care Cardiology

Endorsed by the Pediatric Cardiac Intensive Care Society

Timothy F. Feltes, MD, FAAP, FACC, FAHA, *Co-Chair*
Stephen J. Roth, MD, MPH, FAAP, *Co-Chair*
Melvin C. Almodovar, MD
Dean B. Andropoulos, MD, FAAP
Desmond J. Bohn, MB, BCH, FFARCS, MRCP, FRCPC
John M. Costello, MD, MPH, FAAP
Robert J. Gajarski, MD, MHSA, FAAP, FACC
Antonio R. Mott, MD
Peter Koenig, MD, FACC, FASE

1. INTRODUCTION

1.1. Document Development Process

The Society of Pediatric Cardiology Training Program Directors (SPCTPD) board assembled a Steering Committee that nominated 2 chairs, 1 SPCTPD Steering Committee member, and 6 additional members from a wide range of program sizes, geographic regions, and subspecialty focuses. Membership of this writing group reflected the diverse backgrounds of the physicians who currently direct pediatric cardiac critical care management, including pediatric cardiology, critical care medicine, and anesthesiology. Representatives from the American College of Cardiology (ACC), American Academy of Pediatrics (AAP), and American Heart Association (AHA) participated. The Steering Committee member was added to provide perspective to each Task Force as a "nonexpert" in that field. Relationships with industry and other entities were not deemed relevant to the creation of a general cardiology training statement; however, employment and affiliation information for authors and peer reviewers are provided in Appendixes 1 and 2, respectively, along with disclosure reporting categories. Comprehensive disclosure information for all authors, including relationships with industry and other entities, is available as an online supplement to this document.

The writing committee developed the document, approved it for review by individuals selected by the participating organizations (Appendix 2), and addressed their comments. The final document was approved by the SPCTPD, AAP, and AHA in February 2015 and approved by the ACC, as well as endorsed by the Pediatric Cardiac Intensive Care Society, in March 2015. This document is considered current until the SPCTPD revises or withdraws it.

1.2. Background and Scope

To achieve the best clinical outcomes and provide a safe care environment, every pediatric cardiologist should have basic patient assessment and stabilization skills, command a clear understanding of complex cardiovascular anatomy and physiology, know the effects of pharmacological agents on cardiac physiology, and function as an effective communicator within a multidisciplinary team (MDT). The experience garnered by a pediatric cardiology trainee in the pediatric cardiac intensive care unit (CICU)

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concentrates the educational opportunity to refine these skill sets and is an important part of cardiology fellowship training.

The mission of this writing group was to build upon the pediatric cardiac critical care training guidelines published in 2005 (1). We retained and added to the General Training Goals identified by the 2005 task force (Sections 3.2.1 to 3.2.6) and have added to some of the Specific Training Goals (Sections 3.3.1 to 3.3.7) as well. We have added expected proficiencies to the 2005 guidelines, and where appropriate, included descriptive text to address these competencies. Our revised training recommendations describe the program resources and environment that are required for training pediatric cardiology fellows, together with a competency-based system promulgated by the American College of Graduate Medical Education (ACGME), to implement specific goals and objectives for training pediatric cardiology fellows. This system categorizes competencies into 6 core competency domains: Medical Knowledge, Patient Care and Procedural Skills, Systems-Based Practice, Practice-Based Learning and Improvement, Professionalism, and Interpersonal and Communication Skills, along with identification of suggested evaluation tools for each domain. Competencies unique to pediatric cardiac critical care are listed in Sections 3 and 4 (see the "2015 SPCTPD/ACC/AAP/AHA Training Guidelines for Pediatric Cardiology Fellowship Programs [Revision of the 2005 Training Guidelines for Pediatric Cardiology Fellowship Programs]: Introduction" for additional competencies that apply to all Task Force reports). Advanced competencies unique to pediatric cardiac critical care are listed in Section 4. Other publications address more comprehensive aspects of critical care knowledge that the pediatric cardiology trainee should attain (2).

1.3. Levels of Training—Core and Advanced

In this statement, we discuss core training for all fellows enrolled in a traditional 3-year pediatric cardiology fellowship and advanced training for fellows who wish to embark on a career in critical cardiac care. Core training is required for all trainees and is intended to ensure that fellows acquire the knowledge base and skills necessary to become a pediatric cardiologist referring his/her patient to the intensive care unit (ICU) and serve as a consultant or co-manager (not independent) of the patient. Advanced training guidelines are recommended for practitioners who are board-eligible/board-certified in pediatric cardiology and intend to manage patients as the primary cardiac intensivist in a pediatric ICU. These guidelines do not address training for practitioners with primary fellowship training other than pediatric cardiology.

2. PROGRAM RESOURCES AND ENVIRONMENT

Physical and/or administrative standalone pediatric CICUs are currently not a requirement in pediatric cardiology fellowship programs, although the trend is certainly toward that model. The cardiology trainee should attain the specified requirements outlined in these guidelines through interaction with pediatric cardiologists, pediatric intensivists, neonatologists, pediatric cardiac surgeons, and other practitioners. Cardiology program directors should have significant input related to the cardiac critical care experience of trainees to ensure the following proficiencies are obtainable. Pediatric cardiology fellows should receive the appropriate supervision by faculty well-versed in cardiac critical care.

3. CORE TRAINING: GOALS AND METHODS

3.1. Length of Training

The committee's recommendations on length of training are based on 2 primary goals: 1) those supervising trainees in the ICU environment require adequate exposure over time to evaluate trainee progress; and 2) every trainee needs to develop the competencies required to consult on patients in the ICU setting by the completion of fellowship training. In training programs where pediatric cardiology fellows act as the first-line (primary) medical provider for cardiac patients in the ICU (generally programs that have a separate CICU), a *minimum* of 2 months of full-time supervised experience in the ICU is recommended over the course of the 3-year fellowship. For programs where pediatric cardiology fellows function more as a consultant for cardiac patients in the ICU setting, at least 4 months of supervised experience providing such consultation is recommended over the course of the 3-year fellowship. Although the above represents the minimal training, the committee advocates strongly that cardiology fellows gain experience as a primary care provider for 3 to 6 months in a CICU setting over the course of the general cardiology fellowship. It is also important to note that these defined experiences require evaluation and management of neonates and pediatric patients with and/or being evaluated for cardiac disease. Therefore, fellowship directors must be cognizant that trainees gain experience in a neonatal and pediatric intensive care setting during fellowship training as part of their routine night/weekend inpatient call responsibilities. Trainees should be evaluated by the appropriate supervising faculty. The pediatric cardiology fellowship director should work closely with those supervisory physicians to create clear goals and measures of cognitive and technical competence and to provide a mechanism for timely evaluation of trainees.