EPA 1: Acquire the Imaging Skills Required for All Aspects of Pediatric and Cardiology Care

Supervision Scale for This EPA

1. Trusted to observe only
2. Trusted to perform and interpret the imaging study with direct supervision and coaching
3. Trusted to perform and interpret the imaging study with indirect supervision for most simple and some complex cases
4. Trusted to perform and interpret the imaging study with indirect supervision but may require discussion for a few complex cases
5. Trusted to perform and interpret imaging studies without supervision

Description of the Activity

Upon completion of a general pediatric cardiology fellowship, the individual must be able to perform a complete transthoracic echocardiogram (TTE) and be able to interpret and identify normal cardiac anatomy, exclude lesions associated with risk for sudden death, identify common pediatric and simple congenital heart disease, and have knowledge of fetal and transesophageal echocardiography (TEE) and cardiac magnetic resonance imaging (MRI). They should be able to perform echocardiograms on patients with complex congenital heart defects and have sufficient knowledge to make a management plan and initiate treatment.

The specific functions which define this EPA include:

1. Performing and interpreting complete TTE on children and young adults with normal hearts and with both normal and abnormal anatomy and function
2. Communicating the results of these studies to patients, families, referring physicians, and health care professionals
3. Demonstrating the highest ethical principles and practices while performing, interpreting, and communicating imaging studies
4. Knowing the indications, strengths, and limitations of fetal and TEE
5. Knowing the indications for, strengths, and limitations of cardiac MRI, CT scan, and nuclear imaging in diagnosis and management of acquired and congenital heart disease
6. Searching the medical literature and applying evidence-based information to the noninvasive evaluation of a given patient’s cardiac anatomy and function

Judicious Mapping to Domains of Competence

✓ Patient Care
✓ Medical Knowledge
Entrustable Professional Activities
EPA 1 for Pediatric Cardiology

✓ Practice-Based Learning and Improvement
✓ Interpersonal and Communication Skills
✓ Professionalism
Systems-Based Practice
Personal and Professional Development

Competencies Within Each Domain Critical to Entrustment Decisions*

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Context for the EPA

Rationale: Cardiac imaging is fundamental to understanding anatomy and physiology when taking care of a patient with congenital or acquired heart disease. It is also an important screening tool to exclude the same. Cardiology fellows will be expected to be able to independently perform and interpret transthoracic echocardiography (TTE) upon completion of their fellowship as this is a necessary skill for the practice of the subspecialty.

Scope of Practice: Knowledge and skill needed in performing, interpreting, and reporting transthoracic echocardiography is an expectation of all general cardiologists. For other imaging modalities such as transesophageal echocardiography, fetal echocardiography, Cat Scan (CT) and Magnetic Resonance Imaging (MRI) only knowledge of indications, applications, and limitations is expected. TTE services are provided as both inpatient and outpatient procedures. Competence in TEE, MRI, CT scan, and fetal ECHO may require additional training after completion of core cardiology fellowship and for cardiologists who do not have additional training, consultation from colleagues with these advanced skills may be warranted. Practicing cardiologists should be aware of needs and advantages for multimodality imaging and refer patients accordingly.

Setting: Diagnosis and management in the following settings: inpatient, outpatient, consultation, routine, and acute/emergent or intensive care environment.


References