



Entrustable Professional Activities

EPA 2 for Pediatric Cardiology

EPA 2: Care for Patients Who Require Catheter-Based Interventions

Supervision Scale for This EPA

1. Trusted to observe only
2. Trusted to provide care with direct supervision and coaching
3. Trusted to provide care with indirect supervision for most simple and some complex cases
4. Trusted to provide care with indirect supervision but may require discussion for a few complex cases
5. Trusted to provide care without supervision

Description of the Activity

Upon completion of a general pediatric cardiology fellowship, the individual must: 1) understand the indications and appropriate timing for referral for diagnostic or interventional cardiac catheterization; 2) balance the potential complications of the procedure with the potential benefits; 3) compare the risk benefit profile to other options of therapy; 4) critically analyze the results of the catheterization procedure; and 5) effectively communicate all of this information to the patient and other members of the care team.

The specific functions which define this EPA include:

1. Demonstrating the skills and knowledge required to perform a thorough pre-catheterization assessment including detailed review of the medical history, current condition, physical examination, and relevant diagnostic studies
2. Knowing the risks and benefits specific to the full spectrum of cardiac catheterization procedures and of potential noncardiac catheterization options for optimal patient management
3. Interpreting the hemodynamic and angiographic data
4. Communicating the intent and risks of the procedure as well as the results of the procedure to patients, families, and professional colleagues

Judicious Mapping to Domains of Competence

- Patient Care
- Medical Knowledge
- 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

PC 7:	Developing management plans
PC 9:	Counseling patients and families



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MK 1:	Demonstrating knowledge
PBLI 5:	Incorporating feedback into practice
SBP 3:	Incorporating cost awareness into care

Context for the EPA

Rationale: Pediatric cardiologists must be able to manage the care of patients requiring cardiac catheterization as well as interpret data generated from the procedure.

Scope of Practice: The care of patients who require cardiac catheterization is an essential activity of a pediatric cardiologist. All pediatric cardiologists must understand the indications, risks, benefits, and limitations of cardiac catheterization and have the ability to correctly analyze and utilize the catheterization data. The patient population includes the fetus, infant, child, adolescent, and adult with congenital or acquired heart disease. This document is intended to address the scope of knowledge and skills of pediatric cardiologists referring their patients for cardiac catheterization. As such, it focuses on activities required to make an appropriate referral and provide care after the procedure with the understanding that the pediatric cardiologist will recognize his/her own limitations and seek additional assistance from a pediatric interventional cardiologist as needed.

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

Patient Population: Infant, child, adolescent, and adult.

Curricular Components That Support the Functions of the EPA

1. Demonstrating the skills and knowledge required to perform a thorough pre-catheterization assessment including detailed review of the medical history, current condition, physical examination, and relevant diagnostic studies
 - Determines the general state of the patient
 - Orders the relevant diagnostic studies based on cost-benefit analysis for the individual patient and shared decision-making with the patient and family
 - Interprets the relevant diagnostic studies in the context of the history and physical examination
 - Knows the indications and contraindications for catheterization and specific interventions
 - Recommends appropriate and timely catheterization referral
 - Seeks and incorporates feedback from interventional consultants regarding pre-referral diagnostic workup and management
2. Knowing the risks and benefits specific to the full spectrum of cardiac catheterization procedures and of potential noncardiac catheterization options for optimal patient management
 - Describes the risks and benefits of diagnostic and common interventional cardiac catheterization procedures*
 - Describes the principles of radiation safety
 - Describes basic procedural methodologies of diagnostic catheterization and common interventions
 - Explains the alternative diagnostic options
 - Explains the alternative management options, including medical and surgical



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3. Interpreting the hemodynamic and angiographic data
 - Distinguishes normal pressure data, including waveforms, from abnormal data
 - Determines pressure gradients
 - Applies thermodilution and the Fick principle for cardiac output measurement and resistance calculations
 - Interprets the results of angiography
 - Synthesizes the catheterization data into a unified diagnosis where possible
 - Determines the procedural result to be successful or unsuccessful where possible
4. Communicating the intent and risks of the procedure as well as the results of the procedure to patients, families, and professional colleagues
 - Communicates with the patient/family and ensures their understanding of the indications, risks, benefits, alternatives, and potential complications
 - Elicits and takes into account patient preferences in making recommendations
 - Communicates the results of the procedure to the patient/family and ensures their understanding
 - Communicates the catheterization data, both orally and in written form, to interdisciplinary colleagues

* Common interventional cardiac catheterization procedures include the following

- Valvuloplasty
- Arterio/venoplasty
- Device closure
- Stent placement
- Balloon atrial septostomy
- Endomyocardial biopsy

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