



Entrustable Professional Activities

EPA 1 for Pediatric Critical Care Medicine

EPA 1: Acute Management of the Critically Ill Patient, Including Those with Underlying Chronic Disease

Supervision Scale for This EPA

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

Description of the Activity

Children with critical illness or injury must be managed with expertise; ability to resuscitate and stabilize patients being fundamental to this subspecialty. The focal components of this professional activity build upon those of managing the hospitalized patient with less critical illnesses including: 1) engaging in sound clinical reasoning that drives the development of an appropriate differential diagnosis and workup; 2) placing the patient at the center of all management decisions by engaging in bidirectional communication with patients and parents; and 3) providing patient and family centered care based on fundamental physiologic and pathophysiologic principles.

The specific functions which define this EPA include:

1. Identifying the key issues for the care of critically ill patients and forming a provisional differential diagnosis
2. Rapidly developing management plans that *address all comorbidities* requiring attention during the hospitalization and *case management issues* such as special resources required during and post-hospitalization
3. Performing common procedures needed to care for the patient including identifying the need for the procedure
4. Demonstrating ability to utilize technology, including an understanding of the various monitoring techniques and devices, evaluating new technology, adopting new technology in a fiscally responsible manner, and applying technology to care by integrating it into practice in a manner that provides optimal patient outcomes
5. Addressing and documenting the primary problem, as well as admission and discharge criteria

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



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Competencies Within Each Domain Critical to Entrustment Decisions

PC 5:	Performing complete physical exams
PC 7:	Developing management plans
PC 8:	Performing procedures
PC 11:	Using information technology
MK 1:	Demonstrating knowledge
ICS 1:	Communicating with patients/families
ICS 6:	Maintaining medical records
PPD 1:	Engaging in help seeking

Context for the EPA

Rationale: The acute management of critical illness is the fundamental tenet of the clinical practice of pediatric critical care. However, definitive pediatric data to guide management are lacking in many circumstances, which may lead to substantial variability across institutions and programs in both the management of patients and education of trainees in the specialty. For this reason, specific foundational skills and knowledge of the pathophysiology and evolution of critical illness are detailed to ensure that a reasoned approach prevails when empiric data are lacking.

Scope of Practice: The clinical practice of pediatric intensive care involves the acute management of patients to optimize the outcomes of critically ill patients. This acute management is first founded in basic physiologic and pathophysiologic principles. Acute management also involves the integration of input from a variety of sources including patients, families, consultants, and the multidisciplinary critical care team. Other important considerations in the acute management of patients are not only acute and life-threatening illness, but also concurrent chronic and comorbid conditions that may be contributing to illness. In addition, the ability to perform procedures and utilize technology are crucial elements in the optimal management of patients. This acute management of critical illness represents the essence of the clinical practice of pediatric intensive care and a comprehensive approach, based on a strong foundation of fundamental physiology and pathophysiology, is essential. The age span, ranging from newborn to young adults, also emphasizes the need for applied knowledge of physiology and pathophysiology in caring for critically ill patients.

Curricular Components That Support the Functions of the EPA

1. Identifying the key issues for the care of critically ill patients and forming a provisional differential diagnosis
 - Performs a thorough physical exam
 - Interprets diagnostic tests
 - Utilizes invasive and noninvasive monitoring
 - Discusses elements of uncertainty related to the provisional diagnosis
2. Rapidly developing management plans that *address all comorbidities* requiring attention during the hospitalization and *case management issues* such as special resources required during and post-hospitalization
 - Generates shared goals of care to address comorbidities



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- Collaborates with other health care providers and families to address any special resources required for the critically ill patient
 - Identifies service-based resources to address the management plan for the critically ill child
 - Promotes interdisciplinary discussions to address all comorbidities and case management issues
 - Reassess all available data to adapt management plans as necessary
3. Performing common procedures needed to care for the patient including identifying the need for the procedure
- Thoroughly assesses the need for procedures in critically ill children and recognizes potential complications
 - Demonstrates competence in performing common procedures required in caring for critically ill children
 - Recognizes limitations and engages in help-seeking behaviors
4. Demonstrating the ability to utilize technology to monitor and enhance care, including an understanding of the various monitoring techniques and devices, evaluation of new technology, adoption of new technology in a fiscally responsible manner, and application of technology with integration into practice in a manner that provides optimal patient outcomes
- Knows the spectrum of monitoring devices and the advantages and challenges of individual technologies
 - Evaluates new technology
 - Adopts and integrates new technology into practice based on utility and cost/benefit
 - Utilizes invasive monitoring to improve patient care
 - Utilizes noninvasive monitoring to improve patient care
 - Recognizes when invasive and noninvasive monitoring is no longer needed
5. Addressing and documenting the primary problem, as well as admission and discharge criteria
- Documents the need for pediatric intensive care admission
 - Documents the primary problem and all comorbidities
 - Addresses a clear treatment plan for the primary problem

Problems **generally** within the scope of critical care practice where the role of the intensivist is to recognize, evaluate, and manage these patients

- Recognition, evaluation, and management of acute or chronic single organ failure
- Recognition, evaluation, and management of respiratory insufficiency and respiratory failure
- Recognition, evaluation, and management of inflammatory, immunologic, and other infectious syndromes
- Recognition, evaluation, and management of shock states (septic, hemorrhagic, distributive, obstructive, cardiogenic)
- Recognition, evaluation, and management of acute medical cardiac illness
- Pre- and postoperative evaluation and management of congenital heart disease (one and two ventricle)
- Recognition, evaluation, and management of acute neurological illness and injury (Status Epilepticus [SE], stroke, Traumatic Brain Injury [TBI], etc.)



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- Recognition, evaluation, and management of acute multi-organ trauma and burns (accidental and nonaccidental)
- Recognition, evaluation, and management of acute metabolic (including tumor lysis), endocrine, and toxicological illness
- Preparation, performance, and management of complications of critical care procedures
- Preparation, performance, and management of complications of advanced technologies
- Administration and monitoring sedation and analgesia
- Recognition, evaluation, and management of the nutritional status of critically ill and injured children

Problems that **generally** require consultation/co-management depending on the context in which one practices

- Patients with a primary diagnosis managed by a subspecialist
- Patients with a specific subspecialty problem
- Surgical and post-operative patients
- Patients with solid organ or bone marrow transplants

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