Entrustable Professional Activities
Curricular Components Supporting EPA 5 For Pediatric Pulmonology

Curricular Components That Support the Functions of EPA 5: Demonstrate Competence in Performing the Common Procedures of the Pediatric Pulmonary Subspecialist

1. Demonstrating knowledge of the anatomy, physiology, indications, risks, benefits, alternatives, and potential complications of the procedures
   - Describes normal anatomy and physiology relevant to the procedure.
   - Distinguishes normal variants from pathologic findings
   - Stratifies pre-procedure risk based on child’s age, diagnosis, and comorbidities, and incorporates assessment into risk benefit analysis and procedure planning
   - Considers cost benefit analysis as part of procedural planning

2. Communicating with the patient and family to ensure informed consent as well as post procedure instructions
   - Adapts informed consent process based on pre-procedure risk assessment
   - Adapts communication of results based on family/child knowledge, developmental level, and preferences
   - Works with primary care physician/medical home and other care team members to incorporate findings into a coordinated treatment plan

3. Managing pain and sedation for the procedure
   - Prepares patient and family with what to expect in developmentally appropriate manner, uses nonpharmacologic comfort measures in conjunction with pharmacologic measures
   - Coordinates with the sedating physician/anesthesiologist to ensure appropriate degree of sedation or anesthesia as well as appropriate airway management to perform procedure safely and comfortably
   - Describes potential adverse effects of commonly used medications to achieve pain control and sedation

4. Performing technical skills pertinent to the procedure
   - Demonstrates competence in motor skills relevant to the procedure
   - Prepares equipment relevant to the procedure (calibration, set up, choosing correct size)
   - Describes infection control strategies relevant to the procedure
   - Positions and instructs patient and family in developmentally appropriate manner
   - Leads team members in conducting the procedure with confidence and attention to patient comfort
   - Demonstrates the technical skills to safely and effectively perform the procedure, guides a junior colleague in safely and effectively preforming the procedure, or seeks help from a colleague if needed to ensure the optimal outcome for the patient
   - Oversees procedures to clean and store equipment following each procedure
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5. Managing post-procedure complications
   • Anticipates complications based on pre-procedure risk assessment and implements procedures to minimize risk when appropriate
   • Distinguishes normal transient physiologic response to procedure from complications that require intervention
   • Identifies complications during procedure, seeks help from other team members, and if necessary, aborts the procedure based on assessment of risk-benefit balance in the context of the patient

6. Interpreting results of the procedure in the context of the patient
   • Interprets results in the context of other clinical information
   • Synthesizes findings into unifying diagnoses/treatment plan when possible
   • Ensures proper and prompt follow up

7. Demonstrating confidence that puts patients and families at ease
   • Demonstrates the knowledge to explain procedures and their possible complications as well as answer questions to help allay anxiety
   • Communicates with the patient/family at a level that aligns with their health literacy

Procedures generally within the scope of the practice of a pediatric pulmonologist include:
   • Spirometry
   • Lung volume measurement
   • Diffusing capacity of the lung
   • Tests of bronchoprovocation (e.g., exercise, methacholine)
   • Assessment of respiration during sleep (respiratory channels in a polysomnogram, measurement of gas exchange during sleep)
   • Use of noninvasive ventilation
   • Use of invasive ventilation
   • Flexible fiberoptic bronchoscopy, bronchoalveolar lavage, mucosal biopsies

Related procedures that generally require consultation from other specialists including pulmonologists with advanced training:
   • Transbronchial lung biopsies
   • Lung biopsies (thoracoscopic/open)
   • Rigid bronchoscopy
   • Nonrespiratory assessment of sleep
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- Functional evaluation of feeding
- Diagnostic imaging of the respiratory system (X-ray, fluoroscopy, ultrasound, CT, MRI)
- Diagnostic imaging of the CNS (MRI, CT)
- Endoscopy and biopsies of the GI tract
- pH probe/impedance probe monitoring
- Diagnostic imaging of the spine
- Diagnostic testing of muscle strength and function
- Genetic testing

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