

CORE SKILLS**OXYGEN DELIVERY AND AIRWAY MANAGEMENT****INTRODUCTION**

Respiratory distress and respiratory failure account for a significant number of pediatric emergencies in the acute care and inpatient settings. In these situations, early identification and treatment of respiratory compromise is critical. Appropriate airway management and oxygen delivery will result in reduced morbidity and mortality. Pediatric hospitalists frequently encounter children with respiratory compromise and are often in the best position to provide immediate, life-saving interventions.

KNOWLEDGE

Pediatric hospitalists should be able to:

- Review the basic anatomy of the upper respiratory tract and describe the anatomic differences between infants, children, and adolescents.
- Describe the various forms of monitoring related to assessment of oxygenation and ventilation, including cardiorespiratory monitors, pulse oximetry, capnography, and blood gas sampling.
- List the crucial items to have available at the bedside or in an emergency supply cart in the event of respiratory compromise, including suction, oxygen, oxygen delivery systems, pediatric sizes of advanced airway equipment, and resuscitation medications.
- Summarize the steps involved in assessing and securing a patient's airway, including proper airway positioning, suctioning, selection and use of the appropriate airway equipment, and the use of adjunctive medications.
- Describe the indications for and uses of different types of airway equipment, including oropharyngeal, nasopharyngeal, laryngeal mask, and tracheal airways.
- Compare and contrast low flow and high flow oxygen delivery systems, and give examples of each.
- Describe the mechanism of action of heliox and inhaled nitric oxide and list the indications for their use.
- List factors that may complicate airway management, including anatomic abnormalities of the face and oropharynx, neurologic impairment, and trauma.
- List the indications for consultation with an otorhinolaryngologist, anesthesiologist, or other subspecialist with regard to airway management.

SKILLS

Pediatric hospitalists should be able to:

- Anticipate the need for airway management or oxygen delivery and ensure that all appropriate equipment is readily available.
- Perform frequent clinical assessments and recognize when patients need supplemental oxygen or airway management.
- Correctly position the pediatric airway using head tilt and jaw thrust maneuvers.
- Use suction equipment to clear the airway when necessary.
- Select and use the appropriate method for oxygen delivery when indicated.
- Select the appropriate airway device and establish a secure airway when indicated.
- For patients with established tracheostomy tubes, respond with appropriate actions when the tube becomes obstructed or dislodged.
- Select appropriate monitoring and correctly interpret monitor data.
- Correctly identify the needs for and efficiently access appropriate consultants to ensure proper airway management.
- Implement an appropriate respiratory care plan for ongoing patient management, collaborating with nursing staff, respiratory therapy, subspecialists, and other healthcare providers as indicated.

ATTITUDES

Pediatric hospitalists should be able to:

- Assume responsibility for airway management and oxygen delivery.
- Recognize the importance of maintaining skills in airway management and oxygen delivery and participate in relevant continuing education activities.

CORE SKILLS

- Communicate effectively with patients and the family/caregiver regarding the need for airway management or oxygen delivery and the care plan.

SYSTEMS ORGANIZATION AND IMPROVEMENT

In order to improve efficiency and quality within their organizations, pediatric hospitalists should:

- Lead, coordinate, or participate in the development of hospital systems designed to detect patients with respiratory compromise early and provide an appropriate, rapid response.
- Lead, coordinate, or participate in educational initiatives for nurses, physicians, and other healthcare providers related to pediatric advanced life support.
- Work with hospital administration to ensure emergency code carts are pediatric-specific and contain adequate, appropriate equipment.
- Lead, coordinate, or participate in peer review or relevant case conferences with subspecialists and other healthcare providers to identify individual areas or systems issues in need of improvement.

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