

The following topics are covered in the Advanced Simulation Curriculum and are based on the American Board of Pediatrics Neonatal –Perinatal Content Outline.

The sessions encourage reflective thinking, good team communication and deliberate practice of technical skills. The list is not all-inclusive.

- Neonatal Resuscitation

Airway

1. Know the proper approach to airway management in the delivery room
2. Know the potential complications of airway management in the delivery room and know their management
3. Know the current recommendations regarding suctioning meconium from the airway during and following delivery

Ventilation and oxygenation

1. Know the indications for assisted ventilation, including continuous positive airway pressure, immediately after birth and how to assess its effectiveness
2. Understand how to use self-inflating and flow-inflating bags or T-piece resuscitators to provide assisted ventilation immediately after birth
3. Know indications for and proper administration of supplemental oxygen immediately after birth

Circulatory support

1. Know the indications for, techniques, and potential complications of chest compression immediately after birth
2. Know the indications for and management of intravascular fluid volume replacement immediately after birth

Pharmacologic management

1. Know the indications, contraindications, and methods of administration of drugs used for neonatal resuscitation

- Airway obstruction (eg, vascular rings, choanal atresia, etc.)

- a. Know the clinical features of an infant with airway obstruction
- b. Plan appropriate diagnostic evaluation and management for an infant with airway obstruction

- Respiratory distress

Know the clinical strategies and therapies used to decrease the risk and severity of RDS

Know the management of RDS, including surfactant replacement

- Pulmonary Hypertension

Recognize the clinical features and differential diagnosis of persistent pulmonary hypertension

Know the management of persistent pulmonary hypertension including assisted ventilation, pharmacologic approaches, and ECMO

- Air leaks

Recognize the clinical, laboratory, and imaging features of air leaks

- Congenital heart disease

Cyanotic heart defects

Know the evaluation and medical and/or surgical management and associated potential complications or adverse effects of such management for a cyanotic neonate

Recognize the clinical features and possible associated defects of a cyanotic Neonate

- Arrhythmias

Know appropriate management of common arrhythmias in the fetus and newborn infant, and understand the potential complications or adverse effects of approaches and drugs used

- Shock

Recognize features and management of hemorrhagic, distributive, cardiogenic, obstructive and neurogenic shock

- Fetal conditions that jeopardize the fetus during pregnancy

Know the neonatal complications of abnormal presentations (breech, shoulder dystocia, etc)

Know how specific fetal diagnoses, such as airway abnormalities, abdominal wall defects, trachea-esophageal fistula, myelomeningocele, or severe hydrocephalus might alter intrapartum management

- Recognize features of electrolyte disturbances and its management
- Know the clinical features and inheritance patterns of common syndromes or associations that can be recognized in the newborn period (eg, VATER association and DiGeorge syndrome)