



## Small Baby Care Specialist® Program Description & Objectives

Micro-premature, extremely low birth weight and very low birth weight infants are at the highest risk to experience a prolonged hospital course, major morbidities, long-term neurodevelopmental challenges, and family stress. Caring for the smallest babies in the NICU requires specialized interdisciplinary support focusing on evidence-based interventions to enhance the NICU experience promoting improved outcomes for the infant, family and NICU team.

The Small Baby Care Specialist® Program was designed to encourage an interdisciplinary approach to care supported by evidence and best practice strategies. The Program is presented by an interdisciplinary expert faculty who share practical implementation of best practice clinical strategies so that you and your team can provide comprehensive coordinated care for this patient population.

The overarching goal of the program is to transform care provided by the interdisciplinary team to improve the experience and outcome for the baby, family and NICU team.

Upon completion of the Small Baby Care Specialist® Program and the evaluation form, you may choose to receive a certificate of completion and one of the following forms of continuing education credit. 42.5 Contact Hours provided by the California Board of Registered Nursing (Provider EngageGrowThrive #16677); 35 CME (AMA PRA Category 1), AAPA Category 1 CME, Accreditation Council for Pharmacy Education, and Interprofessional Continuing Education (IPCE Credit recognized by the Commission on Dietetic Registration) provided by Postgraduate Institute for Medicine; 35 contact hours (CRCE) approved by the American Association for Respiratory Care; 3.5 CEU approved by the California Physical Therapy Association (CPTA #21-676). AOTA 3.5 CEU intermediate education level (Provider: EngageGrowThrive #0000000808). A score of 70% must be obtained on a post-test prior to completing the final evaluation to receive continuing education.

## Objectives

At the completion of this Course, the learner will be able to:

**Overall Objective:** Identify three potential strategies to implement to reduce NICU morbidities and improve long-term outcomes for small babies.

### **SMALL BABY CARE FOUNDATIONS**

#### **Family Partnered Care**

1. Recognize the impact of the NICU on the family unit.
2. Identify three daily care practices to promote parenting.

#### **Small Baby Data/Outcomes**

1. Analyze outcome data for small babies and identify the impact of NICU care on the baby's and family's future.
2. Examine the effect one or more NICU morbidities have on long-term impact for the small baby and family.

#### **Maternal Role Attainment**

1. Identify two key psychological processes experienced by pregnant women as they transition to motherhood.
2. List two ways in which preterm birth and the NICU environment can hamper attachment through interruption in these processes.
3. Identify two care practices that can promote maternal role attainment.



### **Communication/Teamwork**

1. Compare how a team-based approach to care can improve two processes and two outcomes for small babies and their families.
2. Name two specific tools to utilize in the NICU to improve communication between team members.

### **Continuity of Care**

1. List three parent perceptions of “Continuity of Care” in the NICU.
2. Identify one process that creates synergy among the interdisciplinary team promoting continued, coordinated, and comprehensive care to the infant and family.
3. List the three phases of the Parent/Nurse Relationship during the NICU Hospitalization.

### **Quality Improvement/Process Improvement**

1. Examine the principles of process improvement and how they can be incorporated to improve outcomes for the small baby.
2. Identify the benefits of utilizing process standardization to reduce practice variation.

## **EARLY MANAGEMENT**

### **Antenatal Care**

1. Identify three maternal risk factors for premature birth.
2. List three potential implications of maternal risk factors on the premature neonate.

### **Resuscitation/Golden Hour**

1. Select examples of three equipment or process requirements unique to the resuscitation of the small baby.
2. List two characteristics of functional teams that ensure successful resuscitation and golden hour care.
3. Identify two best practice care strategies to facilitate safe, efficient, and gentle resuscitation and stabilization.

### **Thermoregulation**

1. Recognize three physiologic mechanisms of thermoregulation in the preterm infant.
2. Compare the importance of utilizing dual monitoring measurements to assess and maintain thermal stability.
3. List two practice, equipment, or environmental modifications to consider when utilizing developmental support devices when caring for the premature infant.

## **NUTRITIONAL MANAGEMENT**

### **Prevention of Malnutrition & Growth Failure**

1. List two evidence-based nutritional interventions to prevent post-natal growth failure.
2. Identify one long-term risk associated with growth failure.
3. Name one component in maternal breastmilk that helps to facilitate growth.
4. Identify one nutrition intervention that supports the growth of the small baby after discharge.

### **Parenteral Nutrition**

1. Identify one evidence-based parenteral nutrition intervention to prevent post-natal growth failure/malnutrition.
2. Identify one benefit provided by newer lipid emulsions to the premature infant.

### **Enteral Nutrition & Maternal Diet**

1. Select one evidence-based enteral nutrition intervention to prevent post-natal growth failure.
2. Name one component in maternal breast milk that helps to facilitate growth.
3. Identify one common nutrient deficiency in the maternal diet that results in low levels in maternal breast milk.

### **Nutrition Monitoring Practices**

1. Name two clinical methods to monitor growth in the premature infant.
2. Identify two factors that put the VLBW infant at risk for neonatal malnutrition.



### **Discharge Nutrition**

1. Identify one nutrition goal for the VLBW infant at discharge.
2. Identify one nutrition intervention used for a high risk VLBW infant leaving the NICU.

### **Benefits of Human Milk**

1. List three benefits of a human milk diet.
2. Recognize two important benefits of Mother's own milk.
3. Identify two strategies to support lactogenesis.

### **Pre-Feeding Interventions: Set up for Success**

1. Name two ways an infant is developing feeding skills in utero.
2. Identify three neonatal experiences in the NICU that can negatively affect the premature infant's future feeding skills.
3. List three pre-feeding techniques to facilitate the foundation for positive oral feeding skills.

### **NEC Prevention**

1. Recognize at least three risk factors for the development of NEC in the small baby.
2. List two complications associated with NEC.
3. Identify three best practice important in reducing the incidence of NEC.

## **RESPIRATORY MANAGEMENT**

### **Prevention of BPD**

1. Identify three contributors to the cause of BPD in the premature infant.
2. Name two evidence-based or best practice strategies to prevent BPD.

### **Mechanical Ventilatory Modalities**

1. Compare and contrast the different modes of invasive conventional mechanical ventilation for infants.
2. Differentiate between conventional and high frequency ventilation.
3. Select in which disease process high frequency ventilation could potentially be of most benefit.

### **ROP Prevention**

1. Recognize one impact of oxygen saturation targeting on the reduction of severe ROP.
2. Identify two ways to improve compliance with oxygen targeting in the NICU.

### **Apnea of Prematurity**

1. Define Apnea of Prematurity.
2. Identify two strategies to treat Apnea of Prematurity.

## **CARDIAC MANAGEMENT**

### **PDA**

1. List three signs and symptoms of PDA and their potential significance, and physiologic closure in the premature infant.
2. Compare and contrast medical and surgical PDA interventions and identify two associated risks.

## **NEURODEVELOPMENT**

### **Risks, Outcomes, & Neuroprotection**

1. Identify two anatomic structures or features of the preterm infant brain that increase the risk of brain injury.
2. Recognize the prevalence of long-term neurodevelopmental sequelae in premature infants.



3. Name two neuroprotective practices to implement in the care of the small baby to prevent intraventricular hemorrhage.
4. Identify two care strategies to improve neurodevelopmental protection for small babies.

### **Brain & Neurosensory Development Experiences in the NICU...Shaping Neurologic & Emotional Development**

1. List two implications of the fetus' in-utero sensory experience.
2. Identify the importance of the critical period for the developing sensory system.
3. Recognize one purpose of each component of the Limbic System.

### **The Impact of Stress and Pain on the Developing Brain**

1. Name two physiologic and two behavioral pain or stress responses in the premature neonate.
2. List two potential changes to the premature brain with exposure to stress and pain.
3. Identify three long-term effects from exposure to stress and pain in the NICU.
4. List two strategies to minimize the effects of pain and stress on the developing infant.

### **Non-Pharmacological Stress and Pain Relief**

1. Identify two care practices to minimize stress and pain in the premature infant.
2. List three positive caregiving opportunities to enhance state organization and promote self-calming for the premature infant.
3. Identify two evidence-based practices to perform during required painful procedures to protect the premature infant's developing brain.

### **Positioning the Neonate for Best Outcomes**

1. Recognize the importance of intrauterine positioning in musculoskeletal development and function.
2. Identify positioning morbidities & their functional limitations.
3. List two ways to promote positioning calmness and behavioral and physiological regulation.

### **Skin to Skin Holding**

1. List three clinical or physiologic benefits for performing skin to skin care with premature infants.
2. Identify three steps to prepare prior to performing skin to skin that optimize the experience for the parent and their premature infant.
3. List two long-term effects for skin to skin care to the developing infant.

### **INFECTION PREVENTION**

#### **Risks, Outcomes, & CLABSI Prevention**

1. Identify four factors that significantly increase the risk of infection in the small baby.
2. List three examples of small baby practices that have been associated with a reduction in infection.
3. Recognize two co-morbidities associated with infection in the small baby.
4. Identify two key examples of care strategies to reduce the risk of CLABSI in the premature neonate.

#### **Antibiotic Stewardship**

1. Recall two risks of using antibiotics in the small baby.
2. Identify two factors that can improve the accuracy of infection diagnosis in a small baby.
3. List three ways an NICU nurse can participate in their unit-based Antibiotic Stewardship Program.
4. Identify three strategies that have been used to reduce antibiotic exposure in the small baby.

#### **Skin Care for ELBW Infants**

1. List three anatomic and functional differences in premature and ELBW infant skin.
2. Select two strategies to address extremely increased transepidermal water loss and evaporative heat loss in the ELBW infants.
3. List two preventative and two treatment techniques for skin breakdown due to the use of medical adhesives and skin disinfectants in ELBW infants.



4. Identify potential for skin breakdown as a portal of entry for infection, and recognize the importance of early identification of bacterial and fungal microorganisms.

#### **Preterm Neonate Renal Development & Function**

1. Identify two functions of the kidney
2. Recognize two characteristics of renal development that place the preterm neonate the preterm neonate at risk for poor renal function.
3. Define Acute Kidney Injury (AKI).

#### **Retinopathy of Prematurity**

1. Identify two risk factors for the development of ROP.
2. Name two potential therapies for the treatment of ROP.

#### **Small Baby Pharmacotherapy**

1. Outline three pharmacokinetic and pharmacodynamic principles in neonates.
2. Compare and contrast two considerations for medication administration in preterm infants vs. term infants or children.
3. Identify two specific precautions and monitoring recommendations for preterm drug therapy.

### **PROFESSIONAL NEONATAL PRACTICE**

#### **Intro to Neonatal Ethics**

1. Compare the difference between ethics and morality.
2. Define autonomy, beneficence, non-maleficence, and justice.

#### **Intentional Caregiving in the NICU**

1. Define intention as it relates to bedside caregiving in the NICU.
2. Identify three steps to intentional caregiving.

#### **Summary**

1. Define three foundational tenets for the small baby care specialist to integrate into daily practice.

#### **Practice Integration Sessions**

1. Identify one practice or process change you can apply and model immediately in the care of small babies and their families in each of the following areas:
  - a. Family-partnered care
  - b. Teamwork, communication, consistency, continuity and professional practice
  - c. Nutritional monitoring and/or management
  - d. Respiratory monitoring and/or management
  - e. PDA management
  - f. Neuro-protective and neuro-promotional practices
  - g. Infection prevention techniques
  - h. Professional and/or intentional practice