Objectives

- Recognize the significance of nursing’s role in providing holistic, patient-centered care for mechanically ventilated infants and describe best practice approaches useful in the management of this population’s respiratory support needs.

- Summarize the benefits of collaborative interprofessional teamwork and effective communication techniques that address the goal of quality care and patient safety.

- Outline the underlying principles and stages of fetal and neonatal lung development and include the implications for appropriate clinical management and selection of ventilator mode.

- Describe the six core interventions developed as an evidence-based practice bundle to standardize and improve the quality of care provided to infants managed with noninvasive respiratory support (NIRS).

Content Outline

1. Care Considerations for the Neonate Receiving Mechanical Ventilation
   1.1 Stages of fetal & neonatal lung development with clinical implications
   1.2 Explanation of neonatal mechanical ventilation
      1.2.1 Mechanical ventilation terminology
      1.2.2 Selection of ventilator mode
   1.3 Nursing care aspects
      1.3.1 Elements related to intubation, extubation & oxygen saturation
      1.3.2 Prevention & recognition of ventilator-acquired pneumonia (VAP)
      1.3.3 Positioning & use of sedation & analgesia
      1.3.4 Parental involvement with focus on skin-to-skin care

2. Process of Implementing an Evidence-Based Non-Invasive Respiratory Support (NIRS) Bundle in NICU
   2.1 Review of evidence-based literature & development of project objective
   2.2 Quality Improvement (QI) project development
      2.2.1 Setting, design & ethical considerations
      2.2.2 NIRS evidence-based practice (EBP) bundle
      2.2.3 Staff development
      2.2.4 Survey tool & data collection process
      2.2.5 Results including nursing & infant outcomes
      2.2.6 Discussion & conclusions

Reading Material Resources

Module WB1930: Neonatal Ventilatory Support- Nursing Perspectives is based on the resources listed below. A copy of each resource is included with the module.

Special Considerations in Neonatal Mechanical Ventilation, Dalgleish S, Kostecky L and Charenia I, Critical Care Nursing Clinics of North America (28), 2016, pp 477-498

Implementation of an evidenced-based non-invasive respiratory support (NIRS) bundle in the NICU to decrease nasal injury complications, Milligan PS and Goldstein MR, Journal of Neonatal Nursing (23), 2017, pp 89e-98e