Chen, Yee, et al, 2009).

- Newborns with spontaneous circulation (heart rate >60 beats/min) should be stabilized or resuscitated with room air, but asphyxiated newborns with depressed circulation (heart rate <60 beats/min) should be stabilized or resuscitated with 100% oxygen (Ten and Matsiukevich, 2009).

- In very preterm infants (<30 weeks' gestational age) stabilized or resuscitated with 100% oxygen, the majority (80%) had SpO_2 95% in the first 10 minutes. Infants stabilized or resuscitated with room air followed a similar course as full-term and preterm newborns when 100% oxygen was administered along with titration against SpO_2. Similar changes in heart rate were observed in both groups (Dawson, Kamlin, Wong, et al, 2009).

Apply the Evidence: Nursing Implications

The International Liaison Committee on Resuscitation recommends that "in term infants receiving resuscitation at birth with positive pressure ventilation, it is best to begin with air rather than 100% oxygen" (Perlman, Wyllie, Kattwinkel, et al, 2010). Decisions to increase the oxygen concentration should be based on the oxygen saturation and the infant's clinical response.

When the oxygen saturation is below the recommended levels, increase fraction of inspired air (FiO_2) by 10% every 30 seconds until the saturation level reaches the desired range. Rapid FiO_2 changes may cause constriction of the pulmonary blood vessels (Ramji, Saugstad, and Jain, 2015).

Quality and Safety Competencies: Evidence-Based Practice*

Knowledge

Differentiate clinical opinion from research and evidence-based summaries.

Describe the various interventions for newborn stabilization and delivery room resuscitations with room air or low oxygen.

Skills

Base individualized care plan on patient values, clinical