

requirements and a decreased need for ventilatory support ([Speer, Sweet, and Halliday, 2013](#)).

Infants with RDS who survive the first 96 hours have a reasonable chance of recovery. However, complications of RDS include associated respiratory conditions and problems associated with prematurity, including patent ductus arteriosus and congestive heart failure, intraventricular hemorrhage, bronchopulmonary dysplasia, retinopathy of prematurity, pneumonia, air leak syndrome, sepsis, NEC, and neurologic sequelae.

Nursing Care Management

Care of infants with RDS involves all of the observations and interventions previously described for high-risk infants. In addition, the nurse is concerned with the complex problems related to respiratory therapy and the constant threat of hypoxemia and acidosis that complicates the care of patients in respiratory difficulty.

The respiratory therapist, an important member of the NICU team, is often responsible for the maintenance of respiratory equipment. Although it may be the respiratory therapist's responsibility to regulate the apparatus, nurses should understand the equipment and be able to recognize when it is not functioning correctly. The most essential nursing function is to observe and assess the infant's response to therapy. Continuous monitoring and close observation are mandatory because an infant's status can change rapidly and because oxygen concentration and ventilation parameters are prescribed according to the infant's blood gas measurements and pulse oximetry readings.

Changes in oxygen concentration are based on these observations. The amount of oxygen administered, expressed as the fraction of inspired air (FiO_2), is determined on an individual basis according to pulse oximetry or direct or indirect measurement of arterial oxygen concentration. Capillary samples collected from the heel (see [Chapter 20](#) for procedure) are useful for pH and PaCO_2 determinations but not for oxygenation status. Continuous transcutaneous or pulse oximetry readings are recorded at least hourly. Blood sampling is performed after ventilator changes for