

Quality Improvement: Newborn Chemical Withdrawal

Describe the scenario.

A 16-year-old female presented to the clinic with cramping and lower abdominal pain. After obtaining the patient's health history, and careful assessment of the patient's symptoms, the nurse suspected a pregnancy in the female teen. However, the teen was certain she was not pregnant. Concerns were raised since the patient stated in their health history previous use of illicit drugs. Following a consult with the physician, the nurse followed orders to obtain a CBC, UA, and pregnancy test STAT. The results confirmed a positive pregnancy. The teen was 24 weeks pregnant so that put her in her second trimester. Since the teen had participated in the use of illegal marijuana, cocaine, and alcohol abuse, and was unaware of her pregnancy, unfortunately, the baby had not been receiving the adequate prenatal care. High risks that the baby was in danger of was failure to thrive (FTT) and neonatal chemical withdrawal also known as neonatal abstinence syndrome (NAS). NAS occurs when a baby suffers withdrawal symptoms from certain drugs that they are exposed to for a length of time in the mother's womb before birth. The baby can experience these symptoms as early as 1-3 days after birth. The teen mother begins to receive the appropriate prenatal care at 24 weeks. Unfortunately, the baby is born premature at 28 weeks and is exhibiting NAS symptoms. The baby experiences skin mottling, high-pitched crying, irritability, sleep problems, poor feeding, slow weight gain, and tremors. The baby is placed in the NICU and its plan of treatment/care moving forward is to manage NAS.

In what way did the patient care or environment lack? Is this a common occurrence?

In this circumstance, the teen mom lacked the appropriate prenatal care. Prenatal care is very detrimental to a baby's journey in the womb until birth. The sooner a mother can begin adequate prenatal care, the better it is for the baby throughout the pregnancy. In this case, since the teen mother was completely unaware of her pregnancy, when she finally sought medical care, and learned of her positive pregnancy, it was rather late in her pregnancy that she begun prenatal care. Also, since she participated in the use of illicit drugs, the baby was at high risk for NAS and other conditions that may accompany this syndrome. Unfortunately, it does happen more often than we'd like. It has been a national concern for years and has recently risen in more recent years.

What circumstances led to the occurrence?

The teen mother's participation in the use of marijuana and cocaine contributed to the baby developing NAS. When the baby was born exhibiting symptoms of not only NAS but also FTT, which can be a result of NAS, the teen mother's alcohol abuse played a factor in this as well. Because weeks had passed by without the teen mother knowing of her pregnancy, this caused her to miss very important prenatal care in the first few weeks of her pregnancy. Delaying adequate prenatal care can place the unborn baby at risk for many different adverse conditions, such as FTT.

In what way could you measure the frequency of the occurrence?

When assessing and measuring NAS in infants, the most commonly used tool to do evaluate infants is the Finnegan Neonatal Abstinence Scoring Syndrome (FNASS), including modifications. This scoring tool consists of a 31-item list of different signs and symptoms of three levels of withdrawal. The three different levels of the FNASS are CNS disturbances, Metabolic, Vasomotor and Respiratory disturbances, and Gastrointestinal disturbances. The FNASS is based on factors such as record review, maternal reports, and direct observation of the infant.

What evidence based ideas do you have for implementing interventions to address the problem?

Because babies do not know how to care for themselves and have no strength or knowledge, it is up to the parents, nurses, and healthcare team to care for babies experiencing NAS and help them meet their basic needs until they are able to do so on their own. There are three different interventions aimed at treating and managing NAS in infants. Nursing support of breastfeeding, kangaroo care, and Rooming-in to improve outcomes for NAS. There are many medical benefits of breastfeeding such as decreased incidence of respiratory infections, and gastroenteritis. Other psychosocial benefits include increased bonding between the mother and baby. Breastfeeding can also shorten the stay at the hospital for infants with NAS. Mothers who are taking opioid substitution therapy are safe to breastfeed their babies. Since infants also experience irritability and poor sleeping, skin-to-skin care, or also known as kangaroo care, has shown to have a

positive impact on infants with NAS. Maintaining a baby's temperature is vital to their overall health. With at least three hours of kangaroo care, an infant's FNASS can significantly decrease. Kangaroo care contributes to psychosocial benefits such as increased time of bonding between mother and baby, observation time, and allowing the mother to provide care and meet her baby's basic needs. It allows the baby to rest appropriately and feel comforted and warmth in their mother's arms. Rooming-in further allows the mother and baby to bond more. It also allows for shorten hospital stays.

How will you measure the efficacy of the interventions?

In implementing the above nursing interventions and holistic care provided by the mother, policies shall be put in place when treating an infant with NAS and managing the accompanying symptoms. Evidence based interventions should be a part of all nursing care delivered to these infants. Every infant exhibiting NAS will be assessed per hospital policy to determine the infants plan of care and goals. If it is safe for the mother to breastfeed, it will be encouraged and supported by nursing staff. The infant will then be evaluated by daily weights, feeding initiative suckling and cues. Kangaroo care will be done daily and should be done for at least hours to establish a bond between mother and baby. The baby's overall affect and health will show the improvement and benefits of skin-to-skin care with mother. Rooming-in will be the first option available for mothers with NAS. Rooming-in allows for closer observation of the infant experiencing NAS symptoms and also gives the mother an opportunity to meet and care for the infant's basic needs. To measure the efficacy of these interventions, evaluating the infant's daily progress of meeting their basic needs and psychosocial needs will be completed. The goals for infants with NAS will be that they will have an overall well appearance, will be less irritable, will not cry as often or as loud, will gain better sleep and growth, gain more weight, and experience little to no tremors and/or seizures.