

Answering the Questions of Perinatal Exposure to Illicit Substances



A guidebook for nurses

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Goals of the Project

The goal of this project is to improve the care of neonates by identifying substance exposure early and advocating for needed care and services for the children. Specifically the goal is to teach healthcare providers to identify at- risk neonates and reduce the incidence of neonates with substance abuse-related problems.

This project is part of the work being done by the West Virginia Perinatal Partnership Substance Use During Pregnancy Task Force.

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Why is this issue being addressed?

Caring for drug-exposed infants can be emotionally, physically, and mentally demanding upon the nurses and other healthcare providers. Education may provide an understanding of the consequences of substance abuse on the newly born (Raeside, 2003). Consistency among care providers when caring for such challenging patients is crucial. Zellman et al. (2002) state, “Good protocols identify important decision points, key diagnostic criteria and screening tools, encourage communication among medical personnel, and guide referral and reporting” (p.206).

This guidebook will provide you, the healthcare provider, with tools to assist you in identifying substance-exposed neonates, suggestions for ongoing care and treatment, and resources families



after discharge from your facility. Information contained within this guidebook will help you identify times that extra vigilance in assessment should occur, list signs and symptoms of exposure and

withdrawal, provide an assessment tool for neonatal abstinence syndrome (NAS), and give a list of resources for reporting exposure and for treatment options for the mother and infant.

Is illicit substance abuse during pregnancy really a problem in West Virginia?

A review of birth score data examined the presence of prenatal and postnatal risk factors for substance-exposure in infants born to West Virginia mothers. The results of data collected from July 2007 to July 2008, found that 17,349 mothers provided information. Of these, 816 (5%) reported drug or alcohol use during pregnancy. With regard to those reporting substance use, 489 (59%) reported using marijuana, 143 methadone, 110 cocaine, 29 methamphetamine, and 22 heroin. Alcohol during pregnancy was reported by 185 mothers. Poly-substance use was reported, with 117 mothers admitting to the use of at least two substances (WV Perinatal Partnership, 2008).

In 2008, a review of birth data and subsequent NICU admissions by the WV Perinatal Partnership and the Center for Business and Economic Research at Marshall University examined the cost of care in an NICU for substance-exposed neonates. Of the 816 drug-using mothers in the birth data described in the previous paragraph, 103 infants required admission to the NICU for treatment. The average length of stay for these infants was 16 days, with an estimated cost of \$41,815 dollars per stay. The total cost for all of the 103 infants was estimated to be \$4.3 million (WV Perinatal Partnership, 2008).

The 2010 Annual Report of the West Virginia Birth Score Program (Hamilton, 2010) provided confirmation that substance use during pregnancy

is an ongoing, and in some cases, growing problem. Data was collected regarding 18,124 births, with 1501 instances of drug exposure -- a 1.8 times increase from 2008. The 8.3% overall drug exposure rate consisted of marijuana (669); opioids (446); methadone (231); cocaine (75); methamphetamine (50); and heroin (30). Alcohol use was reported by 172 mothers. Combining the drug and alcohol exposure, 9.2% of West Virginia's infants were reported to be exposed to substances in utero in 2010. Substance-exposed babies have the potential to need specialized and ongoing care; thus it is crucial for them to be identified and treated as early as possible.

In West Virginia, for 83% of those reporting substance use during pregnancy, the primary source of insurance was Medicaid. Another 7% was self pay or unknown. Only 10% had private insurance. Federal and state funded insurance programs do not pay the full cost of care.

A report in the Charleston Gazette (Eyre, Nov. 12, 2007) acknowledged a critical shortage of NICU beds in West Virginia. Two issues were as identified as contributing to the shortage: higher numbers of high-risk infants delivered in rural hospitals and an increase in number of newborns requiring detoxification due to mothers using drugs during pregnancy. The ability for Level 1 and 2 nurseries across the state to treat and monitor some of these infants could help reduce the numbers that are transferred to the NICU, impacting the current bed shortage. Education, support and training have been recommended for the Level 1 and 2 nurseries (Baxter, Nerhood, and Chaffin, 2008)

When can substance exposure be identified?

Identification of substance exposure is determined within two periods: prenatal and neonatal. Determination during both periods relies heavily upon the self report of the pregnant woman. Feelings of guilt and embarrassment and fear of prosecution result in underreporting of substance use, whether the substance is alcohol, tobacco, or drugs (Gray & Huestis, 2007). The National Survey on Drug Use and Health released in 2005 reported that 43 percent of all women surveyed, including those not pregnant, admitted to using illicit drugs within the month prior to the survey. For 12 years, the rates of use of alcohol, tobacco, and marijuana have remained the same within the United States, however, the use of illicit drugs has increased during that same period of time (Arria, et al., 2006). Ebrahim and Gfroerer (2003) reported that marijuana was the most commonly used drug during pregnancy, being admitted by 75% of the substance users in their study with cocaine use reported by 10% of the group.



Members of the WV Perinatal Partnership have collaborated to search for answers to the problem of substance use during pregnancy focusing on two periods: perinatal and neonatal.

Perinatal Screening

The Perinatal Partnership team, led by Stephanie Nicodemus, RN, CNM, has developed and is proposing a standardized screening tool to be used during antepartum visits to assess for risk of substance use during pregnancy. Intervention in the antepartum period would be of greatest benefit in decreasing adverse neonatal outcomes (Armstrong et al., 2003).

Legislation proposed in 2008 and reintroduced in 2009 became law on May 28, 2009 and establishes standards for the screening of all pregnant women in West Virginia. Fear of retribution and legal action often prevents women from admitting substance use. The law mandates screening of all pregnant women, but does not mandate a specific screening tool. The responsibility for monitoring this activity falls under the responsibility of the WV Department of Maternal Child Health.

Neonatal Screening

Ideally, substance use in pregnancy is identified by the Obstetric provider, and the pregnant woman receives treatment. Sadly, we know this is exception rather than the rule. Identification of the neonate soon after birth can result in early treatment and interventions, with a goal of decreasing short- and long- term negative outcomes.

When should extra screening and assessment for substances occur?



If your organization does not have a protocol in place to determine when extra screening or caution should occur, the following guidelines could be beneficial. These instances should raise a red flag and be a time when a more detailed screening and assessment should occur.

Mother

- No prenatal care
- Late prenatal care
- Limited prenatal care
- Unanticipated delivery outside the birthing facility
- Drop-in delivery (hospital/doctor hopping)
- Abruptio placenta
- Maternal admission to drug use during pregnancy
- Positive Maternal drug screen

Infant

- Unexplained premature delivery
- Unexplained small for gestational age

- Unexplained small head circumference
- Unexplained seizures, intracranial bleeds, or strokes
- Unexplained symptoms that might suggest drug withdrawal:
 - High pitched crying
 - irritability
 - hypertonia
 - lethargy
 - disorganized sleep
 - sneezing
 - hiccoughs
 - drooling
 - diarrhea
 - feeding problems
 - respiratory distress
- Unexplained congenital malformations involving genitourinary tract, abdominal wall or gastrointestinal systems



How is substance exposure determined?

Identification of substance use during pregnancy can be accomplished through testing of blood, urine, hair, amniotic fluid, saliva and sweat. Methods to determine exposure are somewhat time limited. A study by Sarkar and Donn (2006) reported that 83% of neonatologists utilized urine and meconium screens to determine drug exposure.

Umbilical Cord Sampling

A relatively new method for drug testing is the use of a portion of the umbilical cord. The umbilical cord sample can be collected immediately at birth. A comparison study by Montgomery et al. (2006) found that umbilical cord tissue was more accurate than meconium testing and identified positive substance exposures that had been classified as negative with meconium samples. Gray and Huestis (2007) reported that this method of detection can help determine the presence of amphetamines, opiates, cocaine, and marijuana. This method of detection is expensive; hopefully this will decrease in time.

In 2008, Montgomery et al. reported the results of a multicenter study conducted in Utah and New Jersey that compared the results of meconium and umbilical cord testing. The umbilical cord proved to be just as accurate as meconium and results more quickly obtained.

Meconium

Until recently, meconium assays have been the test of choice for substance identification. Meconium assays must be performed on all meconium the infant passes. Often the infant may have a bowel movement in utero, which prevents collection of this specimen in its entirety (Buchi, Zone, Langheinrich, & Varner, 2003; Lester, et al., 2002). Meconium can be contaminated with urine during attempts at collection as well. Meconium samples must be stored at proper temperatures - usually refrigeration is necessary. High rates of false positive results have been reported as a problem with meconium sampling (Gray and Huestis, 2007).

Urine

Urine specimens can be used but are not the preferred method for testing. Urine drug data is only accurate for one to three days after the delivery and will give the provider a sample of substance use in the days immediately before the delivery. Urine samples can be difficult to obtain. Frequent removal of urine collection bag may cause skin irritations, and insertion of urinary catheters may introduce bacteria into the urinary tract. Urine can be tested for the following substances: cocaine, cannabis (marijuana), opiates, amphetamines, and nicotine (Gray and Huestis, 2007).

Hair

Infant hair may be tested at any point up to the first three months of age. Hair shafts hold particles of the drug and chronicle drug exposure from about

six months of gestational age. Hair collection can be difficult due to the amount of hair required and the need to collect the entire hair shaft, including the root (Garcia-Bournissen et al., 2006; Gray and Huestis, 2007; Mecham and Melini, 2002; Montgomery et al., 2006; Schuetze & Eiden, 2006). Hair sampling provides the healthcare provider with evidence of substance use in the latter parts of pregnancy because the baby's hair grows in the third trimester (Koren, Hutson, Gareri, 2008). Hair sampling can detect substance exposure over a longer period of time and can detect exposure to cocaine, marijuana, opiates, amphetamines, and nicotine (Gray and Huestis, 2007).

Cord Blood

Cord blood sampling can be used to determine in-utero substance exposure. This method is relatively new, with little research available to substantiate findings. The detection window with cord blood is relatively short; it requires exposure within one to three days before birth (Gray and Huestis, 2007).



What are the most commonly used drugs and what do they do?

The American Academy of Pediatrics classifies illicit drugs into four categories: Opioids, Central Nervous System stimulants, Central Nervous System depressants, and Hallucinogens.

Marijuana was identified as the most frequently used illicit substance by pregnant women in West Virginia as determined from the birth score sheets and by a survey conducted of nursing managers . If legal substances were discussed, tobacco would be the number one substance used during pregnancy. West Virginia is the number one state for tobacco use during pregnancy, with 32.8% of women of childbearing age smoking in 2007 (March of Dimes, 2009).

When discussing these drugs, it is important to note that many substance users do not use only one substance. The majority are poly-substance users, meaning they take two or more substances, including alcohol, tobacco, and drugs.

MARIJUANA

Classification/Origin/Effects

Marijuana is a CNS depressant. Marijuana is produced as the Indian cannabis plant. Marijuana produces psychoactive effects including increased perceptions of textures, smells, tastes, sounds and sights (D'Apolito, 1998).

Transfer to fetus

The active ingredient in marijuana, tetrahydrocannabinol, crosses the placenta and can cause reduction in the heart rate of the fetus (Schaefer, Peters, and Miller, 2007). Marijuana can be detected in urine the first day of life and up to three days after delivery in meconium (D'Apolito, 1998).

Impact on the Neonate

- Alters neurobehavioral performance (Barros et al., 2006)
- Lower gestational age at delivery
- Increased risk of prematurity (Sherwood et al., 1999)
- Reduction in the heart rate of the fetus (Schaefer, Peters, and Miller, 2007).
- Growth Reduction (Taeusch et al, 2005)
- Late prenatal care (Burns et al., 2006)
- More often required NICU admission

Possible post-natal symptoms

- Irritability

- Tremors
- Sleep disturbances

Long-term outcomes

- Increased risk of childhood leukemia and eye problems, as well as a link to developmental delays (D'Apolito, 1998).
- Increased risk of neuroblastoma in children particularly when marijuana is used in the first trimester of pregnancy (Bluhm et al., 2006).
- Increased risk for depression and anxiety from first trimester exposure. Increased risk of lower reading comprehension and underachievement from second trimester exposure (Goldschmidt et al., 2004)

Breastfeeding

Marijuana passes into the breast milk and has a half life of up to 57 hours. Women using marijuana should not breastfeed. Exposure to marijuana via breast milk has been associated with delayed motor development (Schaefer, Peters, and Miller, 2007).

COCAINE

Classification/Origin/Effects

Cocaine is produced from the erythroxyton coca plant of South America. Cocaine is a central nervous system stimulant. It causes vasoconstriction - narrowing of blood vessels - and hypertension- high blood pressure (Addis et al., 2001). These can cause bleeding or tissue death in the mother or the infant.

Cocaine blocks dopamine and norepinephrine which magnifies euphoria, giving the user a heightened sense of power and sexual excitement.

Transfer to Fetus

Koren, Hutson, and Gareri (2008) reported that the placenta appears to block some of the absorption of the cocaine by the fetus. Cocaine can be present in neonatal urine for one to two days and in meconium up to three days. Cocaine can be present in urine samples for seven days.

Impact on the neonate

- Delayed auditory brainstem response, possibly indicating auditory system compromise (Tan-Laxa et al., 2004)
- Low birthweight (Bateman et al., 1993)
- Shorter length
- Lower head circumference (Bauer et al., 2005)
- Intrauterine growth restriction (IUGR)
- Abnormal fetal monitoring and circulatory

issues

- Higher heart rates (Schuetze and Eiden, 2006)
- Higher incidence of hypertension (Shankaran et al., 2006)
- Meconium staining
- Malformations
 - Urogenital
 - Brain
 - Midline deformities
 - Skull defects, encephaloceles
 - Ocular malformations
 - Vascular disruptions, such as limb reduction and intestinal atresia
 - Cardiac
- Neurodevelopmental conditions
 - Hypertonia
 - Tremors
 - Strokes
 - Seizures
 - Brainstem conduction relays

(Martinez, Partridge, and Taeusch, 2005)

Possible post-natal symptoms

- Tremors and jitters (Bauer et al., 2005)
- High pitched cry
- Excessive sucking
- NAS

- Possible Seizures
- Tachycardia
- Tachypnea
- Apnea
- Hyperirritability (may occur as late as 30 days after birth)

Long-term outcomes

- Higher infection rates
- Negative behavioral outcomes at 3, 5 and 7 year follow-up (Bada et al., 2007)
- Lower IQ scores
- Higher risk of SIDS

Breastfeeding

Cocaine appears in breast milk within 15 minutes of the mother's ingestion and has a half life of less than 1/2 hour, and clears within 5 hours. Women using cocaine should not breastfeed. If a mother uses cocaine while breastfeeding, she should pump and discard the breast milk for the following 24 hours (Schaefer, Peters, and Miller, 2007).



METHAMPHETAMINE

Classification/Origin/Effects

Methamphetamine is a powerful stimulant that causes the central nervous system to release dopamine. Over time, the production of dopamine decreases or halts entirely.

Methamphetamine has not always had a bad reputation. A Japanese chemist discovered the method to produce methamphetamine in 1919 using some of the same items used in its production today: ephedrine, red phosphorus, and iodine (Wikipedia, 2005). The production of this stimulant resulted in a drug that has been used throughout history. The military used forms of amphetamines to keep soldiers awake and alert for combat. Patients with asthma, Parkinson's disease and obesity were prescribed methamphetamine as a possible treatment for their health problems. Production under controlled conditions and prescription medications are not the issues. What is at issue is the production of illegal methamphetamine. According to Roehr (2005), a half a million Americans use methamphetamine each week. This drug may be ingested, inhaled, injected, or smoked.

Transfer to fetus

Methamphetamine causes vasoconstriction



when used, thus causing vasoconstriction of the placenta and the fetal organs, increasing the risk of congenital anomalies (Schaefer, Peters, and Miller, 2007).

Impact on the neonate

Babies exposed to methamphetamine in-utero are more likely to have APGAR scores <7 (Ludlow et al., 2004). They are also likely to be small for gestational age (SGA). Administration of Narcan, a narcotic reversal agent, to a methamphetamine-exposed neonate could result in the seizure activity.

Signs of exposure include

- Hyper excitability
- Disturbances in muscle tone
- Cardiac defects
- Cleft lip
- Biliary atresia

Possible post-natal symptoms

- Tremors and jitters (Bauer et al., 2005)
- High-pitched cry
- Excessive sucking
- Possible seizures
- Tachycardia
- Tachypnea
- Apnea
- Hyperirritability (may occur as late as 30 days after birth)

Long-term outcomes

- Mothers have lower quality of life perceptions
- Greater likelihood of substance use in family and social system
- Increased risk for ongoing legal difficulties
- Increased likelihood of development of a substance abuse disorder (Derauf et al., 2007)
- Potential for the following issues:
 - Respiratory Illnesses
 - Ingestion
 - Rashes
 - Burns
- Behavioral Issues
 - Hyperactivity
 - Sleep Disturbances
 - Aggressiveness

Breastfeeding

Amphetamines pass into breast milk. The half life is unknown. Women taking amphetamines should not breastfeed (Schaefer, Peters, and Miller, 2007).

OPIATES

Classification/Origin/Effects

Opiates are some that are commonly used in the healthcare including morphine, meperidine, codeine, and methadone. Also included in this group is heroin, the most extensively studied with regard to its impact on the fetus.

Methadone is widely used as a treatment for heroin addiction. Abrupt withdrawal of the opiates should be avoided. Opiate users also are more likely to be poly-substance users.

Transfer to fetus

Heroin crosses the placenta quickly and is found in fetal tissue within one hour of the mother's use (D'Apolito, 1998).

Impacts on the neonate

Infants exposed to opiates may present with respiratory depression at birth. They also have more feeding problems (LaGasse et al., 2002). There are higher rates of prematurity among opiate-exposed neonates, and they are often SGA (Martinez, Partridge, and Tausch, 2005)

Hussain and Ewer (2007) reported a potential for cardiac issues for



the infant exposed in utero to methadone. “Methadone treatment is a well recognized cause of QT interval lengthening in adults . . . bradycardia, tachycardia or an irregular heart rate in an infant born to a mother on methadone treatment should not be ignored and a 12-lead electrocardiogram should be performed” (p.768).

The incidence of Sudden Infant Death Syndrome (SIDS) is two to four times higher in infants exposed in utero to opiates when compared to those who are not exposed to opiates or other substances (Schaefer et al., 2007; Taeusch et al., 2005).

Possible post-natal symptoms

Severe withdrawal symptoms typically appear between 24 and 72 hours after birth (Abrahams et al., 2007; Schaefer, Peters, and Miller, 2007). Withdrawal symptoms may be delayed up to 36 days and last as long as 6 months (D’Apolito, 1998).

Long-term outcomes

Possible developmental delays

Breastfeeding

All opiates pass into breast milk. Because the properties of heroin are not fully understood, mothers using heroin should not breastfeed. Methadone, however, does appear to be well tolerated by the infant when breastfed. In fact, breastfeeding is strongly recommended, as the infant is not being quickly withdrawn from the methadone. The American

Academy of Pediatrics (2001) released a position statement that methadone is compatible with breastfeeding regardless of the dose as there is minimal transfer of methadone into breast milk. Jansson et al. (2008) reported infants of methadone-using mothers who were breastfed required less medication treatment for NAS.

Neonatal Abstinence Syndrome (NAS)

NAS is defined as a “withdrawal syndrome, generically termed the neonatal abstinence syndrome, is a constellation of behavioral and physiological signs and symptoms that are remarkably similar despite marked differences in the properties of the causative agent. NAS is often predominated by autonomic over-reactivity, typified by yawning, sneezing, mottling and fever. Paramount, however, is cerebral irritation, resulting in an irritable and hypertonic infant” (Oei and Lui, 2007, p 9-10). A study by Lifshitz et al. (2001) found that 96% of neonates exposed in-utero to narcotics exhibited NAS.

Symptoms of NAS appear at an average of 72 hours of age; however, they may not present until 4 weeks of age (Crochetti, Amin, and Jansson, 2007). With many babies discharged at 48 hours of age, how many with NAS are actually not identified?

Clinical Signs of Neonatal Withdrawal Syndrome

Central Nervous System (CNS) Dysfunction	<ul style="list-style-type: none">• Irritability• Excessive Crying• Jitteriness• Tremulousness• Hyperactive reflexes• Increased tone• Sleep disturbance• Seizures
Autonomic Dysfunction	<ul style="list-style-type: none">• Excessive sweating• Mottling• Hyperthermia• Hypertension
Respiratory Symptoms	<ul style="list-style-type: none">• Tachypnea (rapid breathing)• Nasal stuffiness
Gastrointestinal and feeding disturbances	<ul style="list-style-type: none">• Diarrhea• Excessive Sucking• Hyperphagia (eating too much)

(Martinez, A., Partridge, J.C., and Taeusch, H.W. 2005, p110)

Treatment of Opiate Withdrawal

Opiate withdrawal is treated with opiate administration. Commonly used medications for withdrawal symptoms include tincture of opium, morphine, benzodiazepines, and phenobarbital (Taeusch et al., 2005). Methadone is also used to treat opiate withdrawal. Medication doses may be titrated to treat the withdrawal symptoms.

Neonatal Abstinence Assessment (NAS)

A common assessment tool used for evaluation of NAS is the Finnegan scale. Sarkar and Donn (2006) completed a survey of 75 neonatologists regarding their treatment of NAS. The Finnegan scoring tool was used by 49 (65%) of the neonatologists, with only 3 reporting use of the Lipsitz tool. Of the 49, 16 used the original version of the Finnegan tool, while 33 used a modified version. The Finnegan method in this guidebook is the one most commonly identified by nurse leaders in West Virginia as the one used for assessment in their facilities. This scale is from the Neonatal Handbook and can be found at this website:

http://www.rch.org.au/nets/handbook/media/NASS_1.pdf

The Neonatal Abstinence Scoring System is included in this guidebook in a small version. The larger version can be found within the manual provided to your facility.

The use of the NAS scoring system tool requires assessment of several areas. These areas are bro-

ken down into three categories: CNS, gastrointestinal and other categories (categorized on some Finnegan scales as metabolic, vasomotor and respiratory symptoms). A guideline for scoring these areas is included on the following page.

Neonatal Handbook



Neonatal Abstinence Scoring System

Infants at risk of narcotic withdrawal are assessed for signs of withdrawal ½ to 1hr after each feed. Infants who display signs of withdrawal will score from signs in each of the three sections of the scoring chart. The scoring chart is designed for term infants who are fed 4 hourly. Allowances must be made for infants who are preterm or beyond the initial newborn period.

SYSTEM	SIGN	SCORE												
C.N.S.	Excessive cry	2												
	Continuous cry	3												
	Sleeps <1hr after feed	3												
	Sleeps <2hrs after feed	2												
	Sleeps <3hrs after feed	1												
	Over active Moro reflex	2												
	Very over active Moro reflex	3												
	Mild tremors disturbed *	1												
	Mod/severe tremors disturbed *	2												
	Mild tremors undisturbed *	3												
	Mod/severe tremors undisturbed *	4												
	Increased muscle tone	2												
	Excoriation *	1												
	Myoclonic jerks	3												
Generalised convulsions	5													
G.I.T.	Excessive Sucking	1												
	Poor Feeding *	2												
	Regurgitation *	2												
	Projectile Vomiting	3												
	Loose Stools	2												
	Watery Stools	3												
OTHER	Sweating	1												
	Fever 37.3 to 38.3 C	1												
	Fever 38.4 C and above	2												
	Frequent yawning (>3-4 in 1/2hr)	1												
	Mottling	1												
	Nasal Stuffiness	1												
	Sneezing (>3-4 in 1/2hr)	2												
	Nasal flaring	1												
	Respiratory rate >60/min.	1												
	Respiratory rate >60/min. & retraction	2												
TOTAL SCORE														

Adapted from L.P.Finnegan (1986)

Explanation of Signs

- Tremors – infants should only get one score from the four options in this category
- Excoriation – score when presents, rescore only if it increases or appears in another area
- Poor Feeding – score if slow to feed or baby takes inadequate amounts
- Regurgitation – score if it occurs more frequently than usual in a newborn

Finnegan Scoring Guidelines

High-pitched cry	Score 2 if high-pitched at its peak, 3 if high-pitched throughout
Tremors	This is a scale of increasing severity, and a baby should only receive one score from the four levels of severity. Undisturbed refers to the baby being asleep or at rest in the cot.
Increased muscle tone	Score if the baby has generalized muscle tone greater than the upper limit of normal.
Excoriation	Score only when excoriations first appear, increase or appear in a new area.
Yawning and sneezing	Score if occurs more than three to four times in 30 minutes.
Nasal flaring/respiratory rate	Score only if present without other evidence of lung or airway disease.
Excessive sucking	Score if more than that of an average hungry baby.
Poor feeding	Score if baby is very slow to feed or takes inadequate amounts.
Regurgitation	Score only if occurring more frequently than would be expected in a newborn baby.

http://www.rch.org.au/nets/handbook/index.cfm?doc_id=622

How do we communicate?

The Joint Commission reported communication problems affected more than 70% of the sentinel events that occur in healthcare organizations (Joint Commission, 2007; Leonard, Graham, and Bonacum, 2004). Streitenberger, Breen-Reid, and Harris (2006) stressed the importance of effective hand-off communication when patients are being transferred from community settings to tertiary settings, especially when pediatric patients are involved. When substance-exposed neonates are transferred, consistent information must be shared, and thus a standardized communication form is proposed.

A model for communication, with origins in the United States military is SBAR - situation, background, assessment and recommendations. This model has been recommended by the Joint Commission and the Institute for Healthcare Improvement (Reference). An example of SBAR is found in the organizational tool kit. An example of SBAR might be as follows:

Situation—We have a 38-week gestation neonate that is exhibiting signs and symptoms of NAS. The infant is inconsolable, has tremors, and sleeps for very short periods.

Background—The baby was born outside the facility. The mother denies substance use; however, drug screens were positive.

Assessment—VS HR 160, R 40, T 99 (R). We have been performing routine assessments using the NAS scoring tool with scores ranging from 4 to 7.

Recommendation: We need to transfer the infant to get further assessment and start treatment. We are willing to accept the baby back once medications have been started and doses are stable.

What Can We Do to Help?

Neonatal nurses have the opportunity to promote parent-infant attachment and improve outcomes related to developmental risk from substance exposure (Fraser et al., 2006). Providing care, ensuring the safety of infants, and promoting the bonding process can be affected by substance exposure.

Rooming in

Frequently, substance-exposed infants are placed in isolation to decrease stimulation and worsening withdrawal symptoms. Abrahams et al. (2007) found that neonates born to mothers who used heroin or methadone had decreased need for treatment for NAS when they roomed in with the mother. These newborns had shorter lengths of stays than those kept in the nursery. These babies were also more likely to be discharged home with their mothers.

Discharge planning

A study by Marcellus (2002) indicated that 72% of nursing staff was not aware of the services available within their community for support of and training of foster parents to care for substance-exposed neonates. Improved communication between care providers is of utmost importance in discharge planning and early intervention.

Early Home-based intervention

When infants are identified at high risk for delays and potential risk of abuse or neglect related

to substance exposure, early intervention and home visits are important (Bartu et al., 2006; Nair et al., 2003; Singer et al., 2004). Other issues may impact the home environment and need to be examined and addressed, including social circumstances, nutritional deficits, psychological issues, and stress (Schempf, 2007). Jansson, Svikis, & Beilenson (2003) reported the benefits of case management with substance-exposed infants and their mothers in improving child outcomes.

Treatment options

Sarkar and Donn (2006) examined the treatment of neonatal substance withdrawal within neonatal intensive care units (NICU) across the United States. Opioids, usually morphine, are most frequently used for opioid and poly-drug withdrawal. Phenobarbital was also reported for poly-drug withdrawal, while methadone was used for opioid withdrawal.

Jackson, Ting, Mckay, Galea, and Skeoch (2004) performed a randomized controlled trial to compare phenobarbitone (phenobarbital) and morphine in the treatment of NAS. Opiate administration was found to be the more effective treatment.

Who do I call?

In June 2003, the Keeping Children and Families Safe Act became law (US Department of Health and Human Services, 2009). This law mandates the reporting by healthcare providers to child protective services of any infant born and identified as being affected by illegal substance abuse and withdrawal symptoms. To contact child protective services, call the county Department of Health and Human Resources office. A listing of numbers for the state of West Virginia is found on the next pages of this guidebook.

Child Abuse and Neglect Hotline

(1-800-352-6513)

7 days a week, 24 hours a day

What if I report a mother and the report is unfounded?

WV Code #49-6A-6 provides immunity from criminal and civil liability for the person who in good faith reports suspected abuse or neglect.



*WV Department of Health & Human Resources
Bureau for Children and Families
Local County Office Directory*

The WV Department of Health and Human Resources (WV DHHR) comprises the central offices of Client Services; Family Support; and Social Services and the following county offices where clients may seek assistance.

Gain: DHHR employees are to use these agency telephone lines for cost-efficient telephone calls. The addresses in () denote a physical address when the office uses a postal box to receive their mail.

COUNTY	PHONE	FAX	MAILING ADDRESS	PHYSICAL ADDRESS
Barbour	457-2780	457-9824	209 South Main Street Philippi, WV 26418	
Berkeley	267-0100	267-0123	P.O. Box 1247 Martinsburg, WV 25402	433 Mid-Atlantic Parkway Martinsburg, WV 25404
Boone	369-7802	369-7818	P.O. Box 970 Danville, WV 25053	156 Resource Lane Foster, WV 25081
Braxton	765-7344	765-3694	1920 Sutton Lane Sutton, WV 26801	
Brooke (see Hancock)				
Cabell	528-5800	528-5523	2699 Park Avenue, Suite 100 Huntington, WV 25704	
Calhoun	354-8118	354-7076	P.O. Box 280 Grantsville, WV 26147	404 Main Street
Clay	587-4268	587-2567	P.O. Box 969 Clay, WV 25043	94 Main Street
Doddridge	873-2031	873-3078	115 Main St. West Union, WV 26456	
Fayette	465-9613	465-7288	1400 Virginia Street Oak Hill, WV 25901	
Gilmer	462-0412	462-0415	1493 WV Highway 5, East Glennville, WV 26351	
Grant	257-4211	257-1569	15 Grant St., Suite 1 Petersburg, WV 26847	
Greenbrier	647-7476	647-7486	150 Maplewood Ave. Lewisburg, WV 24901	
Hampshire	822-8900	822-7571	P.O. Box 1736 Romney, WV 26757	Route 50, East
Hancock	794-3080	794-4169	100 Municipal Plaza, Suite 600 Weirton, WV 26062	
Hardy	538-2391	538-2476	112 Beans Lane Moorefield, WV 26836	
Harrison	627-2295	627-2171	P.O. Box 1877 Clarksburg, WV 26302	633 West Pike Street
Jackson	373-2560	372-7888	2139 Cedar Lakes Drive Ripley, WV 25271	
Jefferson	724-2600	728-0529	P.O. Box 984 Charles Town, WV 25414	239 Willow Spring Drive
Kanawha	746-2360	558-1802	4190 W. Washington Street Charleston, WV 25313	
Lewis	269-8820	269-0544	P.O. Box 1268 Weston, WV 26452	91 Arnold Avenue
Lincoln	824-5811	824-7811	P.O. Box 468 Hamlin, WV 25523	8209 Court Avenue
Logan	792-7095	792-7003	195 Dingess Street Logan, WV 25801	
McDowell	436-8302	436-3248	840 Virginia Avenue Welch, WV 24801	
Marion	363-3261	363-5541	P.O. Box 2590 Fairmont, WV 26555	107-109 Adams Street Suite 2

*WV Department of Health & Human Resources
Bureau for Children and Families
Local County Office Directory*

The WV Department of Health and Human Resources (WV DHHR) comprises the central offices of Client Services; Family Support; and Social Services and the following county offices where clients may seek assistance.

Gain: DHHR employees are to use these agency telephone lines for cost-efficient telephone calls. The addresses in () denote a physical address when the office uses a postal box to receive their mail.

COUNTY	PHONE	FAX	MAILING ADDRESS	PHYSICAL ADDRESS
Barbour	457-2780	457-9824	209 South Main Street Philippi, WV 26418	
Berkeley	267-0100	267-0123	P.O. Box 1247 Martinsburg, WV 25402	433 Mid-Atlantic Parkway Martinsburg, WV 25404
Boone	369-7802	369-7818	P.O. Box 970 Danville, WV 25053	156 Resource Lane Foster, WV 25081
Braxton	765-7344	765-3694	1920 Sutton Lane Sutton, WV 26801	
Brooke (see Hancock)				
Cabell	528-5800	528-5523	2699 Park Avenue, Suite 100 Huntington, WV 25704	
Calhoun	354-8118	354-7076	P.O. Box 280 Grantsville, WV 26147	404 Main Street
Clay	587-4268	587-2567	P.O. Box 969 Clay, WV 25043	94 Main Street
Doddridge	873-2031	873-3078	115 Main St. West Union, WV 26456	
Fayette	465-9613	465-7288	1400 Virginia Street Oak Hill, WV 25901	
Gilmer	462-0412	462-0415	1493 WV Highway 5, East Glennville, WV 26351	
Grant	257-4211	257-1569	15 Grant St., Suite 1 Petersburg, WV 26847	
Greenbrier	647-7476	647-7486	150 Maplewood Ave. Lewisburg, WV 24901	
Hampshire	822-8900	822-7571	P.O. Box 1736 Romney, WV 26757	Route 50, East
Hancock	794-3080	794-4169	100 Municipal Plaza, Suite 600 Weirton, WV 26062	
Hardy	538-2391	538-2476	112 Beans Lane Moorefield, WV 26836	
Harrison	627-2295	627-2171	P.O. Box 1877 Clarksburg, WV 26302	633 West Pike Street
Jackson	373-2560	372-7888	2139 Cedar Lakes Drive Ripley, WV 25271	
Jefferson	724-2600	728-0529	P.O. Box 984 Charles Town, WV 25414	239 Willow Spring Drive
Kanawha	746-2360	558-1802	4190 W. Washington Street Charleston, WV 25313	
Lewis	269-8820	269-0544	P.O. Box 1268 Weston, WV 26452	91 Arnold Avenue
Lincoln	824-5811	824-7811	P.O. Box 468 Hamlin, WV 25523	8209 Court Avenue
Logan	792-7095	792-7003	195 Dingess Street Logan, WV 25801	
McDowell	436-8302	436-3248	840 Virginia Avenue Welch, WV 24801	
Marion	363-3261	363-5541	P.O. Box 2590 Fairmont, WV 26555	107-109 Adams Street Suite 2

State Resources

Resources are available in West Virginia to provide early intervention for the substance-exposed neonate.

Birth to Three provides early-intervention services for children who have an identified developmental delay or are at risk for a developmental delay.

To refer a child to the Birth to Three system in state, call **1-866-321-4728**.

The web address for a list of Birth to Three contacts is:

<http://www.wvdhhr.org/birth23/contact.asp>

Right From The Start provides care coordination for pregnant women and their infants up to 1 year of age.

To qualify for Right From The Start a woman must:

- Be pregnant
- Live in West Virginia
- Have a current Medicaid card
- Have a Medicaid-eligible infant

Right From The Start can also help with substance use during pregnancy by providing the woman with resources for treatment.

Toll Free in WV 1-800-642-8522

The following web address will give a list of providers for referral:

<http://www.wvdhhr.org/rfts/providerlists.asp>



Children with Special Healthcare Needs (CSHCN) can help with the provision of medical care for children with certain chronic medical conditions. As discussed earlier, children exposed to substances in utero are at risk for congenital anomalies and lifelong health issues. Children with the following conditions may qualify for assistance from CSHCN:

- Conditions which involve bones, joints or muscles
- Heart conditions
- Epilepsy and other convulsive conditions
- Neurological conditions, such as cerebral palsy and spina bifida
- Certain operable eye conditions, such as crossed eyes and congenital cataracts
- Kidney and urological conditions, including those requiring dialysis

- Cleft lip/palate and other conditions requiring plastic surgery, such as burns
- Ear, nose and throat conditions requiring treatment by an otolaryngologist
- Hearing loss, including hearing aid placement and related services
- Other chronic conditions, such as cystic fibrosis and sickle cell anemia

There are 12 care coordination teams located throughout the West Virginia for these children and their families. Call **1-800-642-9704** to contact the office nearest to you.

Ski*Hi provides services for hearing-impaired infants and children through the WV School of the Deaf. As reported earlier, substance exposure can result in hearing deficits.

West Virginia Schools for the Deaf and Blind

Ski*Hi Preschool Program

(304) 822 4843 or (304) 822 4837



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