

## Neonatal & Newborn Substance Exposure

During the first trimester of pregnancy the embryo increases in size by more than 2.5 million times. Because of this rapid development, the fetus is especially vulnerable to injurious stimuli. Almost all known abnormalities of the fetus are developed at this time.

The U.S. General Accounting Office estimated that 5 million or more women have used nicotine, alcohol, or illicit drugs during pregnancy. According to the National Institute on Drug Abuse, 5.5% of women used an illicit drug, 18.8% used alcohol and 20.4% smoked cigarettes during pregnancy.

The following training module will present you with information on the effects that intrauterine drug exposure has on children. While some drugs were studied many years ago, others have become topics of concern only in the past decade. You will also be given information on how a drug affects a child's long term development and methods for working with drug-affected children.

### **Cocaine**

Evidence from clinical reports and case studies suggests that a pregnant woman and her developing fetus are at risk for a wide range of potential problems when cocaine is present. Among the medical complications attributed to cocaine use in a pregnant woman are cardiovascular effects including acute myocardial infarction, cardiac arrhythmia, rupture of the ascending aorta, central nervous system complications including aneurysms due to increases in blood pressure, and other, less frequently occurring effects such as respiratory arrest and seizures. The medical complications that may result from the life-style associated with drug use include failure to seek proper prenatal care, nutritional deficits, and weight loss.

Cocaine also crosses the placental barrier and can result in detrimental effects to the fetus.

Clinical data indicate that the neonate exposed in utero to cocaine may have a lower gestational age at delivery, lower birth weight, decreased body length, and a smaller head circumference. The child will outgrow most of these effects over time. Unfortunately, studies have also shown associations between cocaine use during pregnancy and the occurrence of fetal anomalies, including an increase in skull malformations, limb defects, urethral obstruction, enlarged bladder, cystic distension of the kidneys, and neural defects. These problems will not be outgrown and have only a possibility of being corrected with surgical procedures. Intrauterine fetal death also occurs more frequently in pregnant cocaine users than in nonusers.

Problems of respiratory control are of significant long-term concern in drug-exposed infants. An increased risk of sudden infant death syndrome (SIDS) has been reported in infants of cocaine-using mothers, as well as other sleep pattern abnormalities such as apnea and deep sleep.

Cocaine-exposed infants are largely unable to respond to the human voice and face, and are unable to interact with others. Many are very jittery and irritable, and startle or cry at the gentlest touch or sound. Consequently, these babies are very difficult to comfort and often are described as withdrawn or unresponsive. The infants have a piercing cry and can shoot from sleep to screaming which cannot be consoled. Such infants are very difficult to care for, as normal methods of comforting and interacting with infants will not be effective. The infants' own limitations to interaction hinders how well they bond with their caregivers.

When the child grows older the damage to the neurological system shows itself in a few different areas. Recent studies suggest that these children may lag behind unexposed peers in motor skills, at least

through two years of age. Most affected appear to be fine motor skills, such as those used in learning to write, draw, or play sports. Most children who were exposed to cocaine before birth have normal intelligence. However, studies of cocaine-exposed school-aged children do suggest subtle effects on intelligence and behavior. Exposed children tend to score about 3 points lower on tests of IQ than non-exposed children. While effects on overall intelligence appear small, the effects on specific language abilities are larger. Teachers also report more problem behaviors in cocaine-exposed children compared to unexposed children. As a result of these subtle effects on learning and behavior, some exposed children will need special education to help reach their full potential.

## **Opiates**

The group of opioid drugs includes heroin, morphine, codeine, methadone, and several other prescription drugs. Isolating the neonatal effects of exposure to one of the opioid drugs is difficult to study. Most women who use opioids take multiple drugs instead of using only one type. But studies have still been done on these multi-drug using individuals to determine the effects the family of drugs has on infants.

In utero opioid exposure has consistently shown a decrease in nucleic acid synthesis and protein production in the brain, suggesting overall brain growth is compromised. The decreased brain growth can lead to many of the problems these children develop in childhood. This assumes the neonate survives to be born. Opioid use has been shown to increase the rate of premature labor, premature rupture of membranes, breech presentation, antepartum hemorrhage, toxemia, anemia, uterine irritability and infection (e.g., HIV, hepatitis, syphilis).

As the opioid-exposed children age, more consequences of their drug exposure can surface. While still an infant, many of the children (3 out of 4) will have motor development delays. They will have muscle rigidity and delays in developing their equilibrium, acquisitional, and transitional motor skills.

As children enter preschool and elementary school, the long-term consequences will become quite noticeable. Their neurological damage will effect their motor planning skills.

Motor planning is how an individual initiates a motor activity, sequences the moves in an activity, coordinates bilateral movement, and rapidly alternates movements. Children with impaired motor planning demonstrate a lack of coordination and show persistent fine tremors. Although the child may be able to accomplish certain motor tasks, the quality and precision of movement is affected. Functional skills such as buttoning clothes, tying shoe laces, using scissors, and completing paper-and-pencil tasks are difficult. The child will lack spatial awareness, orientation, directionality, and left-right discrimination.

Opiate-exposed children can also have communication disorders.

A large majority of polydrug-exposed preschool and kindergarten children are overwhelmed with auditory stimuli and become frustrated due to their lack of ability to express themselves clearly. Younger preschool children with problems articulating needs may have learning disabilities in the language or verbal areas. They may also have problems with articulation due to a disorder known as oral dyspraxia (lack of coordination). Either of these problems can make verbal communication almost impossible. The child understands what they want to say but is unable to pronounce the words or just cannot remember the words. Opiate-exposed children can also develop stutters and slur words. Frequently, children have difficulty following directions; when further analyzed, there appears to be a weakness in short-term auditory memory and auditory sequencing.

Neurobehavioral disruption commonly identified during an infant's drug withdrawal in the neonatal period is a consequence of underlying neurological dysfunction. With neuromaturation, many of these behaviors resolve. However, a great many children continue to demonstrate distractibility, unfocused play, inattention, impulsivity, and in some cases, frank hyperactivity. A recent long-term study diagnosed over 80% of the in utero opiate exposed children with symptoms similar to ADHD once they reached elementary school. The longer each child was followed into his/her early school years, the clearer it became that, although IQ scores were within the normal range, many children continued to demonstrate learning and behavior difficulties that interfered with achievements.

## Smoking

Pregnant women who smoke are up to 80 percent more likely to suffer a miscarriage than their non-smoking counterparts. There is a direct correlation between the amount of smoking during pregnancy and the frequency of spontaneous abortion and fetal death. Pregnant women are also twice as likely to develop potentially life-threatening placental complications. These include placenta previa, a condition in which the placenta is attached too low in the uterus and covers part or all of the cervix, and placental abruption, in which the placenta separates from the uterine wall before delivery. Both can result in a delivery that jeopardizes the life of mother and baby, though a cesarean delivery can prevent most deaths. Placental problems contribute to smokers' increased risk of having a stillborn baby. Women who smoke early in pregnancy double their risk of having an ectopic pregnancy, in which the embryo becomes implanted in a fallopian tube or other abnormal site instead of the uterus. These pregnancies rarely result in the birth of a baby, and must be removed surgically or with drug treatment to protect a woman's life. Ectopic pregnancy remains an important cause of maternal deaths in parts of the world where these treatments are not readily available.

The impacts on the fetus are just as dangerous. Smoking during pregnancy has been shown to reduce the birth weight and size of a fetus. Low birth weight and intrauterine growth retardation are important risk factors for childhood morbidity and mortality. Numerous studies have also shown an increase in the risk of Sudden Infant Death Syndrome (SIDS). This risk is five times higher for babies of smoking mothers versus babies of non smoking mothers.

Exposure to smoking (ETS) has been shown to be very detrimental to children as they develop. At a meeting of the World Health Organization, international studies were compared to determine what effects environmental tobacco smoke had on children. Below is the list of their findings.

- ETS increases risks of lower respiratory tract illnesses, including bronchitis and pneumonia, in the first years of life.
- ETS is a cause of chronic respiratory symptoms in school-aged children.
- ETS increases the severity and frequency of symptoms in children with asthma.
- ETS increases the risk of acute and chronic middle ear disease.
- ETS is associated with physiological changes in children that may increase the risk of cardiovascular disease and childhood cancers.
- Parental smoking is associated with learning difficulties, behavioral problems, and language impairment.

The last point on the list was expanded by the following quote.

"When compared to children of nonsmokers, children of smokers perform more poorly in school. They also have lower scores in cognitive functioning tests - in particular, language and auditory processing - and have more behavioral problems, including conduct disorders, hyperactivity, and decreased attention spans. Cognitive and behavioral deficits in children have lifelong consequences and result in increased costs for education and social services."

Smoking not only damages a child's physical health, it also damages the mental and social health. These effects will last a child's entire life.

## Alcohol

Alcohol is the only substance of abuse that is well associated with physical malformations as well as the neurodevelopmental defects. The classic triad of fetal alcohol syndrome (FAS) consists of growth retardation, physical anomalies (with a characteristic face) and central nervous system dysfunction. Many mothers will reduce their drinking after learning of their pregnancy. This has led to what has been described as the fetal alcohol effect, which represents a milder dose-dependent version of the entire syndrome. At this time, there is no known safe level of alcohol use during pregnancy that will prevent either condition. The most severe aspects of Fetal Alcohol Syndrome are associated with first-trimester use of alcohol, especially in those women with a poor diet.

Women who drink heavily during their pregnancy are also at risk of spontaneous abortions and premature placental separation. Alcohol-exposed infants may develop mental retardation, one of the hallmarks of FAS. There is an apparent dose-dependent relationship, and FAS now accounts for approximately 33% of all mental retardation. Milder cognitive effects include prolonged language delays and sleep dysfunction.

Newborn children exposed to alcohol can go through withdrawal once they have been delivered. Signs of alcohol withdrawal may include hyperactivity, crying, irritability, poor suck, tremors, seizures, and poor sleeping pattern. Signs usually appear at birth and may continue up to 18 months.

The victims of Fetal Alcohol Syndrome suffer all of the following impairments:

- Growth retardation
- Characteristic facial features, such as:
  - Small eyes with drooping upper lids
  - Short, upturned nose
  - Flattened cheeks
  - Small jaw
  - Thin upper lip
  - Flattened philtrum (the groove in the middle of the upper lip)
- Central nervous system problems, including:
  - Mental retardation
  - Hyperactivity
  - Delayed development of gross motor skills such as rolling over, sitting up, crawling, and walking
  - Delayed development of fine motor skills such as grasping objects with the thumb and index finger, and transferring objects from one hand to the other
  - Impaired language development
  - Memory problems, poor judgment, distractibility, impulsiveness
  - Problems with learning
  - Seizures

They may also have a visibly smaller skull size and develop hearing disorders.

Fetal Alcohol Syndrome or the milder Fetal Alcohol Effects are permanent. Children will not outgrow the symptoms and will have to try to cope with the results their entire lives. Their future will include some or all of the following conditions.

- Mental health problems such as attention deficit disorder, conduct disorder, depression, and psychotic episodes.
- Problems in school, including higher rates of suspension and expulsion due to difficulty getting along with others, disobedience, and truancy.
- Trouble with the law. Those born with FAS may have problems controlling anger and frustration, and problems understanding the motives of others. This may lead to violent behavior. As a result, teenagers and adults with FAS are more likely to be involved with the criminal justice system than their peers. Also, those with FAS can be especially susceptible to persuasion and manipulation, which may lead to unwitting involvement in illegal activities.
- Drug and alcohol abuse. More than one-third of those with FAS have problems which require inpatient treatment for drugs and/or alcohol abuse at some time in their lives.
- Difficulty holding a job and living independently.

### **Caring of Infants**

Handling infants who have survived substance exposure can be difficult and demanding. Substance exposed children can suffer from physical pain and also are more sensitive to sound, light, contact, and other external sources of stimulation. Infants still need to have interaction in order to bond with their parents, but it will need to be done at a pace the infant can handle. Caregivers will need to be especially sensitive to the baby and to his/her ability to convey information. The infant's responses will let caregivers

know which mode of stimulation he or she likes best (talking, touching, looking, holding). These different modes should be used individually at first. When a positive response from the child is achieved, try adding a second stimulus, such as holding first and then talking. If the early signs that the infant is becoming over stimulated appear, the caregiver is going too fast and will need to decrease the stimuli.

Here are a few suggestions as to how to handle a drug exposed infant.

1. Don't allow the infant to become frantic. Early signs that the infant is becoming over stimulated are yawns, sneezes, motor agitation, color changes, and eye aversions. If this happens, give the infant "time out." Lower the level of lighting and reduce the noise level in the infant's room. This will reduce external stimuli and help the infant relax.
2. The use of both swaddling and pacifiers are highly recommended. If the infant has reached the frantic state, swaddle him/her immediately. Then, when the infant is calmer, follow with a pacifier. If this doesn't work, hold the infant closely, in a vertical position, and rock gently. Up and down rocking, as opposed to the more usual side to side, appears to be more comforting.
3. When they are calm, infants may be unwrapped so they can learn about controlling their body movements themselves. Re-swaddle if the signs of over stimulation appear; i.e., frantic, diffuse activity.
4. Stimulate the infant gently, but do interact with him/her. Because they are so cranky and unresponsive, parents are often inclined to leave them to themselves. Things that normal babies often enjoy don't work for these newborns. Remember that babies who are fragile must be respected for what it costs them to interact. They are often willing to interact a bit after they have been fed, so take advantage of these times. This will improve their tolerance for stimulation and may improve their self-control.
5. Play with the infant when he/she is ready, not when you want to.

When substance exposed children reach school age, they tend to develop behavior patterns similar to other drug exposed children. These patterns can be used by teachers to help identify children with problems who need specialized education. The patterns of behavior are the following:

- difficultly concentrating and easily distracted;
- unable to sit still, remain quiet, or control body movements;
- clumsy, unable to control crayons and scissors;
- easily frustrated and gives up quickly;
- unpredictable, mood swings;
- poor memory.

A child who was exposed to substances in utero also can suffer from hypersensitivity to stimuli. Visual, audio, or physical stimulation can overwhelm their ability to cope with different situations. When this type of overload occurs the child becomes uncontrollable and may not be able to calm down for several hours. This is not necessarily something that the child wants to have happen; they just do not have methods to deal with the sensory overload. They may not even know what can trigger their loss of control. Helping pre-school and elementary school children learn to recognize and intervene before they are overloaded can dramatically improve their social life and give them some confidence. One of the best methods for creating intervention strategies is to use a behavior log for the child. A log is maintained by anyone who cares for the child during the day. The caregiver logs what the child does throughout their day. Notes should be very detailed around the times that a child loses control of himself/herself. Over time a pattern can be determined from reviewing the child's behavior log to identify the environmental triggers that set the child off. Once these triggers have been established the child and caregivers can determine how to minimize the child's exposure to stressful environments. The child can also be taught methods to cope with particular environments or trained how to remove himself/herself from stressful environments. The child may also begin to recognize his/her own feelings before losing control and develop his/her own self-regulating mechanisms.

## **Prognosis**

Some of the effects of in utero substance exposure will weaken and subside over time. These temporary effects are mostly due to drug withdrawal. Some infants may need medication to help ease the symptoms

or special therapy to work through the side effects, but they have a good chance of overcoming the problems within a few years.

Other effects will be permanent. Neurological damage to the fetus does not get reduced when the drug withdrawal has subsided. Neurological damage will impact a child's mental, social, and physical development. Muscle motor damage may be reversed with extensive therapy, but full motility will most likely never be achieved. Therapists with expertise in neurodevelopmental therapy can treat children and demonstrate effective changes. The neurodevelopmental approach to therapy is based on the premise that therapeutic intervention should take into account the child's present neurodevelopmental and functional skills and build on these, rather than intervene at the skill level expected for the child's chronological age. For example, if a 15-month-old child, who should be starting to walk, can only roll and sit, the intervention includes passive and strengthening exercises designed to promote crawling and pulling to stand. Neurodevelopmental therapy uses strategies for sensory-motor integration, inhibition of primitive reflexes, and facilitation of normal balance and equilibrium.

Adult family members may need training to learn how to handle and care for their drug exposed infant. They may also need therapy to help cope with the difficulties that raising a drug exposed child creates.

As children exposed as a prenatal to substances move into their preschool years, the frequency of visits to the physician decreases, but there is an increase in rehabilitation services needed from speech-and-language and occupational therapists. Special education and remedial services for learning problems need to be addressed. Behavior management can be provided by a psychologist in coordination with the child's physician. The psychologist must also teach parents and teachers how to use behavior management strategies consistently and effectively to prevent and correct behavior problems. Nursing services are important in coordinating care among teachers and health care providers.

Some of the long-term studies have shown that children exposed to substances in utero were more likely to have to repeat grades in school and were more often in trouble with school and legal authorities than their non exposed peers.

### **Substance Exposed Newborns (SEN)**

There is growing concern for the care and safety of substance-exposed newborns in Arizona. Early intervention services for both the newborn and the mother are critical in minimizing the effects of prenatal substance exposure.

Based on extensive medical literature review, review of other state guidelines, and input from hospital newborn programs, this committee drafted [Guidelines for Identifying Substance-Exposed Newborns](#).

### **The Relationship Between Substance Abuse and Child Abuse**

In addition to the biological risk that prenatal alcohol or drug exposure poses to these children, they are at an increased risk of child abuse and neglect by parents whose need for drugs takes priority over the care of their infants and children. As a result of these factors, there has been a sharp increase in the number of drug exposed children in out-of-home placements.

The driving force behind new efforts to identify and protect substance exposed infants and children is the understanding that intervention services for the newborn and mother are critical in minimizing the acute and long-term effects of prenatal substance exposure. Even if a newborn exhibits no clinically significant difficulties in the neonatal period, identification of a substance-exposed newborn may improve the infant's long-term development.

There is also increasing concern about the negative impact on children when parents or other members of the household engage in other illegal drug-related activity, such as the manufacture of methamphetamines in home-based laboratories. The state of Arizona has responded to the growing problem of the manufacturing and distributing illegal substances by parents and caregivers by expanding the civil definition of child abuse or neglect so that children living in dangerous home environments can be protected.

## **The Ways in Which Children Are Exposed**

Substance exposed infants are not only classified as such due to prenatal exposure to drugs and alcohol. Approximately 50% to 80% of all child abuse and neglect cases substantiated by Child Protective Services involve some degree of substance abuse by the child's parents.<sup>1</sup> This can be due to a variety of factors including:

- The often chaotic lifestyles and social instability where the primary focus of a parent or caregiver is directed towards obtaining and using drugs, instead of attending to the basic needs of an infant.
- Substance abusing parents lose touch with reality, making them emotionally unavailable to their infants for much of the time.
- Substance abusing parents are repeatedly observed having trouble balancing the needs of their infants with their drug use.

Between the ages of one and four months, babies need regular routines including periods of deep sleep and quiet alertness. Mothers with substance issues and without other support find it extremely difficult to provide a regular routine for their baby or assist in helping the baby reach developmental milestones.

## **The Effects of Exposure on Newborns**

### **Low Birth Weight**

Birth weight is an important factor associated with children's overall health and development. Children who weigh under five-and-one-half pounds at birth are more likely to have serious medical problems and to exhibit developmental delays. Drug-exposed infants often do not exhibit normal development.

### **Premature Birth**

The risk of premature birth (birth at less than thirty-seven weeks) is higher in drug-exposed infants. Other complications can include an increase in acute medical problems following birth, and extended periods of hospitalization. Birth weight under three pounds has been associated with poor physical growth and poor general health status at school age.

### **Failure to Thrive (FTT)**

Infants who were exposed to alcohol and/or drugs may exhibit this disorder, which is characterized by a loss of weight, or slowing of weight gain, and a failure to reach developmental milestones.

### **Neurobehavioral symptoms**

Within seventy-two hours after birth, many infants who were exposed to drugs experience withdrawal symptoms, including tremors and irritability. Their skin may be red and dry; they may have a fever, sweating, diarrhea, excessive vomiting, and even seizures. Such infants may require medication for calming. Other infants exposed to stimulants show a pattern of lethargy during the first few days after birth, are easily over stimulated, and may go from sleep to loud crying within seconds.

### **Infectious diseases**

Infants with prenatal drug exposure may be exposed to infectious and/or sexually transmitted diseases contracted by their mothers. The most common infectious diseases seen in infants are Chlamydia, syphilis, gonorrhea, hepatitis B, HIV, and AIDS.

## **Neglect of Basic Necessities**

Child neglect is characterized by failure to provide for the child's basic needs. Neglect can be physical (for example, inadequate clothing for cold weather), medical (for example, refusal to seek health care when a child clearly needs medical attention), educational (for example, failure to enroll a child of mandatory school age), or emotional (for example, chronic or extreme spouse abuse in the child's presence). Severe neglect often results in death, particularly in the case of very young children. While physical abuse tends to be episodic, neglect tends to be chronic. Neglectful families often appear to have many problems that they are not able to handle. It is often very difficult to facilitate change in the behavior of chronically neglectful families. For early childhood caregivers, neglect may also be chronic. For example, it might be standard practice for a caregiver to leave infants in their cribs for most of the day, rather than providing a safe area for them to move about.

Children of substance abusers often find themselves denied basic needs such as food, hygiene, shelter, and protection from the abuse and neglect perpetrated on them by others who frequent homes of drug abusers.

## **Procedures for Removal of a Substance Exposed Newborns**

According to Arizona law, initially a child may be taken into temporary custody by a peace officer or a child protective services worker if temporary custody is clearly necessary to protect the child because probable cause exists to believe that the child is either:

- A victim or will imminently become a victim of abuse or neglect.
- Suffering serious physical or emotional injury that can only be diagnosed by a medical doctor or psychologist.
- Physically injured as a result of living on premises where dangerous drugs or narcotic drugs are being manufactured.

In determining if a SEN should be taken into temporary custody, the interested person, peace officer or child protective services worker may take into consideration as a mitigating factor:

- The participation of the parent or guardian in the healthy families program.
- The availability of reasonable services to the parent or guardian to prevent or eliminate the need for removal of the child and the effort of the parent or guardian to obtain and participate in these services.

## **Policy and Regulation**

In an effort to address the growing problem of substance exposed newborns, a statewide initiative, under the direction of Arizona Governor Janet Napolitano, recruited a team of medical professionals and physicians to assist Child Protective Services in the creation of clear and consistent guidelines for identifying substance exposed newborns in order to provide adequate care and safety. These [guidelines](#) have been distributed to medical professionals throughout the state.<sup>2</sup>

The Governor's plan called for clearer direction to CPS investigators and case managers, law enforcement officials, and mandatory professional reporters, as well as to the community, regarding the role of Child Protective Services in SEN cases.

Arizona law and CPS policy now make it clear that the primary purposes of CPS are:

- Protect children by investigating allegations of abuse and neglect.
- Promote the well-being of children in a permanent home.
- Coordinate services to strengthen the family and prevent abuse or neglect.

If a child's health is demonstrably adversely affected at birth or within the first year of birth, Arizona law and CPS policy now make clear that in determining whether a child has been neglected, consideration

shall be given to a parent's drug or alcohol abuse, including a mother's abuse of a dangerous drug, narcotic drug or alcohol during pregnancy if the child is demonstrably adversely affected at birth or within the first year of birth. Arizona law and CPS Policy also state that a child may be taken into temporary custody if the child has been physically injured as a result of living on premises where dangerous drugs or narcotic drugs are manufactured. The injury does not need to be physical, as neglect also qualifies as damaging to a child's health and well being.

State law A.R.S. § 13-3620 requires that a health care professional, who reasonably believes that a newborn infant may be affected by the presence of alcohol or a drug, immediately report this information to Child Protective Services. Arizona is one of only twelve states to have enacted specific reporting procedures in regards to substance exposed newborns. *In general, these policies make drug exposure, or a positive drug test alone, the basis for reporting.*

## Removal of Infants Pros and Cons

### Pros

- Early intervention services for the newborn and mother are critical in minimizing the acute and long-term effects of prenatal substance exposure. Thus, even if the newborn exhibits no clinically significant difficulties in the neonatal period, identification of the substance-exposed newborn may improve the infant's long-term outcome.
- Detection of substance abuse holds the promise of benefit to the mother with addiction. The mother, as well as child, may receive needed treatment and services.
- Expanded definitions of child endangerment and abuse address recent substance abuse trends in the state of Arizona.
- An integrated child welfare system, with communication among interested agencies, delivers comprehensive, effective, and timely assistance to those in need. CPS is able to assist families by coordinating economic, mental health, and physical health resources, creating holistic and comprehensive solutions to families struggling with issues of substance abuse.

### Cons

- Punitive approaches and incarceration have not been demonstrated to be beneficial in improving health for mothers and infants.
- Foster placement of children and mandated entry into a complex child welfare system, with limited resources and capabilities may lead to suboptimal outcomes for both mother and infant.
- The subject of testing for drugs of abuse, particularly testing for those that are illegal, presents ethical dilemmas for health professionals. Patients may be less likely to seek help for fear of incarceration or punitive action.
- Health providers need to be aware of the legal implications of their actions in the context of recent court decisions that uphold the rights of mothers against unlawful search and seizure.

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<sup>1</sup> U.S. Department of Health and Human Services. National Center on Child Abuse and Neglect. Protecting Children in Substance Abusing families. 1994

<sup>2</sup> The Guidelines for Identifying Substance Exposed Newborns;  
<http://www.governor.state.az.us/cps/documents/SenGuidelines.pdf>

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