Drug-Exposed Infants

Recent studies have documented that an increasing number of women of childbearing age are abusing licit and illicit substances. Although statistical data are insufficient, there are indications that approximately 1 in 10 infants may be exposed to illicit drugs during pregnancy. The National Institute on Drug Abuse 1988 National Household Survey revealed that 8.8% of women of childbearing age admitted to having used an illicit drug in the month before questioning. A recent survey of 36 private and public hospitals showed that approximately 11% of women delivering in these hospitals had used illegal drugs at some time during their pregnancies. A preliminary study in Pinellas County, Florida, demonstrated that cocaine and marijuana use during pregnancy were almost equally distributed across racial and socioeconomic lines.

These incidence data parallel the increasing number of infants being admitted to special-care nurseries for complications caused by their intrauterine exposure to alcohol and other drugs. It is also important to consider that drug-exposed infants often go unrecognized and are discharged from the newborn nursery to homes where they are at increased risk for a complex of medical and social problems including abuse and neglect.

This statement addresses illicit substance use in pregnancy and its medical, social, mental health, and legal consequences for children and families. The Academy is developing a separate statement to address the issue of infants exposed to alcohol in utero.

THE PROBLEM

All illicit drugs reach the fetal circulation by crossing the placenta and can cause direct toxic effects on the fetus, as well as fetal and maternal dependency. For example, the opiate-exposed fetus may experience withdrawal in utero when drugs are withdrawn from a dependent mother or, after delivery, when the mother's use no longer directly affects her newborn. Although the incidence of breastfeeding by substance-abusing mothers is generally low, it is important to counsel nursing mothers about the hazards of drug use. See American Academy of Pediatrics policy statement “Transfer of Drugs and Other Chemicals into Human Milk.”

Symptoms of neonatal opiate withdrawal are often present at birth but may not reach a peak until 3 to 4 days or as late as 10 to 14 days after birth. Evidence of withdrawal from narcotics can persist in a subacute form for 4 to 6 months after birth. Common features of the neonatal abstinence syndrome mimic those of an adult’s withdrawal from narcotics. Significant signs and symptoms for the neonate include the high-pitched cry, sweating, tremulousness, excoriation of the extremities, and gastrointestinal disturbances. Although withdrawal from nonnarcotic substances, such as marijuana, does not appear to result in as severe a syndrome of abstinence as withdrawal from narcotics, the newborn may exhibit irritability and restlessness, poor feeding, crying, and impaired neurobehavioral activity also seen in the neonatal narcotics abstinence syndrome. There is a need for increased research to define the degree of permanent residual in these infants.

A major problem confronting pediatricians today arises from the consequences of using cocaine during pregnancy. As in other substance-abusing populations, cocaine-dependent pregnant women have a high incidence of infectious diseases, especially hepatitis, acquired immunodeficiency syndrome, and other sexually transmitted diseases. Other problems during pregnancy are anticipated in a population which underutilizes prenatal care. Even so, cocaine-using women often experience an uncomplicated labor and delivery, although they may be at increased risk of abruptio placentae.

Cocaine-exposed infants have an increased incidence of premature birth, impaired fetal growth, and neonatal seizures. Although a specific co-
caine-withdrawal syndrome in the neonate has not been defined clearly, signs of irritability and tremulousness, lethargy, or an inability to respond appropriately to stimulation may occur. Many, however, seem to have no specific clinical manifestations in the early neonatal period.

Perinatal cerebral infarctions have occurred in infants whose mothers have used cocaine during the few days before delivery. These perinatal cerebral infarctions exemplify the severe morbidity that may be associated with intrauterine exposure to cocaine. Issues of increased risk of malformations and abnormalities of respiratory control have been raised but await confirmatory studies. Because most published studies of cocaine’s effect on pregnancies and infants have focused on recognized substance-abusing populations, little information is available regarding the effects of low doses of cocaine. In addition, interpretation of clinical studies is complicated by the fact that abuse of multiple drugs often occurs.

Environmental factors also place drug-exposed children at high risk for abuse, neglect, and developmental delay. The long-term effects on learning and school performance of children exposed to illicit drugs in utero have not been well documented. Although some research is in progress to study this issue, more emphasis is needed in this area.

IMPLICATIONS FOR THE PEDIATRICIAN

Universal neonatal screening for illicit drugs is not recommended. The long-term consequences, ie, the harms vs the benefits of “labeling” the infant and/or the mother, are not known. However, since there are well-documented and potential effects on children exposed to drugs in utero, it is essential that pediatricians recognize drug-exposed infants. Obtaining a thorough maternal history in a non-threatening organized manner, from all women, is the key to diagnosis. Since many drug-exposed infants exhibit no specific signs or symptoms at birth, they may go unrecognized if pediatricians are not alert to the issue during or after the newborn period. Reliance on signs and symptoms is hampered by the increasing prevalence of early discharge from the nursery. Some drug-exposed infants will be missed if physicians rely solely on toxicology screens for diagnosis. Screens will surely be negative when drugs were used early in pregnancy and can be negative even when women have taken drugs during the 48 hours before delivery. Because urine toxicology screens may vary among laboratories, pediatricians should be aware that marijuana, its metabolites, and metabolites of cocaine may not be included unless requested specifically.

Infants and children of substance-abusing parents and/or guardians are at increased risk for physical, sexual, and emotional abuse. Although all states require physicians to report suspected child abuse or neglect, some states also mandate reporting to Child Protective Services infants with neonatal drug screens positive for illicit drugs. Many of these agencies are overburdened and unprepared to deal appropriately with the potential flood of babies born to substance-abusing mothers. Pediatricians should, therefore, work with their state social service agencies and state legislatures to extend the assistance now available through Child Protective Services. Until that is accomplished, pediatricians should consider recruiting the assistance of the local Child Protective Services agency to provide multidisciplinary treatment and support for the affected mother, child, and family. Chapters of the Academy and local pediatricians should discuss with all professionals and agencies involved how multifaceted problems resulting from drug exposure in utero might best be addressed in their communities. In general, a coordinated multidisciplinary approach in the development of a plan without criminal sanctions has the best chance of helping children and families.

IMPLICATIONS FOR HEALTH CARE POLICY

Far too little is known about how to best manage the problems posed by drug-exposed infants. There are virtually no data about which approaches are effective in decreasing the use of illegal drugs during pregnancy. Little is known about the difficulties faced by these infants, both in the newborn period and especially during their developmental years. It is imperative that efforts to alleviate serious problems include evaluation of the efficacy of interventions and ongoing observation and evaluation of drug-exposed infants and children. The following discussion of policy is necessitated by the critical need for more information.

Health policy issues posed by drug-exposed infants can be divided into two components. The first is how to prevent infants from being exposed to potentially harmful drugs before birth; the second is how to address the needs of drug-exposed infants and children.

Prevention of exposure before birth is a vexing problem that has defied solution. At the threshold is a need to explore more effective ways to help people resist the initial and subsequent use of drugs.

Even voluntary drug treatment programs, which probably are the most desirable means of approaching drug-using pregnant women, raise important policy concerns. The most basic problem is that
demand far exceeds supply. Meeting this need for effective therapy must be a major national priority. Moreover, although there is anecdotal evidence that the few community-based, multidisciplinary treatment programs currently available may help pregnant women to stop using drugs, there is a critical need to determine whether and which interventions within these programs actually work.

The Academy believes that the most appropriate way to prevent intraterine drug exposure is to educate women of childbearing age about the hazards of drugs to the fetuses and to encourage drug avoidance. If this fails, effective drug treatment programs should be made readily available to pregnant women and to women anticipating and/or at risk for pregnancy. Punitive measures taken toward pregnant women, such as criminal prosecution and incarceration, have no proven benefits for infant health; although sanctions imposed by civil court involvement may be of benefit. The American Academy of Pediatrics is concerned that such involuntary measures may discourage mothers and their infants from receiving the very medical care and social support systems that are crucial to their treatment.

Forced intervention after the birth of the drug-exposed infant can occur in two different divisions of the legal system. Within the civil justice system, family or juvenile courts explicitly focus on the impact on children and families and attempt to protect children by soliciting Child Protective Services support for the family which sometimes entails placing children outside the home. There are few data about the effect of involvement in the civil justice system on child outcome. One study, however, did demonstrate better outcomes for physically abused children whose parents were ordered into therapy by a juvenile court than for children whose parents only signed voluntary treatment contracts.

Intervention can also be enforced by criminal prosecution. Most states impose criminal sanctions against the perpetrators of child abuse and neglect, and recently a number of states have passed or are considering laws that impose criminal penalties on women who use drugs during pregnancy. There is no evidence that these latter sanctions prevent in utero drug exposure or help drug-exposed children after birth. Without strong evidence that involvement with the criminal justice system serves to prevent prenatal drug exposure or to improve children’s health, such intervention is unjustifiable.

Until the issue of how to prevent drug exposure appropriately and effectively is resolved, we are left to deal with the second major health policy issue which is how to address the needs of drug-exposed infants and children. Although there are some data about the potential for illicit drugs to cause congenital malformations and other health problems in the infant and young child, little is known about subsequent problems confronting drug-exposed infants as they enter their school years and adolescence. Longitudinal studies of these children are crucial.

Prevention and/or treatment of women using illicit drugs during pregnancy is necessary to help ensure the health of newborn babies. Learning more about the problems to drug-exposed infants and children will require extensive research, and addressing the issues of prevention and remediation will require a societal commitment. Funds for research, prevention, and treatment must be made available, not only for the sake of these children, but also for the benefit of society.

**RECOMMENDATIONS**

1. Pediatricians can be involved in organizing community-based social service or child protective service systems, designed to provide essential services for drug-abusing women and their children.

2. A comprehensive medical and psychosocial history including specific inquiry regarding maternal drug use should be a part of every newborn evaluation.

3. Newborn urine toxicology should be regarded only as a potential adjunct to a thorough maternal drug history. Universal toxicologic screening is not recommended.

4. The pediatrician should include maternal drug use in the differential diagnosis of any neonate with suggestive symptomatology.

5. The pediatrician should be knowledgeable about state and local child protection reporting requirements.

6. In most circumstances, when a drug-exposed infant or drug-abusing mother is identified, the pediatrician should consider recruiting the assistance of local child protective services in order to provide multidisciplinary treatment and support for the affected mother, child, and family.

7. The pediatrician should evaluate the drug-exposed infant for other medical conditions associated with maternal drug use, including the possibility of concurrent sexually transmitted diseases in the mother and infant.

8. Since adverse effects of drug exposure may not be evident at birth, the pediatrician should be alert to potential long-term consequences which may become apparent during ongoing care.

9. The American Academy of Pediatrics supports the development and evaluation of models of coor-
ordinated multidisciplinary prevention, intervention, and treatment services which improve access to early comprehensive care for all substance-abusing pregnant women and their children. Evaluation of current and new treatment modalities is imperative to determine their effectiveness.

10. Funds for research, prevention, and treatment should be made available to address issues of drug-exposed infants.

11. The public must be assured of nonpunitive access to comprehensive care which will meet the needs of the substance-abusing pregnant woman and her infant.

12. Pediatricians are encouraged to become actively involved in policy issues related to drug-exposed infants and children at the federal, state, and local levels.

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