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ABSTRACT

This paper brings together information on the conditions and needs of children who have been exposed to drugs, federal programs that affect the well-being of these children, and policy questions that need resolution. Discussion concerns: (1) characteristics of infants who have been exposed to drugs and their families, including prevalence and epidemiology, medical and developmental outcomes, and home environment; (2) the impact of this population on medical and foster care, child welfare, and developmental and educational service systems; (3) service needs of these children, such as preventive, pre- and perinatal, and family and child development services; (4) efforts to help children who have been exposed to drugs and their families. Included are descriptions of programs at the federal, state, and local levels; legal responses to the problem; and data and research needs. A table lists federal efforts affecting children who have been exposed to drugs. The paper concludes with a discussion of policy questions concerning efforts to satisfy the needs of children who have been exposed to drugs and their families. These questions concern limited availablity and effectiveness of drug treatment, diagnosis and reporting of exposure to drugs, and ways to provide care for children who have been exposed to drugs and to protect them. Appendix A provides profiles of federal programs affecting these children. Appendix B lists Congressional hearings on maternal drug abuse.(RH)

DRUG EXPOSED INFANTS AND CHILDREN: SERVICE NEEDS AND POLICY QUESTIONS

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The conclusions and opinions expressed in this paper are those of the researcher and do not necessarily reflect those of the Assistant Secretary for Planning and Evaluation, or of the Department of Health and Human Services in general.

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EXECUTIVE SUMMARY

Drug abuse among adults affects not only the individuals using drugs, but also their families. Particularly devastating is the harm caused by a pregnant drug abuser to her unborn child. This paper was written to bring together available information on the conditions and needs of drug exposed children, federal programs which affect their well being, and outstanding policy questions which must be resolved in the coming months and years.

CHARACTERISTICS OF DRUG EXPOSED INFANTS AND THEIR FAMILIES

No national studies have been conducted to determine the incidence and prevalence of drug use among pregnant women, although the National Institute on Drug Abuse has such a study underway. The only estimates which exist are based either on small pilot studies or educated guesses. Accurate prevalence estimates are difficult to obtain, in part because maternal drug use and infant symptoms are often overlooked or misdiagnosed. The most widely cited estimate indicates that approximately 375,000 children were born exposed to illicit drugs in 1988. More modest estimates judge that 30,000 - 50,000 babies per year are exposed to crack.

The medical and developmental conditions of drug exposed infants vary, and the children display a wide range of ability levels. Among the immediate problems often experienced by these infants are prematurity and low birth weight. Many of them are irritable and hypersensitive to stimulation. They cry a lot, and may have difficulty bonding to their mothers. Some babies of drug users are also victims of AIDS. A large proportion seem to possess normal IQ's but may have developmental deficits. As they grow older, many drug exposed children seem to be hyperactive and have attention deficits. Others may act extremely quiet and withdrawn. In addition, recent studies have found that crack babies in particular are disorganized and are frequently unable to structure their play and relationships.

While the physical and developmental problems of drug exposed and addicted infants are serious, these are often only a part of the child's troubles. The chaotic and often dangerous home environments in which many of these children live after being released from the hospital may do more damage than the initial drug exposure. Drugs may destroy the mother's ability to be an effective parent. Addicted women also often lack interpersonal support systems which might help them fulfill their parenting roles.

EFFECTS ON EXISTING PROGRAMS

The increased use of drugs has strained service programs in many parts of the country, but the worst of the problem is in large cities. Many drug exposed children are born into Medicaid eligible families. Government payments for the care of such children have increased both because there are more of them and because they tend to have more medical problems than other infants. Some hospitals are also finding themselves with "boarder babies" who are ready to be released from the hospital but have been abandoned by their parents.

Child welfare agencies are also becoming familiar with drug exposed children. A recent study of the National Committee for Prevention of Child Abuse notes that substance abuse has become the dominant characteristic in the child abuse caseloads of 22 states and the District of Columbia. The abuse or neglect of very young children seems particularly associated with parental drug use. Expenditures to maintain these children are rising as children enter foster care earlier and stay longer than before.

THE SERVICE NEEDS OF DRUG EXPOSED CHILDREN

A wide spectrum of service interventions may ameliorate the troubles these children face and help their families or foster families become effective nurturing environments. Preventive services may include a wide range of drug education and awareness programs aimed both at potential drug abusers and at the medical community. Drug treatment, as well as parenting skills training and other family support services, could strengthen the family unit. Support groups, housing assistance, education and job training programs could all enable families to better cope with raising children and building stable lives. Intensive, short-term interventions for families on the verge of placement also have proven effective in several locations to prevent the need for out-of-home care.

With or without support services, some children will inevitably end up in the foster care system. A variety of measures could improve foster care and adoption services. In addition to recruiting more foster care homes (in especially short supply for special needs children), existing foster care homes must be supported if they are to be retained. Caseworkers must also be given the training and support they need to perform their jobs adequately. Specialized child care, preschool, and eventually school services can enable those drug exposed children who need them to compensate for developmental difficulties.

CURRENT EFFORTS TO AID DRUG EXPOSED CHILDREN AND THEIR FAMILIES

State and local governments actually provide most of the direct services described above, but their scope and availability vary widely between regions. Some states are pursuing legal action against substance abusing mothers, a few are attempting to devise inter-agency service networks, and some subsidize the treatment and care of these children in varying degrees.

The Federal Government has concentrated its efforts on research and information dissemination regarding drug effects, and in funding block grants and limited service demonstration programs. In addition, the beneficiaries of several Federal entitlement programs include many members of the drug exposed population. While we are only beginning to understand many issues related to drug exposed infants and children, efforts are underway to improve our base of knowledge.

POLICY ISSUES

Limited Availability and Effectiveness of Drug Treatment

In many parts of the nation there are long waiting lists for drug treatment, and most treatment programs have extremely high recidivism rates. In addition, most drug treatment programs in this nation were developed with the single male addict in mind and the increasing numbers of women addicted to crack have found them unprepared. Few treatment programs, for instance, include child care for a female addict's dependent children. Without such services many women are effectively denied access to treatment. In addition, few drug treatment programs ask participating women if they are pregnant, and therefore they may neglect to connect participants with prenatal health care services.

Diagnosis and Reporting of Drug Exposure

Drug and alcohol abuse are often overlooked or misdiagnosed by medical practitioners, and most hospitals' minimal drug screening procedures ensure that only the most hard core cases of maternal drug abuse and fetal drug exposure are detected. In addition, reporting requirements vary among states and are often unclear and unevenly followed. Whether or not perinatal drug exposure constitutes child abuse also varies among states. The situation is further complicated by potential conflicts between child abuse reporting laws and the confidentiality requirements regarding drug treatment. Questions remain regarding when it is appropriate for medical professionals to perform drug screens, and when or whether informed consent should be obtained.

How to Protect and Provide Care for Drug Exposed Children

States and the Federal Government must confront a variety of issues regarding the protection and care of the children of substance abusers. One of the principal among these is whether or not to prosecute women for delivering drug exposed children. A related issue is the question of how hard child welfare workers should try to keep together (or reunite) substance abusing families whose children may enter the foster care system. The increasing number of children in care combined with the scarcity of foster homes have led some experts to call for the return, on a limited scale, of organized group care. Another significant opportunity to prevent children from languishing in the foster care system would be to provide increased adoption opportunities for children unlikely to be reunited with their biological families.

INTRODUCTION

Drug abuse among adults affects not only the individuals using drugs, but also their families. Particularly devastating is the harm caused by a pregnant drug abuser to her unborn child. Many of these children face physical, developmental, and emotional disabilities resulting from prenatal drug exposure. They are innocent victims, harmed by their mothers before birth.

Increasing evidence of the serious, long-term impairments suffered by many drug exposed children underscores the primary need to prevent drug use, particularly during pregnancy. Recognizing that many children have already been born drug exposed, however, and that others will continue to be born despite prevention efforts, it is vital that we also deal with their needs.

The problems of babies born to substance abusers have been recognized for a number of years. In the 1960's and 70's the children of heroin addicts inhabited neo-natal wards, and Fetal Alcohol Syndrome was documented in the children of alcoholics. Yet in the 1980's the use of "crack" cocaine has intensified the problem, and public agencies are hard-pressed to respond.

While concerned about drug exposed children in general, much of this paper will focus on the specific impacts of crack on children and the systems that serve them and their families. There are several reasons for this emphasis. First, it is these children whose quickly increasing numbers and substantial service needs are overwhelming agencies' capacities to deal with them. Second, their family situations seem more chaotic and fragile when compared either with non-troubled families or even with other children of substance abusers. Finally, while individual drugs have somewhat different effects on children, the service systems do not particularly differentiate between the particul substance(s) abused by the parent(s). It should also be recognized that poly drug use is the norm among substance abusers. While cocaine is the most commonly cited drug of abuse, it is often used in conjunction with alcohol marijuana, heroin, PCP, and other drugs. In addition, substance abuse is a progressive phenomenon and may manifest itself in varying levels of severity.

Unlike heroin and many other drugs which are primarily used by men, crack is also used increasingly often by women. The American Association for Clinical Chemistry reports that the number of women as a proportion of all persons who test positive for drugs jumped from 25% in 1972 to 40% in 1988.[1] In FY88 women represented 32.5% of all drug treatment admissions.[2] Both the physiological effects of drugs while high and the addict's preoccupation with acquiring his or her next fix can seriously distract a parent from his or her parenting role.

This paper was written to bring together available information on the conditions and needs of drug exposed children, federal programs which affect their well being, and outstanding policy questions which must be resolved (or to which de facto answers will evolve) in the coming months and year.. Discussions follow regarding (1) the characteristics of drug exposed infants

and their families; (2) the impact this population is having on existing service systems; (3) the service needs of these children; and (4) current efforts to aid these children and their families, including a description of the various federal programs in this area. The paper concludes with a discussion of several policy questions which arise in trying to satisfy the needs of these children and families.

The data upon which much of this report is based, particularly regarding the medical and developmental outcomes of drug exposed children and regarding drug treatment for crack addiction, must at this point be considered preliminary because few studies have been completed on these issues.

CHARACTERISTICS OF DRUG EXPOSED INFANTS AND THEIR FAMILIES

Prevalence and Epidemiology

No national studies have been conducted to determine the incidence and prevalence of drug use among pregnant women, although the National Institute on Drug Abuse (NIDA) has such a study underway. The only estimates which exist are based either on small pilot studies or educated guesses. Accurate prevalence estimates are difficult to obtain, in part because maternal drug use and infant symptoms are often overlooked or misdiagnosed. The most widely cited estimate indicates that approximately 375,000 children were born exposed to illicit drugs in 1988. More modest estimates judge that 30,000 - 50,000 babies per year are exposed to crack. The Office of National Drug Control Policy uses a figure of 100,000 in its National Drug Control Strategy documents.[3] It should be noted that none of these estimates quantify the extent of drug exposure. Nevertheless, clearly there exists a large population of drug exposed children needing services, and service systems are not equipped to deal with them. Figures including the detrimental effects of alcohol and tobacco would be much higher.

These are not typically young, teen mothers. In Massachusetts 72% of the pregnant addicts treated are not first time mothers, and their average age is 24.[4] In addition, recent studies have found that drug exposure is not limited to low income or minority women, as is often the stereotype, but rather it affects a much broader population. In a study of births at 11 hospitals in Pinellas County, Florida, 15.4% of whites and 14.1% of blacks tested positive for drug use, regardless of the socio-economic status of the hospital's patient population[5]. Another survey of 36 hospitals across the country conducted in 1988 found that, on average, about 11% of pregnant women use illicit drugs, the most common of which was cocaine.[6]

Rather than varying by income, the key determinant of how much drug use hospitals found was how hard they looked for it. Again regardless of the hospital population's income, hospitals which perform drug tests only when an infant shows withdrawal symptoms find less drug use than ones which do routine drug histories. The latter find less drug use than hospitals that perform drug tests on all pregnant women or infants.[7]

Local estimates in particular cities indicate the following proporcions of drug involved births:

City	Percentage Births Involving Drugs
San Francisco[8]	7% (of these 85% are crack)
Philadelphia[9]	16%
Milwaukee[10]	10 - 15%
Washington, D.C.[11]	7.5%

In addition, drug treatment centers have reported increasing numbers of middle and upper class Americans addicted to crack. The 1988 Household Survey, administered by NIDA and a major source of drug use information, indicated that 5 million women of childbearing age (9%) were current users of an illegal drug.[12]

Medical and Developmental Outcomes

The medical and developmental conditions of drug exposed infants vary, and the children display a wide range of ability levels. A recent report by the HHS Inspector General, confirming other findings, observed that most drug exposed children seem normal at birth.[13] Research with somewhat older children reveals that a large proportion seem to possess normal IQ's but may have developmental deficits.[14] Outcomes depend, in part, on the particular substance or combination of substances used by the mother, the amount used, and the timing of exposure. Such details of fetal drug exposure are generally not available. In addition, the healthy outcomes of these children are further jeopardized by tneir mothers' frequent lack of prenatal care and inadequate parenting skills.

Among the immediate problems often experienced by these infants are prematurity and low birth weight. A variety of problems are associated with these conditions. In 1980, low birth weight infants accounted for about 60% of all infant deaths.[15] In addition, survivors of low birth weight are twice as likely to suffer from ailments such as cerebral palsy, chronic lung problems, epilepsy, delayed speech, blindness, and mental retardation.[16] Nearly 30% of drug exposed infants are born prematurely.[17] In addition, among other problems cocaine children sometimes have deformities of the urinary tract or experience strokes in utero. These are primarily caused by the vascular constriction cocaine induces. Heroin and methadone children are born addicted and experience withdrawal during their first days of life. Marijuana use during pregnancy has been shown to result in lower infant birth weight and length, and smaller head circumference.[18]

In addition to the gross physical problems experienced by a small minority of drug exposed children, less clearly definable neurobehavioral deficits also affect these infants. Many of them are irritable and hypersensitive to stimulation, making them difficult to care for. Studies have shown that the neurobehavioral abilities of one month cocaine babies are not up to the level of two-day old non-exposed infants.[19] Cocaine exposed babies frequently avoid eye contact and may respond negatively to multiple stimuli such as being rocked and talked to at the same time.[20] They have a

high pitched cry and may be very hard to comfort, creating a difficult environment for bonding between parent and infant. Techniques have been developed for dealing with care giving difficulties these children present, but these require patience and discipline to learn, however, and mastering them may therefore be difficult for mothers still struggling with their addictions.[21]

Studies have also noted that cocaine exposed infants have problems in motor development. Tremors in their arms and hands are common when they reach for objects.[22] They also display differences in muscle tone, reflexes, and movement patterns when compared to non-drug exposed infants.[23]

Studies are just now revealing the effects of drugs, and in particular cocaine, on children's development past infancy. The results of a two-year follow up of 263 children at a Chicago treatment clinic shows that the drug exposed children score within the normal range for cognitive development. These children score more poorly, however, on developmental tests that measure abilities to concentrate, interact with others in groups, and cope with an unstructured environment.[24] Other research also suggests that cocaine children are disorganized and are frequently unable to structure their play and relationships.[25] Anecdotes from child development specialists and teachers who deal with drug exposed children seem to confirm these tendencies. There is also serious concern, however, that labelling children as drug exposed or as "crack babies" may create self fulfilling expectations that they will be limited developmentally.

While drug use may damage the fetus at any point during pregnancy, studies have shown that women who stop using drugs, particularly cocaine, early during pregnancy tend to have healthier babies than those who continue using drugs through all three trimesters. Interventions which suspend the mother's drug use and provide adequate prenatal care can virtually eliminate infants' increased risk of low birth weight and gross physical abnormalities. However, researchers have found almost universal neurobehavioral deficits in the children of cocaine users, even if drug use halts before the second trimester[26].

Some babies of drug users are also victims of AIDS. Over 1,500 cases of AIDS have been reported in children, most of whom are the offspring of IV drug users. The Centers for Disease Control estimates that by 1991 there will be 10,000 - 20,000 children with HIV infection, a significant number of whom will develop AIDS. Between one third and one half the children of HIV infected mothers will remain HIV positive themselves.[27]

Home Environment

While the physical and developmental problems of drug exposed and addicted infants are serious, these are often only a part of the child's troubles. The chaotic and often dangerous home environments in which many of these children live after being released from the hospital may do more damage than the initial drug exposure. Drugs, and particularly crack, may destroy the mother's ability to be an effective parent. While using drugs they may lack concentration and later may be so intent on acquiring their next fix that

they may ignore their children. And money for drugs can take precedence over money for food and other necessities.

Drug addicted women also often lack interpersonal support systems which might help them fulfill their parenting roles. Among crack using mothers studied in New York, Chicago, Philadelphia, and other urban centers, most are unmarried, many are estranged from their families, and their friends tend to be other drug users. The combination of poor social supports, personal emotional instability, and poverty present few opportunities for these women to act as effective parents.[28]

Studies of addicted parents have discovered other disturbing facts. Large proportions of the women were physically or sexually abused as children and may have tendencies to be abusers themselves. A Philadelphia program, for instance, found that nearly 70% of drug dependent women had experienced sexual abuse before the age of 16, as compared with 15% of non-addicted women with similar socioeconomic backgrounds. Eighty-three percent of addicted women had a drug or alcohol dependent parent, as compared with 35% of non addicts.[29] In addition, many have severe personality disorders. Over half of the women seen at Northwestern University's Perinatal Center for Chemical Dependence have been found to be moderately to severely depressed. Researchers have also found that "mothers who give birth to infants while abusing drugs tend to be immature women who demonstrate an abnormal degree of egocentrism in the way they go about parenting."[30] While none of these indicators is reliably predictive, psychologists note that these results indicate many of these children are at risk of being abused or neglected.

EFFECTS ON EXISTING PROGRAMS

The increased use of drugs, and particularly of cocaine, has strained service programs severely in many parts of the country. All kinds of programs seem to be affected: medical, developmental, educational, and protective. It should be noted, however, that the worst of the problem is localized in large cities. The severe impacts discussed here are not being seen everywhere, despite the pervasive media images. Data collected by the National Association of State Alcohol and Drug Abuse Directors indicates that in FY88 six states (CA, FL, IL, MA, NY, and PA) together had 67% of the nation's treatment admissions for cocaine addiction, and 54% of those for heroin. Those same states contain approximately 35% of the nation's population.[31]

Medical Services

Many drug exposed children are born into poor, Medicaid eligible families. Government payments for the care of such children have increased both because there are more of them and because they tend to have more medical problems and longer hospital stays than other infants. In addition, some hospitals are finding themselves with "boarder babies," infants who are ready to be released from the hospital but have been abandoned by their parents. Authorities are often unable to find foster homes to care for them immediately. Most boarder babies are drug exposed, and their mothers are addicts.

A phone survey of hospitals in 5 cities (New York, Miami, Newark, Los Angeles, and Washington, D.C.) by the Child Welfare League of America counted 304 boarder babies in those cities in June of 1989. Most were found in New York (181), but Miami had 5, 41 were in Newark, Los Angeles had 24, and 53 were in D.C. hospitals. The hospitals reported that at least 69% showed signs of impairment due to their mothers' drug use, and the hospitals expected at least 55% to be placed in foster care outside their families immediately upon leaving the hospitals.[32] A recent management advisory report by the HHS Inspector General revealed similar findings. The report's principal findings were that most boarder babies have serious medical problems, there are complex legal obstacles to placement, and that some cities are effectively dealing with the boarder baby problem.[33]

Hospitals in the nation's largest cities are reporting increasing proportions of their pediatric beds taken up by drug exposed infants. During the last six months of 1988 the newborn nursery in Howard University Hospital in Washington D.C. had an average daily occupancy rate of 114%.[34] Recent New York City estimates indicate that by 1995, 5% of all newborns may need neonatal intensive care because of drug exposure.[35] Such care may cost $18,000 or more per child.[36] Cost estimates range from $4,200 to $6,000 per child for the care of drug exposed infants who do not need intensive care but must be hospitalized due to withdrawal symptoms.[37]

Experience in Los Angeles illustrates the enormous medical costs incurred caring for these children. In that city it has been found that 70% of drug exposed infants were term babies who were hospitalized for an average of 9 days, at $600/day or $5,400/child. Premature babies with uncomplicated courses made up 12% of drug exposed births and were hospitalized for an average of 42 days at $1,500/day or $63,000 per child. The 18% born premature with complications were hospitalized for an average of 90 days at $1,500/day or $135,000 per child.[38] The California Department of Health Services estimates that statewide drug exposed infants accounted for $178 million in added health care costs in 1988.[39]

Little data is available regarding Medicaid payments specifically related to drug exposure. Anecdotal evidence would indicate that the costs are very substantial. California estimates that Medi-Cal (the state's Medicaid program) and the California Children's Services Program (a state-only program which pays for services to children with specified medical conditions) together paid approximately three-quarters of the cost of caring for drug exposed infants in 1988, for a total of $134 million.[40]

While Medicaid undoubtedly pays a large portion of the costs, hospitals are absorbing increasing costs that state and federal programs do not pay. San Francisco General Hospital, for instance, estimates that caring for 250 cocaine addicted infants in 1988 cost them $3.5 million in excess of the costs reimbursed by Medi-Cal.[41] Howard University Hospital in Washington, D.C. and Harlem Hospital in New York City report similar shortfalls.[42] Often hospitals are paid on a capitation basis, whereby they are paid a single fee no matter how long a baby remains hospitalized or what services it needs.

The demand for drug rehabilitation services, particularly those suitable for pregnant women, is discussed elsewhere. Nationwide, treatment admissions for heroin and cocaine increased 93% between 1985 and 1989, fueled almost entirely by growing cocaine use. For the first time, cocaine was the primary drug of choice among patients admitted to state supported drug treatment programs in FY88.[43]

Foster Care and Child Welfare Services

Local child welfare agencies are quickly becoming familiar with drug exposed children. Studies from the 1960's and 1970's regarding heroin babies estimated that roughly half of drug addicted mothers who did not seek treatment lost custody of their infants before one year went by.[44] Recent figures from New York indicate that roughly one-third of the infants now diagnosed as drug exposed are placed in substitute care.[45] The children of drug abusers make up large portions of CPS caseloads and overburdened caseworkers demonstrate that many cities' crisis intervention systems are themselves in crisis.

Many cities blame increasing reports of child abuse and neglect on the rising influence of drugs. In New York City between 1986 and 1988, 73% of child abuse deaths were the children of addicts.[46] Other localities report that large portions of their foster care and Child Protective Services caseloads involve parental drug abuse. A recent study of the National Committee for Prevention of Child Abuse notes that substance abuse has become the dominant characteristic in the child abuse caseloads of 22 states and the District of Columbia.

Local estimates of the proportion of new child welfare cases involving drug abuse in particular cities or states are as follows:

Location	% of New CW Cases Involving Drugs
Illinois[47]	50%
Washington, D.C.[48]	80%
San Francisco[49]	76%
Boston[50]	64%
Philadelphia[51]	70%

In a recent study The Black Child Development Institute examined the case records of black children who entered foster care in five cities (Detroit, Houston, Miami, New York, and Seattle) during 1986.[52] They analyzed the characteristics of the children and families, services offered, and case outcomes 18 - 40 months later. A number of that study's findings are relevant here:

- Parental drug abuse was a contributing factor in 36% of placements. Yet only 16% of parents were referred to drug treatment before the child was placed in substitute care.

- By and large, very young children were entering the foster care system. 49% were five years of age or younger.

- o Few "concrete" or hands-on services were provided to families (e.g. homemaker services, crisis counseling, or parenting education).

- o Child Welfare practices differ widely between cities.

It should be stressed that these data reflect the population entering placement in 1986. Anecdotal evidence suggests that in the years since this study began drug abuse has become a more prominent factor.

A follow-up of 97 boarder babies residing in New York hospitals in 1985, found that three years later 60% (58 children) remained in foster care. Another 30% were with parents (13 children) or other relatives (16 children), and only 7 were in finalized adoptive homes. Two children had been institutionalized, and one had died.[53] The study also found that virtually all of the children returned to the care of parents or relatives had done so within the first six months of entering the foster care system.

The abuse or neglect of very young children seems particularly associated with parental drug use. A study examining case records in Boston found that while 64% of substantiated child abuse and neglect cases involved parental drug abuse, 89% of the cases where the child was less than one year old involved drugs.[54]

Child Welfare agencies are overwnelmed and cannot adequately serve all the children who need help. Expenditures to maintain these children are rising as children enter foster care earlier and stay longer than they used to. In New York State 11.6% of the children who entered foster care in 1988 were less than one month old, up from only 6.8% of those entered in 1984. Most of these are the children of addicts. Illinois finds a similar pattern.[55]

Developmental and Educational Services

The first large wave of drug exposed children are just entering pre-school, and they will not enter public schools for another couple of years. It is therefore difficult to determine how they will affect educational programs. Head Start directors estimate that roughly 20% of the children in that program have a parent or guardian with substance abuse problems. Some of these children will have been exposed to drugs in utero. National staff are developing curricula and training materials to help local teachers better address the needs of these children and families.

The Los Angeles Unified Schools have set up several classrooms expressly for drug exposed children, in an attempt to discover practices best suited to their developmental needs.[56] The program, which currently consists of three preschool classrooms, was begun in 1987. Each classroom is staffed by three adults working with a maximum of eight children. In addition, a psychologist, social worker, nurse, and pediatrician work part time with children and families. The children also receive the services of an adaptive physical educator and a speech and language therapist as needed. The small classes foster a nurturing but highly structured environment.

Professionals involved in the Los Angeles project hope that the children in the program can be mainstreamed into normal classrooms. The current experiment should help determine what classroom practices are most effective to enable drug exposed children to compensate for their developmental and neurobehavioral deficits. Program organizers hope to use their experience to help general classroom teachers deal with these children. School systems in several other cities have set up or are exploring the feasibility of similar programs.

THE SERVICE NEEDS OF DRUG EXPOSED CHILDREN

Infants born to drug abusing women begin life physically and neurobehaviorally disadvantaged. Whether in the care of their mothers, extended family, or the foster care system, many or most are also emotionally and socially disadvantaged. Their needs are varied and a wide spectrum of service interventions may ameliorate the troubles they face and help their families or foster families become effective nurturing environments. These interventions are discussed below.

It is impossible to consider the service needs of a drug exposed child without also considering the needs of the parent. The child's principal need is for a functioning, supportive family environment and this cannot be achieved dealing with the child in isolation. This having been said, however, most existing efforts to address perinatal substance abuse seem to deal principally with the parent(s) and treat the child as, at most, a secondary client.

Children's service needs may be divided into several categories according to the time and type of the intervention. While categories inevitably overlap, below they are characterized as follows: 1) Preventive Services; 2) Pre- and Perinatal Services; 3) Family and Child Development Services.

Whatever the array of services offered, coordination and active case management appear to be vital elements of successful service packages. The maze of different local, state, and federal agencies, programs, and forms are daunting to the best organized families. For the often fragile families abusing drugs, help accessing the "system" is essential. Without someone to turn to who can simplify, explain, and make connections, many families will fall through the cracks.

Preventive Services

Preventive Services may include a wide range of drug education and awareness programs aimed both at potential drug abusers and at the medical community. While much attention has been focused on the general detrimental effects of drugs, less has been done to emphasize the devastating effects drug use may have on fetal development.

Women of childbearing age must be made aware of the dangers drugs can pose during pregnancy. Not only are most women unaware of the potential

dangers, but rumor on the streets seems to be that cocaine taken near the end of term will induce labor, a potentially attractive option for a woman who is tired of waiting for the birth of her child. Unfortunately, however, such cocaine use may also cause serious damage to the child.

Doctors also need to be educated. Recent evidence indicates that prenatal substance exposure is far more common than the medical community recognizes. Doctors must be made aware of the nature and extent of drug use in their patient populations and must learn to detect the signs of substance exposure in both infant and mother. Drug treatment programs must be available to those who seek them, particularly for pregnant women.

Pre- and Perinatal Services

An estimated 50 to 60% of drug addicts receive insufficient or no prenatal care, and many simply show up at public hospitals in labor.[57] In addition, an increasing number never come to a hospital at all, delivering their babies at home or in crack houses unassisted. The prosecution of addicts for the prenatal drug exposure of their infants may accelerate this trend.

Outreach efforts are needed to bring pregnant drug users into regular prenatal care. Adequate care and services can ameliorate or eliminate many of the problems most commonly associated with drug use during pregnancy. In addition, the dangers of drug use during pregnancy must become a standard element in prenatal counseling and clear drug history and drug testing protocols must be developed for obstetrical care.

Doctors' sensitivity to drug issues is also vital. If drug exposure is not recognized, a vital opportunity to effectively intervene and improve the life chances of the child is missed. The period surrounding the birth of a child is a time at which families are particularly open to change and will most readily accept assistance.

Family and Child Development Services

Substance abuse places stress on any family, but the effect may be particularly severe where additional factors such as poverty or the lack of a spouse already indicate risks to a child's life chances. These multi-problem families tend to be chaotic and may be inadequately equipped to cope with the pressures of childrearing. Many of these mothers experienced poor parenting when they were children and may be unaware of their children's needs.

In addition to drug treatment, for many of the poor, single women delivering drug exposed infants, parenting skills training and other family support services could strengthen the family unit. Support groups, housing assistance, education and job training programs could all enable families to better cope with raising children and building stable lives.

Intensive, short-term interventions for families on the verge of placement have proven effective in several locations to prevent the need for out-of-home care. The most well known of these is the Homebuilders program

based in Tacoma, Washington. Most of these programs have worked primarily with non-substance abusing families, however. It remains to be seen whether they can be successful when families' problems are at least partially drug related. Projects in New York, Detroit and elsewhere are experimenting with this model.

With or without support services, some children will inevitably end up in the foster care system. Whether given up for adoption, abused, neglected, or abandoned, these children need a stable, supportive environment in which to live until they are either reunited with their biological families or adopted. While child welfare programs and agencies differ both between and within states, most observers agree that, in general, foster care systems are currently unable to provide such care and support to the number and variety of children who need substitute care today.

A variety of measures have been suggested by various groups to improve foster care and adoption services. In addition to recruiting more foster care homes (in especially short supply for special needs children), existing foster care homes must be supported if they are to be retained. Training, respite care, help lines, and child care services are among those which would enable foster care homes to better respond to needy infants and children. Caseworkers must also be given the training and support they need to perform their jobs adequately. The current overwhelming case loads for protective service workers in most cities are inappropriate and must be reduced before visible improvement in child welfare systems can be expected.

Specialized child care, preschool, and eventually school services can enable a drug exposed child to compensate for his or her developmental difficulties. These children are often hypersensitive to stimulation and need structured environments which help them control themselves. Teachers alert to possible learning disabilities may also ensure children receive needed help before they have fallen hopelessly behind their peers. Unfortunately, current diagnostic instruments often fail to detect the types of deficits found in drug exposed children.

Work is just beginning to asses the developmental and educational needs of these children. Many will most likely be hyperactive and will have attention deficits, presenting problems for classroom teachers. In addition, emotional, social, and learning disorders are possible. A great deal of work remains before we can adequately assess and meet the needs of drug exposed youngsters.

EFFORTS TO AID DRUG EXPOSED CHILDREN AND THEIR FAMILIES

Programs at the Federal, State or Local Levels

While drug exposure is often overlooked or misdiagnosed by doctors, a great many infants are recognized each year as drug exposed. Many of these infants are born to drug abusing single women. Some have their hospital bills paid by Medicaid, some receive AFDC, and some are also clients of public housing programs. Eventually many of the children will be eligible for Head

Start and most will attend public schools. None of these programs, however, targets their services on drug exposed children, and none, with the exception of a few demonstration projects, tailors services to meet their particular developmental needs. In addition, health oriented programs tend to focus on the drug treatment needs of the mothers and often ignore or de-emphasize the medical and developmental needs of the children.

City, county, state, and federal agencies are now beginning to recognize the service needs of these youngest victims of substance abuse. State and local governments actually provide most of the direct services described above, but their scope and availability vary widely between regions. Often those communities with the greatest concentrations of drug exposed children have the fewest resources available to devote to services.

States are devising a variety of responses to the phenomenon of drug exposed infants. Several are pursuing legal action against substance abusing mothers. A few are attempting to devise inter-agency service networks and may subsidize the treatment and care of these children. The Federal Government does not keep track of state activities, however, so the ability to identify and compare approaches is strictly limited. A recent report of the HHS Inspector General briefly describes a number of promising programs, and a more detailed study is now underway within the Office of the Assistant Secretary for Planning and Evaluation to document in more detail the efforts of four cities to develop services for these children and their families.

With respect to drug exposed children and their families, the Federal Government has concentrated its efforts on research and information dissemination regarding drug effects as well as funding block grants and limited service demonstration programs. In addition, the beneficiaries of several Federal entitlement programs include many members of the drug exposed population. Federal programs often require state or local matches which leverage Federal contributions.

Table 4 lists current Federal (primarily HHS) activities relevant to drug exposed infants. Descriptions of each program can be found in Appendix A.

Legal Responses[58]

A number of states have enacted laws incorporating either prenatal drug exposure or parental drug use into abuse and neglect reporting and prosecution statutes. These include FL, HI, IL, IN, MA, MN, OK, NY, NV, and RI. These laws vary in their particular requirements and intentions. Several other states are considering legislation on this issue, and more are likely to do so in the future.[59]

Most of the existing statutes require doctors or others to report all drug exposed infants to child welfare authorities, and/or include drug exposure in their definitions of child abuse, harm, or neglect. A few mention parental drug abuse without including prenatal drug exposure directly, and MN's law requires hospitals to administer toxicology tests to pregnant women suspected of using drugs or infants suspected of being drug exposed. No law

TABLE 4

FEDERAL EFFORTS AFFECTING DRUG EXPOSED CHILDREN

Public Health Service Programs and Activities

- OSAP/MCH Pregnant and Postpartum Women and Their Infants Demonstration Grant Program
- OSAP National Perinatal Addiction Prevention Resource Center
- OSAP Conference Grants
- OSAP Training Programs
- NIDA Research Demonstration Grants on Drug Treatment
- NIDA Maternal Drug Abuse Research
- NIDA Conferences on Maternal Drug Abuse Research
- NIDA In-Utero Drug Exposure Survey
- BHCDA Community and Migrant Health Centers
- Training on Drug Issues for Title X Counselors
- HRSA Pediatric AIDS Health Care Demonstration Grants
- Maternal and Child Health Block Grant (Title V)
- HRSA SPRANS Grants
- ADMS Block Grant (With 10% Set Aside for Women's Services)
- OTI Treatment Improvement Grants and other activities

Human Development Services Programs and Activities

- Foster Care and Adoption Assistance (Title IV-E)
- Child Welfare Services (Title IV-B)
- Temporary Child Care for Handicapped Children and Crisis Nursery Program
- Child Abuse and Neglect State and Discretionary Grants
- Head Start
- Comprehensive Child Development Program
- Coordinated Discretionary Grants
- Abandoned Infants Assistance Grant Program
- University Affiliated Programs
- Social Services Block Grant
- Joint Conference on Drug Affected Families
- Evaluation of Substance Abuse and AIDS Impacts on Service Delivery

Other HHS Programs and Activities

- Medicaid
- Supplemental Security Income
- Centers for Disease Control Research
- Inspector General's Reports on "Crack Babies" and related issues

Elsewhere

- National Commission to Prevent Infant Mortality
- GAO Study "Drug Exposed Infants: A Generation at Risk"
- Department of Education drug use prevention and early intervention programs (including implementation of P.L. 99-457 early intervention for young children with or at risk of disability)
- WIC drug education efforts (Department of Agriculture)

currently requires the removal of drug exposed infants from their substance abusing parents. but Arizona and Oregon have each considered such legislation.

A few jurisdictions have begun prosecuting drug abusing pregnant and postpartum women, either using new definitions of child abuse or neglect which include drug exposure, or by stretching other laws to fit these cases. The Christian Science Monitor recently reported that 18 fetal endangerment cases were pending in SC, CO, FL, CA, MA, OH, AZ and IN related to maternal drug abuse.[60] Cases are also pending in IL and in 1987 a D.C. judge sentenced a woman to jail until the birth of her child to protect the child from the mother's cocaine abuse. The mother had been arrested for check forgery.[61] In states where prenatal conduct is not explicitly covered by child abuse and neglect statutes, court decisions have been mixed. Most of these cases are still pending. An upcoming report from the HHS Inspector General will assess changes to state child abuse and neglect laws relating to drug use by pregnant women.

The U.S. Congress is also considering a number of measures regarding perinatal substance abuse. At the time of this writing proposals include measures to authorize a variety of service demonstration programs for substance abusing parents and/or drug exposed children, efforts to change the child welfare system in a number of respects, and proposals to expand the availability of and financing mechanisms for drug treatment. Because the number, content, and status of such bills changes almost daily, no attempt will be made here to discuss specific pieces of legislation. Appendix B, however, contains a list of congressional hearings held during the 101st Congress regarding perinatal substance abuse. Policy issues are discussed in a later section of this paper.

Data and Research Needs

While drug abuse among pregnant women has become recognized as a significant problem, and infants are unquestionably damaged by prenatal substance exposure, data upon which to base policy decisions remains sketchy in a number of areas. Following is a discussion of these gaps and those studies which are underway to provide information which will inform a better understanding this phenomenon and what steps might help service providers deal with these women and children.

While knowing it is a serious problem, policy makers are only beginning to understand the nature and extent of drug use among pregnant women. A number of studies will help quantify this issue. The Centers for Disease Control are conducting the National Maternal and Infant Health Survey and Longitudinal Follow-up which will provide the best information to date about maternal and infant health in the United States. That survey contains limited information about drug use during pregnancy. More definitive information will be collected by the NIDA's In Utero Drug Exposure Survey which is currently underway and should produce detailed data in 1992.

Better information is needed about children's medical and developmental problems associated with maternal drug abuse. A number of NIDA research grants are funding studies in this area. Among these are "Effect of Prenatal

Cocaine Use on Infant Outcome," "Research Intervention: PCP exposed Infants," and "Social Deviance and Drug Abuse: Effects of Drugs In Utero" and many other longitudinal studies examining the effects of in-utero exposure to a variety of substances. The National Institute of Child Health and Human Development has also begun research in this area.

In order to help drug users, decision makers must better understand what types of drug treatment are most successful in helping pregnant women stop using drugs. In addition, they must know what social services (e.g. day care, case management, etc.) have a positive impact on the success of drug treatment. Several NIDA and OSAP treatment demonstration grants will examine these issues. In addition, the new Office for Treatment Improvement (OTI) within ADAMHA will concentrate its efforts on drug treatment issues. OTI's Treatment Improvement Grants are designed to improve drug treatment opportunities and outcomes, particularly for special populations including pregnant and postpartum women. This population is specifically highlighted in OTI's Target Cities Program.

Another issue that is not yet understood is the effect of support services on the capacity of child welfare agencies to reunite families in which a child has been placed in substitute care, and to recruit and retain foster care homes. Available data on these issues are primarily anecdotal. Within HHS the Office of Human Development Services is conducting a study to determine the effects of drugs (particularly crack) on existing programs. The project will be an extensive, two year examination of their services in relation to the children of drug abusers. The HHS Inspector General's Office has issued a series of reports about "crack babies" and the challenges they pose for service agencies, and the U.S. General Accounting Office has produced one as well.

Federal policymakers also lack an understanding of what procedures (if any) states and counties have established to detect, report, and provide services to drug exposed infants. They do not know, for instance, whether and how states' Medicaid programs provide drug treatment services to mothers as well as medical and developmental services to drug exposed infants. The National Association of State Alcohol and Drug Abuse Directors (NASADAD), in conjunction with NIDA and NIAAA, now incorporate questions regarding Medicaid reimbursements in their annual survey of state alcohol and drug abuse agencies.

Finally, policy improvements require a better understanding of what services are most effective in (a) helping families with substance abuse problems stay together and be effective parents and (b) helping children compensate for the developmental problems caused by drug exposure. Some of the NIDA research on comprehensive treatment programs as well as other projects funded from HDS, OSAP, OTI and others to serve drug exposed infants begin to address these issues.

Overall, while we are only beginning to understand many issues related to drug exposed infants and children, efforts are underway to improve our base of knowledge. These efforts are strongest in trying to understand the scope of the phenomenon. A great deal of attention is also going towards an

examination of the medical and developmental processes concerning fetal drug exposure and drug addiction. The weakest area thus far has been in determining and implementing effective interventions to ameliorate the problems faced by these children.

POLICY ISSUES

Limited Availability and Effectiveness of Drug Treatment

A variety of drug treatment methods are employed by clinics and other agencies throughout the nation. These range from those based on the Alcoholics Anonymous 12-step model, though intensive outpatient programs which require the participants' presence for a number of hours daily, to 24-hour residential programs. For heroin addicts, outpatient methadone maintenance programs are used widely. Experiments are now underway in an effort to develop blocking agents to be used in the treatment of cocaine addiction (like methadone is to heroin), to determine the effectiveness of acupuncture treatments, and in a wide variety of other treatment models which have been suggested. Their effectiveness in helping patients control a variety of drug habits has yet to be fully understood. It is important to recognize that "drug addiction" is not a monolithic affliction, but comes in a variety of forms. The generic question "what treatment works?" must be replaced by a quest to determine which treatments are effective for what types of patients and problems. A recent "White Paper" on drug treatment issued by the Office of National Drug Control Policy provides an overview of treatment issues.[62]

Most drug treatment programs in this nation were developed with the single male addict in mind. Substance abuse among women was never widely recognized, although estimates during the 1970's were that 20 - 30% of heroin addicts were women, as were (and are) many alcoholics. An annual report compiled by the NASADAD reports that in FY88 approximately one-third of patients admitted to drug treatment were women and this figure was increasing. Still, the large numbers of women addicted to crack have found most states unprepared. Few treatment programs, for instance, include child care for a female addict's dependent children. Without such services many women are effectively denied access to treatment. In addition, few drug treatment programs ask participating women if they are pregnant, and therefore they may neglect to connect participants with prenatal health care services.

Experts estimate that roughly half of crack addicts are women.[63] New treatment models are needed both to deal with the unprecedented strength of the crack addiction and the particular service needs of single mothers and pregnant women addicted to drugs. A recent survey of 78 drug treatment programs in New York City found that 54% of them categorically refused to treat pregnant women, and 87% had no services available to pregnant women who are both addicted to crack and eligible for Medicaid. Of those treatment programs that did admit pregnant women, less than half arranged for prenatal care, and only 2 made arrangements for the care of the woman's dependent children.[64]

Even if treatment slots were available for pregnant addicts, traditional outpatient treatment programs seem relatively unsuccessful at breaking addicts' dependence on crack. Many experts believe the social dimensions of treatment programs seem to be at least as important as the biomedical aspects. Some believe that residential programs are more successful than outpatient ones, particularly because they remove the addicts from the destructive environment in which they became dependent. The data on such outcomes, however, has not yet been established. In any event, such treatment options rarely exist for pregnant women. In the state of Massachusetts, for instance, there are only 35 residential treatment beds for pregnant women.[65]

The drug treatment community is also experimenting with new treatments for cocaine addiction. Success to date has been minimal. Most treatment programs lose more than half (some up to 90%) of their participants during the first few weeks. The most successful programs report that 40-50% of their clients stay off drugs for periods of at least 1 - 2 years. Longitudinal studies of heroin addicts find that only 30% of addicts seeking treatment stay off illicit drugs on a long term basis. Similar data on crack addiction is not yet available.[66] It must be recognized, however, that drug addiction is a chronic malady and relapse is part of the recovery process. Health, social, and economic benefits may be realized from drug treatment, even when complete abstinence is not attained.

Frustration with the behavior of pregnant and maternal addicts has led to calls for compulsory drug treatment for these populations. Advocates of this approach point out that research thus far indicates that "those under legal pressure to undergo treatment [tend] to do as well or better than those who [seek] treatment on their own."[67] A number of communities are experimenting with drug treatment as a part of criminal sentencing for substance abusers convicted of various crimes and as a part of child welfare case plans. Before such options can be seriously considered, however, sufficient treatment capacity must exist for those who seek it voluntarily.

A recent pilot survey of substance abuse treatment services under Medicaid in seven states (CA, FL, NJ, NY, OH, TX and WI) found variation in the services available. All these states provided acute inpatient detoxification services and some outpatient counseling or rehabilitative services. Only five of the seven paid for methadone maintenance for heroin addicts (CA, NJ, NY, OH, and WI), two made available inpatient rehabilitation for alcoholics (NY and WI) and only one allowed inpatient drug abuse rehabilitation (WI).[68]

Diagnosis and Reporting of Drug Exposure

Drug and alcohol abuse are often overlooked or misdiagnosed by medical practitioners. While drug programs fail to meet the needs of (and often do not even accept) pregnant women, prenatal health care professionals are often uncomfortable with drug abusers. As noted above, research studies have found drug use among pregnant women far more common than the obstetric community recognizes. Most hospitals' minimal drug screening procedures ensure that only the most hard core cases of maternal drug abuse and fetal drug exposure are detected. Even when protocols exist governing when toxicologies are to be

performed, urinalysis will detect only drug use which has taken place within approximately 48 hours of the test.

Lack of consistency and bias in drug screening has led some observers to call for universal screenings for all pregnant women or newborns. Proponents of this approach believe it is the most effective way to eliminate discriminatory procedures. Opponents point out that screening everyone is extremely expensive, and may draw scarce funds away from service provision. Because testing only detects recent drug use, universal screens may miss many occasional drug users or even binge users who have not used drugs recently. In addition, a number of complex legal issues are raised if test results (without informed consent) are used for purposes other than medical diagnosis and treatment, for instance for reporting to child protective services or for prosecution.

Improved clinical training on drug issues is being devised, and several groups are working to raise the awareness of drug issues among health care professionals who deal with pregnant women. A great deal of work, however, remains.

Related to the diagnosis of drug exposure are reporting requirements which vary among states and are often unclear and unevenly followed. Physicians and social workers are mandated to report suspected child abuse to local child protection agencies. Whether or not perinatal drug exposure constitutes child abuse also varies among states. Studies have shown that, regardless of official procedure, black substance abusing mothers are much more likely to be tested for drugs and reported to child protection authorities than are similar white addicts.[69]

Observing this regional variation in reporting requirements, many observers call for mandatory reporting of perinatal substance abuse to child protection agencies. Proponents seek to ensure that all families in which substance abuse is suspected are investigated to be sure children are safe. They observe as well that child welfare agencies can be used to support families and not simply police their treatment of children. Others point out that even mandatory reporting tends to be racially and socioeconomically biased, and that most child protective and child welfare agencies do not have the resources to adequately investigate the reports they get much less provide truly supportive services to families, particularly to those not in crisis.

The situation is further complicated by potential conflicts between child abuse reporting laws and the confidentiality requirements regarding drug treatment. Medical professionals have been confused by the opposing demands. Questions remain, however, regarding when it is appropriate for medical professionals to perform drug screens, and when or whether informed consent should be obtained. In addition, physicians report that reporting requirements undermine the trust between physician and patient vital for successful treatment.

How to Protect and Provide Care for Drug Exposed Children

States and the Federal Government must confront a variety of issues regarding the protection and care of the children of substance abusers. As noted above, one of the principal among these is whether or not to prosecute women for delivering drug exposed children. Advocates believe such prosecutions will compel pregnant addicts to seek drug treatment. Opponents think such a policy will drive addicts away from prenatal services, potentially increasing harm to the child. They point out as well that drug treatment may not be available for those who seek it. Prosecuting women for prenatal behavior is a relatively new concept and raises difficult questions regarding whether mother and fetus can have conflicting rights before birth.

A related issue is the question of how hard child welfare workers should try to keep together (or reunite) substance abusing families whose children may enter (or have already entered) the foster care system. How should the rights of the mother as parent be weighed against the rights of the child, and how much risk to the child is acceptable in an attempt to keep the family intact? During recent years, child welfare systems have emphasized the importance of the family unit, almost to the exclusion of other factors, but more and more observers are questioning this priority, particularly in the face of the crack epidemic.[70]

Further complicating custodial decisions are problems in the foster care systems throughout the nation. Decisions about a child's best interest must account both for his or her family situation and the alternative. Foster care caseloads have grown substantially in recent years and overburdened social workers in most cities are unable to provide effective supervision. In addition, changing demographic patterns, particularly the increased workforce participation of women, have shrunk the pool of traditional foster care homes. In California, for instance, the number of children in placement has grown 2.5 times as fast as the number of foster homes, and the average length of time in foster care grew by 30% between 1986 and 1988.[71] These factors combine to produce what has been described as a "crisis intervention system in crisis." Children often find themselves without stability, bounced between foster homes or in foster homes which have not been adequately screened or trained.

Current child welfare laws were written under the assumption that virtually all families were redeemable. Many experts dealing with crack addicted parents, however, are now wondering if that assumption is valid. The current population of cocaine exposed children and crack families did not exist in 1980 when the foster care system was last revised, and it may be that the system does not suit the needs of this new generation of children.

Many states and localities have in recent years sought out more placements with relatives for children as an alternative to traditional foster care. Some agencies pay relatives for the support of children as they would other foster parents, while others do not. Such placements have the advantage of lessening the break between a child and his or her family. On the other hand, however, such placements are often less carefully monitored and may not entirely remove a child from an abusive situation.

The increasing number of children in care combined with the scarcity of foster homes have led some experts to call for the return, on a limited scale, of organized group care. While recognizing that care must be taken to avoid "warehousing" children, some nonetheless see small, well-managed group home situations filling a legitimate need for some children living where foster care homes are hard to find. They also see an increased ability to provide children in this setting the supportive services they need. Others condemn such thinking, maintaining that any return to the orphanage concept represents an unnecessary and destructive abdication of responsibility by the child welfare system and would be inappropriate for the children served. Such care also costs considerably more than traditional foster homes.

Another significant opportunity to prevent children from languishing in the foster care system would be to provide increased adoption opportunities for children unlikely to be reunited with their biological families. Existing data indicates that nearly all very young children who are reunited with their biological families leave the foster care system within six months or a year of entering it.[72] After that point children seem to stay in the system for years, whether or not their permanency plans call for a return to their families. Many observers believe that many or most of these children should be freed for adoption. In order to prevent children from remaining in temporary care for extended periods of time, guidelines must be developed in child welfare agencies and courts which outline more clearly what efforts should be undertaken to reunite families, and at what point the child should have a right to permanent placement apart from an abusive or neglectful family. Any effort to increase the use of adoption as an alternative would require strong measures to recruit appropriate adoptive families. In addition, it must be recognized that many of these children have special needs and that the adoptive families will need supports.

CONCLUSIONS

This paper has described the service needs of drug exposed infants and children and current efforts to deal with them. It also outlines a number of policy issues which must be resolved regarding drug treatment, diagnosis and reporting, and how best to protect and provide care to these children. While the emphasis here has been on crack, the issues are no different with other substances, including alcohol, marijuana, PCP, heroin, methadone, or "ice" as the newest drug on the horizon is known. The medical effects will vary somewhat as will the severity of the children's impairments and their numbers as they enter the service systems, but the policy issues remain the same. In addition, it must be recognized that it is not only drug exposed children we must be concerned about, but also their non-exposed siblings who need care as well.

Under the auspices of the war on drugs, a great deal of money has been spent on interdiction and the enforcement of drug laws and less funding but still substantial increases have gone to drug treatment. One strong emphasis of new treatment funds has been to provide services to drug using women. While we have not yet had time to see the full results of new research and treatment programs, the efforts are being established.

We have been much slower to respond, however, to the needs of substance abusers' children. We know very little about their developmental needs and how to meet them most effectively. While most large and medium sized cities are facing crises in their child welfare systems, attention is just beginning to focus on this issue. These children are in need. If we do not respond appropriately today, we will face their social dysfunction as they grow older.

APPENDIX A

FEDERAL EFFORTS AFFECTING DRUG EXPOSED INFANTS AND CHILDREN

Public Health Service Programs and Activities

Pregnant and Postpartum Women and Their Infants Demonstration Grant Program
Authorized in the Anti-Drug Abuse Act of 1988, this program is funded jointly by The Office of Substance Abuse Prevention (OSAP) and the Office of Maternal and Child Health (OMCH), both within the Public Health Service. The program will have funded 90 projects by the end of FY90. These grants are for projects addressing the prevention, education, and treatment needs of substance abusing pregnant and postpartum women and their children. Successful applicants were comprehensive programs operated through counties and states. The grants average $300,000 per year for 3 - 5 years. The total FY89 appropriation for the program was $4.5 million. In FY90 the program will spend $32.5 million.

National Perinatal Addiction Prevention Resource Center
The purpose of this planned Center is to provide a focus for policy, research, information referral, training, service design, technical assistance, and evaluation findings of programs targeting substance abusing pregnant and postpartum women and their children. The center shall develop and disseminate promising prevention, treatment, and rehabilitation practices, as well as act as a catalyst for mobilizing communities and the nation to address the problems and negative health consequences of maternal drug use.

Substance Abuse Prevention Conference Grants
OSAP provides financial support for a variety of domestic conferences which coordinate, exchange, and disseminate information about prevention and intervention of alcohol and other drug abuse. Some of these deal with specific issues of pregnant and postpartum substance abusers.

OSAP Training Programs
OSAP has two related efforts addressing service providers' needs for adequate training on alcohol and other drug abuse issues. First is a National Training System which will serve to develop curricula, train, and provide follow up assistance to state and local agencies, program operators, and medical professionals on issues of alcohol and other abuse. While most of the $21 million training funds provided by this program will include pregnant women and their infants as a general part of their design materials, OSAP has specifically set aside $2 million for training in this area. Second, the Health Professionals Education Program, in coordination with NIDA and NIAAA, will develop and demonstrate effective models of integrating alcohol and other drug abuse teaching into medical and nurse education curricula. This $5 million effort is broad based and will include issues related to pregnant substance abusers and their infants.

NIDA Research Demonstration Grants on Drug Treatment
Authorized in the 1988 Anti Drug Act, treatment for pregnant and postpartum women was cited as an area of national significance. Nine projects providing comprehensive services to pregnant women were funded in FY89 for a total of nearly $6.5 million. Approximately $5.0 million will be spent in FY90 to support new projects.

NIDA Maternal Drug Abuse Research
A variety of studies are being undertaken which involve infants and pregnant drug abusers either directly or indirectly. Among the topics being studied are the effects of drugs on the fetus; long term studies of the impacts of prenatal cocaine, marijuana, alcohol and tobacco smoke exposure and its health consequences in pregnant women, newborns and developing children; and epidemiological studies of the extent and nature of drug use among pregnant women. Funding for these projects totals $46.4 million in FY90.

NIDA In-Utero Drug Exposure Survey
This new project will provide national estimates on the prevalence of drug use during pregnancy and estimates of the number of newborns exposed to drugs during pregnancy and will obtain information about the characteristics of those mothers and their exposed infants. This survey will collect information from a national probability sample of approximately 5000 women delivering in the nation's hospitals. This two year project began in March of 1990 and should produce data by 1992.

NIDA Technical Reviews Regarding Prenatal Drug Exposure
NIDA sponsored two conferences in the summer of 1990 addressing methodological issues relating to research on prenatal drug exposure. The audience for both meetings was clinical and pre-clinical researchers. NIDA will publish monographs based on the conference proceedings.

The Community and Migrant Health Center Program
Operated by the Bureau of Health Care Delivery Assistance in the Public Health Service, this program provides health care through community clinics. The Centers serve primarily women and children, and they see large numbers of substance abusers and their families among their clients. Three initiatives related to this population are described below.

Health Care for the Homeless Program: Supplemental funding to 109 community based organizations helped them provide primary health care and substance abuse treatment to homeless individuals and families. The FY90 budget for this program was $34.4 million.

Substance Abuse Initiative: $3.8 million in FY89 and nearly $9 million in FY90 provided supplemental funding to community health centers to integrate the special service needs of substance abusers. Activities include direct service provision, as well as training and curriculum development for service providers.

Comprehensive Perinatal Care Initiative: Supplemental funding to 200 community based health centers helps them provide care to pregnant women and young children. The primary focus of the program is to bring women

into prenatal care earlier. Some funds were used to provide substance abuse treatment and outreach. The budget for this initiative was $31.6 million in FY90.

Training on Drug Issues for Title X Counselors
The Office of Population Affairs funds 4,000 family planning clinics which provide services to a client population of 4 million women of reproductive age. ADAMHA and OPA will spend $500,000 to train Title X clinic staffs on how to perform risk assessments, better identify women with drug abuse problems, and educate clients through preconception counseling on the risks of drug and alcohol for the woman and, should she become pregnant, for her child.

Pediatric AIDS Health Care Demonstration Grant Program
The Maternal and Child Health Bureau within the Health Resources Services Administration funds these projects to demonstrate both effective ways to prevent HIV infection, especially through the reduction of perinatal transmission, and to provide treatment and support for infants, children and youth with infection. Emphasis is on care delivery in ambulatory settings, using a case management approach which will reduce the time spent in hospital settings. Many pediatric AIDS patients are also drug exposed. The program's budget was $14.2 million in FY90.

The Maternal and Child Health Block Grant (Title V)
MCH distributes funds to states which can use the monies for a variety of activities, in order to assure access to quality maternal and child health services, especially for those with low incomes and living in areas with limited availability of health services. Pregnant substance abusing women and children affected by perinatal drug exposure may qualify for services provided by the MCH block grant. Specific provisions are determined by individual states. States are required, beginning in FY91, to report information on the numbers of persons served, including the proportion of infants born with drug dependency.

Special Projects of Regional and National Significance (SPRANS) Funded from the Office of Maternal and Child Health, these grants include both investigator initiated and program directed studies. The five grant categories include several which may pertain to substance abusing women: maternal and child health research; maternal and child health training; and child health improvement projects. Some are targeted at high risk infants and pregnant women, including substance abusers. Funding for the total program was $83 million for FY90, of which an estimated $7.6 million related to drug exposed children or their families.

Alcohol, Drug Abuse and Mental Health (ADMS) Block Grant
Funds in this program (administered by OTI) are passed to the states which use the money as they choose to serve target populations and purposes. In FY86 Congress designated a 5% set aside within this block grant for women's alcohol and drug abuse services. The set aside was raised to 10% in FY89 and statutory language added an emphasis on programs for pregnant women and women with dependent children. States used the broad women's set aside for a variety of purposes, including outreach, prevention, treatment, and staff development aimed at women. Because the pregnant women and mothers emphasis

is new, it is unclear at this time how states are using these funds. In FY90 the Set Aside totals $119.3 million.

Treatment Improvement Grants
The new Office of Treatment Improvement within ADAMHA will administer this program designed to improve drug treatment opportunities and outcomes. Grants will particularly focus on the drug treatment needs of special populations, including pregnant and postpartum women. A total of $39.6 million was appropriated for the program in FY90 and an increase has been requested for FY91. This population is also highlighted in OTI's Target Cities Program

Human Development Services Programs and Activities

Foster Care and Adoption Assistance (Title IV-E)
This program provides federal subsidies for foster care maintenance payments to AFDC eligible children and adoption subsidies on behalf of AFDC and SSI children with special needs. There is an increased need for foster care and adoptive services for drug exposed infants referred to placement. This is an ongoing entitlement program. In 1989 Congress increased the Federal reimbursement rate for foster care and adoptive parent training, and broadened the types of activities which might be included. FY90 expenditures are expected to total $1.375 billion.

Child Welfare Services (Title IV-B)
This formula grant program provides a 75% match for states' child welfare services, up to each state's allotted proportionate share of appropriations. Purposes of the program include preventing and remedying child abuse and neglect, protecting and caring for children who are removed from their homes, and providing reunification and adoption services. Appropriate services are broadly defined and may include case management, counseling, respite care, homemaker services, parenting education, etc. States are reimbursed for services provided to all children, not just low income populations covered under IV-E. Funding has not kept pace with the amounts states spend on these services.

Child Welfare Research and Demonstration
This program provides financial support to State and local governments or other non-profit institutions, agencies, and organizations for research and demonstrations in the field of child welfare, particularly to address preventive and other specialized services, foster care, family reunification and adoption. Within this program $6 million was requested in the President's FY91 Budget to assist the youngest and most vulnerable victims of drugs and HIV. Specifically, this amount will be used to fund innovative projects that demonstrate ways to meet the immediate non-medical needs of infants born to crack-cocaine using mothers and HIV-infected children.

The Temporary Child Care for Handicapped Children and Crisis Nursery Program
Authorized under the Temporary Child Care for Handicapped Children and Crisis Nurseries Act, this program was begun in FY88 to serve abused and neglected infants, many of whom are from drug involved families. Thirty four projects are being funded (16 in FY88 and 18 in FY89) for a total of $5 million. Four

of the FY88 projects focus specifically on drug addicted babies, and three serve HIV+ children.

National Center on Child Abuse and Neglect
The National Center, part of the Office of Human Development Services, administers several state grant programs and a discretionary grant program to assist state and local agencies to address problems of child abuse. The Center also supports research, evaluation, technical assistance, and clearinghouse activities. As part of the discretionary grants program, the Center is funding four demonstration projects aimed at preventing child abuse and neglect among drug using mothers. Projects provide parenting skills training and support groups, vocational counseling, drug/alcohol rehabilitation, and social and psychological support.

Head Start
Head Start is a comprehensive child development program which served approximately 488,000 low income pre-school children in FY90. Intended to serve both children and their families, the program aims to help participants deal more effectively with both their present environment and later responsibilities in school and community life. Head Start programs emphasize cognitive and language development, physical and mental health, and parent involvement. At least 10 percent of enrollment opportunities are made available to children with disabilities. In addition, several programs serving HIV+ children have been funded. Head Start staff recognize that substance abuse is a growing problem among the families they serve, and estimate that at least 20% of the children in the program have a parent or guardian with substance abuse problems.

Comprehensive Child Development Program
This program funds 25 centers intended to provide intensive, comprehensive, integrated, and continuous supportive services for infants, toddlers and preschoolers and their families of low income to enhance their intellectual, social, emotional, and physical development and provide support to their parents and other family members. Most of the centers include drug treatment for parents in their portfolio of available services. Each of the 25 centers has a budget of approximately $1 million.

Abandoned Infants Assistance
In 1988, Congress enacted this program to meet the needs of infants who have been abandoned in hospitals ("boarder babies") and young children, specifically drug exposed children and those with AIDS. Implemented for the first time in FY90, HDS expects to fund approximately 40 grants to prevent abandonment; develop a program of comprehensive services for these children and their families; recruit and train health and social services personnel, foster care families, and residential care staff; and undertake efforts to coordinate local resources to meet the needs of these children and families. The FY90 budget for this program is $9.9 million.

University Affiliated Programs
The Administration on Developmental Disabilities, an office of HDS, funds a number of universities for the purposes of providing interdisciplinary training for persons concerned with developmental disabilities, demonstrating

exemplary services, providing technical assistance, and disseminating information. Currently five universities are providing services to drug exposed children under the auspices of this program. The services include data collection, prevention of developmental disabilities, and early intervention, screening and evaluation for substance abusing mothers and children.

Social Services Block Grant (Title XX)
Administered by the Office of Human Development Services, the statutory goals of this program include preventing, reducing or eliminating dependency; preventing or remedying abuse, neglect, or exploitation of those unable to protect themselves; allowing individuals to achieve or maintain self sufficiency; and preserving or reuniting families. States may, at their option, use some portion of the funds to offer services to drug exposed infants and their families. SSBG funding totalled $2.7 billion in FY89, but it is not known how much of the total was spent on efforts for drug exposed children or their families.

Evaluation of Substance Abuse, AIDS Impacts on Service Delivery
In FY90 the Office of Human Development Services will conduct an extensive study of the short and long-term impact of families with substance abuse problems or AIDS on service delivery within HDS programs. This extensive evaluation will encompass all programs administered by HDS.

Other HHS Programs and Activities

Medicaid
This entitlement program pays for the medical care of many low income persons, particularly those receiving AFDC. Although eligibility and covered services vary somewhat from state to state, many drug exposed infants, particularly crack babies who most often are born to low income single parents, are eligible for benefits. In recent years, Congress has expanded mandatory Medicaid coverage for pregnant women and infants. States were required to extend Medicaid benefits to all pregnant women and children under six in families with incomes below 133% of poverty on April 1, 1990. At state option the program can be used to pay for a variety of drug treatment modalities for eligible recipients. Also under Medicaid, States can use Section 2176 (Home and Community Based Waivers) authority to pay for certain kinds of medical care in foster homes for children who are HIV infected, addicted to drugs at birth, or who have developed AIDS after birth.

Supplemental Security Income
This program, administered by the Social Security Administration, provides income supports to elderly, blind, and disabled individuals in low income families or in foster care and institutions. Nearly 400,000 recipients are children or youth. Drug exposure, per se, does not qualify a child for benefits, but drug exposed children could receive benefits if their particular disabilities and family income and resources fall within program guidelines.

Joint Conference Regarding Substance Exposed Children
HDS, MCH, OSAP, and NIMH will cosponsor a conference, in the Fall of 1990, on the subject of drug exposed infants and young children and their families. The principal purpose of the conference is to provide a forum for State level decision makers to exchange information, experiences, and strategies in the prevention, care, and treatment of drug exposed children and their families. The conference will encourage interdisciplinary dialogue, cross-State discourse, and translation of research findings into practice. If hopes to attract State directors of child welfare services, substance abuse treatment, mental health services, and others with related responsibilities for this population.

Other Research and Evaluation Projects
In addition to research efforts mentioned above, a variety of HHS offices are conducting other research projects in FY90 relating to drug exposed children and their families. A number of these are outlined below.

The Inspector General's Office has produced four related studies regarding drug exposed children and the child welfare system. "Crack Babies" examines how crack babies are affecting the child welfare systems in several major cities. "Crack Babies: Selected Model Practices" briefly describes a number of programs providing services to drug exposed children and their families. "Boarder Babies" is an advisory report describing the extent of the boarder baby problem in several cities. Finally a report discussing legal issues surrounding prenatal drug exposure will be released soon (1990).

ASPE is conducting several policy-related studies regarding this population. Research is underway to identify and describe promising approaches to serving drug exposed children and their families; to determine whether there are differences in the characteristics, needs, services and outcomes between the children of substance abusers and other children in foster care; and to better describe the population and needs of mothers and children receiving care from comprehensive drug treatment programs.

The Health Resources and Services Administration will conduct an assessment of prenatal and substance abuse services available to homeless, pregnant, and substance abusing women in the Community/Migrant Health Centers. They will also fund several other evaluations which indirectly relate to this population.

NIDA's National Drug and Alcoholism Treatment Unit Survey (NDATUS) collects data from all alcohol and drug abuse treatment programs and obtains client demographic profiles, client counts, and treatment capacity by type of treatment. New questions in 1990 relate to the treatment of pregnant addicts.

NIDA and the Bureau of Labor Statistics cosponsor the National Longitudinal Survey of Labor Market Experience of Youth which, in addition to other topics, collects information about prenatal care, alcohol, tobacco, marijuana, and cocaine use during pregnancy.

NIDA is conducting a Drug Services Research Survey. This national sample survey of drug abuse treatment programe includes questions on whether the drug treatment facilities accept pregnant women; whether any priority for admission is given to pregnant women on waiting lists; whether pregnant women are generally referred out to other programs; and the kinds of special services (e.g. prenatal care, birthing, parenting skills, child care services) which are available to pregnant women with drug problems.

Elsewhere

The National Commission to Prevent Infant Mortality
This interdepartmental group is putting together a report for the Domestic Policy Council. The charge of the Task Force is to review issues and propose solutions for the following: universal eligibility for public programs, health promotion and education, insurance and employment benefits, and community based health and social service delivery. One section of the draft report deals with drug abuse.

Department of Education Programs
In FY89 the Department of Education spent $355 million on drug prevention efforts, most of which was passed to the states to spend as they saw fit. Thirty percent of the money going to states went into governors' discretionary funds, of which half was earmarked for "at risk" children. While most of that money is being spent on drug education for older students, some could be spent on young drug affected children as well. The Department is also implementing early intervention legislation (P.L. 99-457) designed to reach children with identified special needs before they reach school age special education classes. Some drug exposed children may be eligible for such services.

WIC Drug Education Efforts
The Special Supplemental Food Program for Women, Infants and Children, operated by the Food and Nutrition Service of the Department of Agriculture, provides supplemental foods, nutritional education and related services to pregnant and postpartum women and infants and children (up to age 5) who are at nutritional risk. The program is considering how best to provide drug education to WIC recipients.

GAO Study "Drug Exposed Children: A Generation At Risk"
At the request of the Senate Finance Committee, the General Accounting Office prepared a report regarding drug exposed infants. The report concludes that prenatal drug exposure is a significant problem, but that it is very difficult to tell how big or how costly the ramifications are.

APPENDIX B

CONGRESSIONAL HEARINGS ON MATERNAL DRUG ABUSE

SENATE

Labor and Human Resources Committee
Subcommittee on Children, Families, Drugs and Alcoholism

"Drugs and Babies: What Can Be Done?" (10/9/90 field hearing in Indianapolis)

"Falling Through the Crack: The Impact of Drug Exposed Children on the Child Welfare System" (2/5/90)

Finance Committee

"Victims of Drug Abuse" (6/28/90)

Governmental Affairs Committee

"Missing Links: Coordinating Federal Drug Policy for Women, Infants and Children" (7/31/90)

HOUSE OF REPRESENTATIVES

Ways and Means Committee
Subcommittee on Human Resources

Field hearing: DC General and Children's Hospital (4/3/90)

"Federally Funded Child Welfare, Foster Care, and Adoption Assistance" (4/4&5/90)

Government Operations Committee

"National Drug Control Strategy: Prevention and Education Strategies" (4/3/90)

"National Drug Control Strategy: Drug Treatment Programs" (4/17/90)

Select Committee on Children, Youth and Families

"Born Hooked: Confronting the Impact of Perinatal Substance Abuse" (4/17/90)

"Beyond the Stereotypes: Women, Addiction, and Prenatal Substance Abuse" (4/19/90)

"Getting Straight: Overcoming Treatment Barriers for Addicted Women and Their Children" (field hearing in Detroit 4/23/90)

ENDNOTES

1. "A Plague Without Boundaries" in Time, November 6, 1989, p. 95.

2. William Butynski, et al, State Resources and Services Related to Alcohol and Drug Abuse Problems Fiscal Year 1988, Washington DC: National Association of State Alcohol and Drug Abuse Directors, Inc., August 1989.

3. The 375,000 is an estimate made by Dr. Ira Chasnoff of Northwestern University in 1988, based on a survey of 40 hospitals. The lower figures are a range estimated by Douglas Besharov of the American Enterprise Institute. Besharov discusses both figures in "The Children of Crack" which appeared in the Fall 1989 issue of Public Welfare. Chasnoff's estimate includes a variety of illegal substances while Besharov's refers only to crack.

4. Presentation by Norma Finkelstein, M.S.W., PhD., Executive Director of the Women's Alcohol Program, CASPAR, Inc. at the Healthy Mothers, Healthy Babies 5th National Meeting, October 13-15, 1989 in Rosslyn, Virginia.

5. Michelle Norris, "Wider Drug Abuse During Pregnancy Indicated" in The Washington Post, September 18, 1989. The study itself was conducted by Dr. Ira J. Chasnoff of Northwestern University.

6. Ira J. Chasnoff, "Drug Use and Women: Establishing a Standard of Care" in Donald E. Hutchings (editor) Prenatal Use of Licit and Illicit Drugs. New York: New York Academy of Sciences, 1989, pp. 208-210.

7. Chasnoff, Ira, et. al. "The Prevalence of Illicit-Drug or Alcohol Use During Pregnancy and Discrepancies in Mandatory Reporting in Pinellas County, Florida" in The New England Journal of Medicine, April 26, 1990:322:1202-1206.

8. Testimony of Sherry Agnos, Developer of Phoenix Project, San Francisco, California, before the U.S. Senate Committee on Governmental Affairs, July 31, 1989.

9. "A Thousand Babies" study sponsored by the Philadelphia Perinatal Society in cooperation with the Philadelphia Department of Public Health, 1989.

10. Testimony of Howard Fuller, Ph.D., Director, Milwaukee County Department of Health and Human Services, Milwaukee, Wisconsin, before the U.S. Senate Committee on Governmental Affairs, July 31, 1989.

11. Douglas J. Besharov, "The Children of Crack, Will We Protect Them" in Public Welfare, Fall 1989. This figure represents the percentage of all live births. Fifteen percent of births to District residents are drug exposed babies.

12. Current use is defined as use within the last 30 days.

13. U.S. Department of Health and Human Services, Office of the Inspector General, "Crack Babies", June 1990, p. 3.

14. Coryl Larue Jones and Richard E. Lopez, "Direct and Indirect Effects on the Infant of Maternal Drug Abuse", Washington DC: National Institutes of Health, 1989.

15. U.S. Congress, Office of Technology Assessment, "Health Children: Investing in the Future," Washington DC: Government Printing Office, February 1988, p. 6.

16. National Commission to Prevent Infant Mortality, "Death Before Life: The Tragedy of Infant Mortality," August 1988, p. 23.

17. Testimony of Neal Halfon, M.D., M.P.H., Director, Center for the Vulnerable Child, Oakland Children's Hospital, Oakland, California, before the Select Committee on Children, Youth and Families, U.S. House of Representatives, April 27, 1989.

18. Zuckerman, Barry, et. al. "Effects of Maternal Marijuana and Cocaine Use on Fetal Growth" in New England Journal of Medicine, March 23, 1989 and Jones, Coryl LaRue and Richard E. Lopez "Component Report on Drug Abuse: Direct and Indirect Effects on the Infant of Maternal Drug Abuse" in Perspectives on Prenatal Care, J.R. Merkatz and J.E. Thompson, Eds. New York: Elsevier Science Publishing Company, 1990.

19. Andrew C. Revkin, "Cradle" in Discover, September 1989, pp. 63-69.

20. Hutchins, Ellen and Greg R. Alexander, "Substance Use During Pregnancy and Its Effect on the Infant: A Review of Issues," HHS Region III Perinatal Information Consortium Technical Report Series, 1990, p. 5.

21. op. cit. Hutchins, p. 21.

22. op. cit. Hutchins, p. 5.

23. op. cit. Hutchins, p. 25.

24. op. cit. Hutchins, p. 28.

25. Judy Howard, et al, "The Development of Young Children of Substance Abusing Parents: Insights from Seven Years of Intervention and Research" in Zero to Three Vol. IX, No. 5, June 1989, pp. 8-12.

26. Ira J. Chasnoff and Dan R. Griffith, "Cocaine: Clinical Studies of Pregnancy and the Newborn" in Donald E. Hutchings (editor) Prenatal Use of Licit and Illicit Drugs. New York: New York Academy of Sciences, 1989, pp. 260-266.

27. "Pediatric AIDS Facts Sheets," The Association for the Care of Children's Health, Washington, D.C.

28. Burns, William J. and Kayreen H. Burns, "Parenting Dysfunction in Chemically Dependent Women," in Chasnoff, Ira J. Drugs, Alcohol, Pregnancy and Parenting, London: Kluwer Academic Press, 1988.

29. Testimony of Teresa Hagen, Supervisor of Clinical Services, The Family Center, Jefferson Medical College, Philadelphia, Pennsylvania, before the U.S. Senate Committee on Governmental Affairs, July 31, 1989.

30. William J. Burns and Kayreen A. Burns, "Parenting Dysfunction in Chemically Dependent Women" in Chasnoff, Ira (ed.) Drugs, Alcohol, Pregnancy, and Parenting, London: Kluwer Academic Press, 1988, pp. 159-171.

31. National Association of State Alcohol and Drug Abuse Directors, "State Resources and Services Related to Alcohol and Drug Abuse Problems, Fiscal Year 1988," Washington DC: NASADAD, 1989.

32. Joyce Matthews Munn, "The Youngest of the Homeless: Characteristics of Hospital Boarder Babies in Five Cities," Washington DC: Child Welfare League of America, August 1989.

33. U.S. Department of Health and Human Services, Office of the Inspector General, "Boarder Babies," June 1990.

34. Testimony of Richard Guy, Co-chairman of the Mayor's Advisory Board on Maternal and Infant Health, Washington, DC, before the Select Committee on Children, Youth, and Families, U.S. House of Representatives, April 27, 1989.

35. "New York Sees Rise in Babies Hurt By Drugs" in The New York Times, October 18, 1989. Projections are those of the New York State Department of Health, based on neonatal intensive care admissions data from 1983 to 1987.

36. Emily R. Novick, Crack Addiction in Pregnant Women and Infants: An Analysis of the Problem, Model Programs, and Proposed Legislation in California. A thesis at the Graduate School of Public Policy, University of California at Berkeley, Spring 1989.

37. Ibid. Novick.

38. op. cit. Testimony of Neal Halfon.

39. op. cit. Legislative Analyst, p. 254.

40. op. cit. Legislative Analyst, p. 254.

41. Bill Gordon, "Crack's Incredible Cost to San Francisco" in The San Francisco Chronicle, February 22, 1989.

42. Testimony of Haynes Rice and "For Pregnant Addicts, A Clinic of Hope" in The New York Times, September 29, 1989.

43. op. cit. NASADAD

44. Barbara Tittle, et al, "Promoting the Health and Development of Drug Exposed Infants through a Comprehensive Clinical Model" in Zero to Three, vol. IX, no. 9, June 1989, pp. 18-20.

45. Douglas J. Besharov, "Let's Give Crack Babies a Way Out of Addict Families" in New York Newsday, September 3, 1989.

46. Comments of Robert M. Stutman, Special Agent in Charge, Drug Enforcement Administration, New York City, before the George Washington University Health Policy Forum, August 8, 1989.

47. Testimony of Ira Chasnoff, M.D., Director, National Association for Perinatal Addiction, Research and Education, Evanston, Illinois, before the U.S. Senate Committee on Governmental Affairs, July 31, 1989.

48. "Drug Habits Called Factor in Child Abuse" in The Washington Post, March 31, 1989.

49. op. cit. Testimony of Sherry Agnos.

50. Julia Herskowitz, et al, "Substance Abuse and Family Violence," Boston: Massachusetts Department of Social Services, June 1989.

51."Cocaine and Pregnancy: Experts Fear a Holocaust" in The Philadelphia Inquirer, 12/15/89.

52. "Who Will Care When Parents Can't? A Study of Black Children in Foster Care." Washington DC: National Black Child Development Institute, 1989.

53. What Ever Happened to the Boarder Babies?, a report of the New York City Office of the Comptroller General, 1988.

54. op. cit. Herskowitz.

55. Friedhelm Wulczyn and Robert Goerge, "Public Policy and the Dynamics of Foster Care: A Multi State Comparison of Placement Histories," preliminary data prepared for the U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, unpublished.

56. Testimony of Carol Cole, M.A., Child Development Specialist/Teacher, Salvin Special Education Center, Los Angeles Unified School District before the Select Committee on Children, Youth and Families, U.S. House of Representatives, April 27, 1989.

57. op. cit. Legislative Analyst of California.

58. A fuller discussion of legal issues may be found in a 1990 report by the American Bar Association, Center on Children and the Law entitled "Drug Exposed Infants and Their Families: Coordinating Responses of the Legal, Medical, and Child Protection System".

59. Most of the information on state laws contained in this section was collected by the HHS' Office of Human Development Services in December of 1989.

60. The Christian Science Monitor, October 10, 1989.

61. "DC Judge Jails Woman As Protection for Fetus" in The Washington Post, August 6, 1989.

62. U.S. Office of National Drug Control Policy, Understanding Drug Treatment, Washington DC: U.S. Government Printing Office, June 1990.

63. op. cit. Stutman.

64. Testimony of Wendy Chavkin, M.D., M.P.H., Columbia University School of Public Health, before the Select Committee on Children, Youth, and Families, U.S. House of Representatives, April 27, 1989.

65. Presentation by Barbara Morse, Ph.D., Fetal Alcohol Education Program, Boston, Massachusetts, at the Healthy Mothers, Healthy Babies 5th National Meeting, October 13-15, 1989 in Rosslyn, Virginia.

66. See Jane Koppelman and Judith Miller Jones, "Crack" in Public Welfare, Fall 1989, Gina Kolata, "Experts Finding New Hope on Treating Crack Addicts" in The New York Times, August 24, 1989, and "Treating Cocaine Addicts" in The Washington Post, November 28, 1989.

67. U.S. Office of National Drug Control Strategy, Understanding Drug Treatment, p. 11.

68. Constance S. Thomas et. al., "Substance Abuse Treatment Services Under Medicaid; Results of a Pilot Study in Seven States," Washington DC: Intergovernmental Health Policy Project, The George Washington University, December 1989.

69. "Prenatal Drug Testing Aims Primarily at Minorities" in The Washington Post, September 21, 1989.

70. See, for instance, Douglas J. Besharov, "Crack Babies: The Worst Threat is Mom Herself" in The Washington Post, August 6, 1989.

71. op. cit. Testimony of Neal Halfon.

72. op. cit. Whatever Happened to the Boarder Babies?