DOCUMENT RESUME

ED 359 682 EC 302 242

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TITLE Educating Young Children Prenatally Exposed to Drugs and At Risk. Report and Resource Compendium.
INSTITUTION Fund for the Improvement and Reform of Schools and Teaching (ED/OERI), Washington, DC.
REPORT NO FIRST-93-7000; ISBN-0-16-041868-2
PUB DATE Jul 93
NOTE 89p.
AVAILABLE FROM U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.
PUB TYPE Information Analyses (070) -- Reports - Evaluative/Feasibility (142) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS At Risk Persons; Behavior Problems; *Congenital Impairments; Disadvantaged Youth; *Drug Abuse; Early Childhood Education; *Early Intervention; Educational Needs; Incidence; Learning Problems; *Prenatal Influences; Profiles; Program Effectiveness; Trend Analysis
IDENTIFIERS *Fetal Drug Exposure

ABSTRACT

This report presents findings of an inquiry into the educational needs of children prenatally exposed to drugs and covers: (1) the extent of the problem, (2) negative effects of prenatal drug exposure on a child's educational potential, (3) typical behaviors and learning deficits of such children, and (4) characteristics of successful early childhood programs for this population. The report also contains profiles of eight programs specifically designed to educate children prenatally exposed to drugs or experiencing psychosocial traumas. Programs are located in the District of Columbia, Los Angeles (California), St. Petersburg (Florida), Tampa (Florida), New York City, Chicago (Illinois) and Palo Alto (California). Highlights of the review of the four study questions include: the number of children prenatally exposed to illicit drugs is increasing; the prevalent use of alcohol and cigarettes poses a greater prenatal threat to a larger number of babies than does any illicit drug; 30-40 percent of prenatally drug exposed children display developmental delays in the absence of effective early intervention; there is no profile of behavior and learning typical of drug-exposed children; educators should focus on identifying and addressing the problem behaviors, not on the causes; and successful programs use developmentally appropriate practice standards and not new instructional methodology especially for drug-exposed children. Recommendations, a list of 32 programmatic or organizational resources, and a glossary complete the report. (Contains approximately 132 references.) (DB)

Educating Young Children Prenatally Exposed to Drugs and At Risk

Report and Resource Compendium

Educating Young Children Prenatally Exposed to Drugs and At Risk

Report and Resource Compendium

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U.S. Department of Education

For sale by the U.S. Government Printing Office
Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328
ISBN 0-16-041868-2

U.S. Department of Education
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July 1993

Preface

The National Education Goals were formulated by the President and governors to stress the importance of all our children being educated to world class standards. Improving the health and education of young children has been declared a top national priority through Goals 1 and 6.

Goal 1 states that by the year 2000, all children in America will start school ready to learn. Its objectives:

- All disadvantaged and disabled children will have access to high quality and developmentally appropriate preschool programs that help prepare children for school.
- Every parent in America will be a child's first teacher and devote time each day helping his or her preschool child learn; parents will have access to the training and support they need.
- Children will receive the nutrition and health care needed to arrive at school with healthy minds and bodies, and the number of low birthweight babies will be significantly reduced through prenatal health systems.

Goal 6 states that by the year 2000, every school in America will be free of drugs and violence and will offer a disciplined environment conducive to learning. Its objectives:

- Every school will implement a firm and fair policy on use, possession, and distribution of drugs and alcohol.
- Parents, businesses, and community organizations will work together to ensure that schools are a safe haven for all children.
- Every school district will develop a comprehensive K-12 drug and alcohol prevention education program. Drug and alcohol curriculum should be taught as an integral part of health education. In addition. community-based teams should be organized to provide students and teachers with needed support.

To meet the high standards set in the goals, all educators and citizens must recommit themselves to working with children that appear "most likely to fail" unless there are appropriate interventions. High on the list for consideration should be children who may be suffering from prenatal drug exposure or from the psychosocial traumas caused by being a part of dysfunctional families.

As a consequence of media attention to children who have been prenatally exposed to drugs, particularly to crack cocaine, the public, educators, and parents or caretakers are seeking information and assistance on how to effectively educate these children. The purpose of this report is to provide the best, most useful information available on drug-exposed children to inform the policies and practices of teachers of young children and their administrators. It is encouraging to find from researchers and practitioners working directly with children affected by drug exposure or psychosocial traumas that the prognosis for successfully educating them is positive if the children are provided with effective early intervention strategies.

If we are to be successful in educating *all* children, we must commit ourselves to the challenge of education reforms featuring schools and programs that are innovative and show promise of reaching students who have traditionally been failing to reach high standards.

This report relates to an important part of the mission of the Office of Educational Research and Improvement—to provide teachers and schools with the best available information to inform their policies and practices.

Emerson J. Elliott
Commissioner, National Center for Education Statistics

Highlights

This report presents the findings of an inquiry into both what is known and unknown about educating children prenatally exposed to drugs. Some highlights of that inquiry are as follows:

What is the extent of the problem? How many children are affected by prenatal drug exposure?

Researchers agree that approximately 11-20 percent of all newborns are prenatally exposed to dru s. In major urban areas, approximately 15 percent of all newborns have been prenatally exposed. However, researchers do not agree on the number of children affected (Chasnoff 1988; National Institute on Drug Abuse 1990).

- The number of children prenatally exposed to illicit drugs is increasing. In Dallas, Texas, for example, the number of babies born exposed to drugs increased from 65 of approximately 3,410 births to 192 of 3,360 births between 1987 and 1988. In Washington, D.C., the number of drug-exposed newborns increased from 4 percent of approximately 1,078 births to 15 percent of 1,105 births between 1987 and 1988 (U.S. House Select Committee on Children, Youth and Families 1989). In New York City, approximately 1,900 babies, 13 percent of all births between January 1986 and December 1990, were born at Harlem Hospital Center with urines positive for cocaine (Dr. Evelyn Davis, congressional testimony July 30, 1991).

- Researchers report that it is difficult to collect data on cocaine or crack cocaine use alone since most women use more than one drug. They also report that the prevalent use of alcohol and cigarettes pose a greater prenatal threat to a larger number of babies than does any illicit drug, including cocaine (National Institute on Drug Abuse 1990; Streissguth 1989, 1990, 1991).

- The National Institute on Drug Abuse, through its Pregnancy and Health Survey, is gathering national data on the number of children prenatally exposed to drugs. Begun in March 1990, the survey will provide national estimates on the prevalence of drug use during pregnancy, estimates of the number of newborns exposed to drugs during pregnancy, and information about the characteristics of the mothers and infants. Survey data are expected in 1993 (Feig 1990).

To what extent is a child's potential to be educated negatively affected by prenatal drug exposure?

Most experts, researchers, and practitioners working with children prenatally exposed to drugs seem to agree that given developmentally appropriate early intervention educational experiences and interdisciplinary, transagency, family-oriented attention to psychosocial traumas causing behavioral and learning problems—regardless of the etiology or cause—the prognosis for the educational success for almost all of these children can be assured (Burnison 1991; Davila 1991; Schipper 1991; Shedlin 1991; Delapenha 1991; Powell 1991; Knight 1991; Jones and Lopez 1988; Stone 1990; Griffith 1991; Poulson 1989).

- Almost all of these children will be in regular classrooms, not special education classes. However, 30-40 percent of them will display developmental delays in language, attention, and social interaction if they do not have effective early interventions, such as Head Start-type programs (Griffith 1991). Without comprehensive interventions that include social, health, and educational services, it is likely that drug-affected children, especially poor children, are at-risk of failure (Burnison 1991; Davila 1991; Schipper 1991; Davis 1991; Shedlin 1991; Delapenha 1991; Powell 1991; Knight 1991; Jones & Lopez 1990; Stone 1990; Griffith 1991; Poulsen 1989).

What are the behaviors and learning deficits that appear to be the effects of prenatal drug exposure or psychosocial traumas?

Researchers and practitioners agree that there is no prototype of behaviors and learning deficits that can be definitively attributed to prenatal exposure to drugs. It is believed, however, that the extent, duration, and type of exposure, as well as a child's genetic predispositions, may determine whether such deficits exist and the extent of the effects on the child. The effects of prenatal drug exposure over time are not yet known.

- There is no typical profile of drug-exposed children. As Stone (1990) and other researchers and practitioners working with drug-exposed children have found, these children are more alike than different from other children. Most of them will not need special education services, since they will have almost no serious

problems that cannot be addressed in regular classroom settings (Cole, Ferrara, Johnson, Jones, Schoenbaum, Tyler, Wallace, and Poulsen 1989; Griffith 1991; Davila 1991; Poulsen 1991; Streissguth, Sampson, and Barr 1989; Kronstadt 1991).

- Researchers have identified several inhibitors to academic achievement that might exist in children suffering from prenatal or postnatal medical and psychosocial traumas. Griffith (1991), in the National Association for Perinatal Research and Education study of 300 children prenatally drug-exposed, found normal patterns of social, emotional, and cognitive development for most of the children. However, as stated earlier, he found 30-40 percent of the children showing developmental delays in language, attention, and social interaction. Researchers have also reported that some children have difficulty in modulating and controlling their behaviors and less task persistence (Howard, Beckwith, Rodning, and Kropenske 1989; Strauss 1986; Streissguth 1989; Wilson 1989).

- Experts agree that drug-exposed children with problems do not exhibit behavior or learning deficits that are that different from children with learning disabilities, attention deficit disorders, or other emotional or behavioral problems. Experts also agree that it is impossible to distinguish between behavioral and learning deficits caused by poor prenatal care and postnatal medical and psychosocial factors—such as poverty, neglect, physical or emotional child abuse, inadequate medical care, unstable living conditions—and those that may be caused by prenatal exposure to drugs.

- There is almost unanimous agreement among researchers and practitioners who have worked with drug-exposed children that educators should focus on identifying and addressing the behaviors interfering with learning, not on identifying which children have been exposed or if the etiology or cause of the problem is prenatal drug exposure (Barth 1991; Burkett et al. 1990; Finnegan 1989; Griffith 1991; Howard, Beckwith, Rodning, and Kropenske 1989; Reed 1987; Chasnoff 1988; Krondstat 1989; Weston, Ivins, Zuckerman, Jones and Lopez 1988; Bradley 1989; Illsley 1989; Lipsitt 1988; Schorr and Schorr 1988; Sigman 1982; Madden, Payne and Miller 1986; Poulsen and Ambrose 1988; Schnoll 1986).

What are the characteristics of programs designed to educate children affected by prenatal drug exposure or psychosocial traumas?

Characteristics of successful programs for children prenatally exposed to drugs include developmentally appropriate education practices; teacher and staff training; parent and family outreach; and multidisciplinary, transagency support teams and services to holistically address obstacles to educating children experiencing behavioral and learning problems, regardless of the obstacles' etiology and causes.

- Most of the programs use the developmentally appropriate practice standards published by the National Association for the Education of Young Children. They also use Early Recognition Intervention Network (ERIN)-type strategies as well as those strategies developed and used by special education teachers in dealing with difficulties in developmental delays in language, cognition, and behavior.
- Programs profiled in this report do not appear to be inventing new curriculum or instructional methodology designed especially for drug-exposed children. Instead, they are trying to find more creative and effective ways of teaching all children, especially those who are failing to learn effectively.

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Introduction

Is there anyone in this nation who doesn't know who "crack cocaine babies or kids" are? I think not. Children who are born to women who used illicit drugs during pregnancy, especially crack cocaine, have incited a great deal of media and, therefore, public attention. The media has projected many pathetic images of very small, low birth weight babies, many abandoned and boarder babies, writhing and crying plaintively while compassionate volunteers or nurses arduously, but unsuccessfully, try to console the inconsolable. "Innocent Victims" (*Time*, May 13, 1991) typical of the descriptions of these babies:

> At a hospital in Boston lies a baby girl who was born before her time—three months early, weighing less than 3 lb. Her tiny body is entangled in a maze of wires and tubes that monitor her vital signs and bring her food and medicine. Every so often she shakes uncontrollably for a few moments—a legacy of the nerve-system damage that occurred when she suffered a shortfall of blood and oxygen just before birth. Between these seizures, she is unusually quiet and lethargic, lying on her side with one arm draped across her chest and the other bent to touch her face, sleeping day and night in the comfort of her cushioned warming table. At best, it will be three or four months before she is well enough to leave the hospital, and even then she may continue to shake from time to time.

In addition to the pathetic images of tiny, convulsing babies, the media has provided scenes describing the extremely bizarre behavior of drug-exposed toddlers whose mothers, caretakers, or teachers are anguishing over how they can possibly continue to meet the special needs of these children. Typical examples are found in "A Tormented Cry" (*Newsday*, September 28, 1990), which describes Barron's behaviors and his grandmother's anguish, and "Innocent Victims," which describes the interaction between Billie and his kindergarten teacher.

> Barron was a happy, healthy baby. But strange things began to happen a few months after his first birthday. He stopped letting anyone hug him, even his grandmother who had cared for him since birth. He would cry whenever she took him outside. He would panic in the company of strangers and run away, his eyes filled with terror. Now, at the age of 4, he grunts and pounds his fists on his

understands when people talk to him. He bursts into tears at the slightest frustration, when, for example, a television commercial interrupts a favorite program... Barron has been diagnosed as autistic, the result, his doctors believe, of exposure to crack in the womb.

At a special kindergarten class in the Los Angeles area, a five-year-old named Billie seems the picture of perfect health and disposition. As a tape recorder plays soothing music in the background, he and the teacher read alphabet cards. Suddenly Billie's face clouds over. For no apparent reason, he throws the cards down on the floor and shuts off the tape recorder. He sits in the chair, stony faced, "Was the music going too fast?" the teacher asks. Billie starts to say something, but then looks away, frowning. The teacher tries to get the lesson back on track, but Billie is quickly distracted by another child's antics. Within seconds, he is off his chair and running around.

The *Time* article above, after giving three vignettes, starts, "These children have very different problems and prospects, but they all have one thing in common: Their mothers repeatedly took crack cocaine, often in combination with other drugs, during pregnancy. That makes them part of a tragic generation of American youngsters—a generation unfairly branded by some as 'children of the damned' or a 'biologic underclass.' More often, they are simply called crack kids."

Although most of the articles go on to give a truer picture of the prognosis of children exposed to drugs, the overall impression that the media has inevitably left with the public, educators, and parents or caregivers of these children is that the featured children are typical of those prenatally exposed to drugs. The media also leaves the impression that there is little help or hope for these children's futures. Unfortunately, it is the media's catchy or glitzey sound bites that appear to linger in the heads and hearts of the readers and that are most often repeated.

The *Wall Street Journal* (July 18, 1989) announced that these children are "Born to Lose." The *Los Angeles Times* (May 15, 1990) indicated that they are "No Hope Babies." The *St. Petersburg Times* (September 11, 1989) called them "the bio-underclass," while *The Oakland Tribune* (May 25, 1989) predicted that these children will become "A generation of sociopaths." *The Washington Post* (September 17, 1989) reported that these children are "turning up in first and second grade classrooms wreaking havoc on themselves and others," while *Newsweek* (February 12, 1990) diagnosed that these children respond "as if the part of the brain that makes us human beings being capable of discussion or reaction has been wiped out."

Almost none of the reports by the media on how drug-exposed children are "acting out" in the classrooms substantiate or document that the children have been prenatally drug-exposed or that drug exposure is the only possible explanation for why those children are exhibiting problems in behavior or learning. Very few explore if there are other drug-exposed children in the same classrooms who are not acting out and are among the top achievers. There are a few reporters lately who have gone beyond the media hype to explore the subject such as Ellen Goodman (*Boston Globe*, November 19, 1992), who states:

> The very phrase 'crack baby' is, in any literal sense, a misnomer. Cocaine is rarely taken by itself. It's part of a stew of substances taken in a variety of doses and circumstances. No direct line, no universal cause and effect, has been drawn from the mother's use of cocaine to fetal damage. Alcohol and tobacco may do as much harm to the fetus as cocaine. So may poor nutrition, sexually transmitted diseases and the lack of medical care. Most important, it appears that the children born to cocaine-using mothers are not hopeless cases, permanently assigned to the monster track.

In Goodman's article, Claire Cole, a researcher at Emory University, retells some of the horror stories about one "crack kid" who couldn't concentrate in class who, upon investigation, was found in fact to be hungry and another "crack baby" who was poorly developed being "raised" by a 5-year-old sister. Cole postulates that the myth of the "crack baby" persists in the media because "crack is exotic and happening mostly in 'marginal' populations among 'bad people' who are not like 'us'."

The consequence of the media's reports about "monster-type crack kids" is that the public, educators, and even parents and caregivers are in a panic seeking information and assistance on if and how to effectively deal with these severely damaged children. Inadvertently, the media's reports have led them to believe that attempts to educate children that have been prenatally exposed to drugs will be impossible because of their extraordinarily destructive behavioral problems or the extreme, organic brain damage they have incurred from their exposure. Researchers and practitioners directly with this population of children have not found this to be true.

Goals of the Report

Findings of an inquiry into what is both known and unknown about educating children prenatally exposed to drugs are presented in this report. Although there has been a great deal of media coverage of drug-exposed children, frontline educators in schools and school districts know very little about the prognosis for success and effective strategies for educating these special children. Therefore, the major goal of this report is to provide the best available knowledge to local school district teachers and administrators (preschool to third grade) to inform their policies and decisions as they strive to provide effective learning environments and instruction for children prenatally exposed to drugs. The report provides

- Knowledge of current findings from researchers and expert practitioners working with drug-exposed children;
- An understanding of the issues and perspectives related to educating drug-exposed children and factors affecting the prognosis for success in educating these and other at-risk children; and
- An understanding of successful early childhood education programs (curriculums, instruction, parent or caretaker involvement, and coordination strategies) contributing to success in educating these and other at-risk children.

The report also seeks to dispel media myths that teachers and administrators may have acquired and to replace these myths with useful information on how to work with preschool- and primary-level children that may be affected by prenatal exposure to drugs or by postnatal psychosocial traumas in ways that can contribute to these children's future academic, social, and economic success.

The Report addresses four questions:

1. What is the extent of the problem? How many children are affected by prenatal drug exposure?
2. To what extent is a child's potential to be educated negatively affected by prenatal exposure to drugs?
3. What are the behaviors and learning deficits that appear to be the effects of prenatal exposure to drugs or psychosocial traumas?

4. What are the characteristics of programs designed to educate children affected by prenatal exposure to drugs or psychosocial traumas?

It also contains profiles of programs specifically designed to educate children prenatally exposed to drugs or experiencing psychosocial traumas. A section on resources available for helping such children is also included.

Information for the report was gathered through reviews of research and practice literature, interviews with key researchers and practitioners, site visits and interviews with staffs of operating promising programs or initiatives, and congressional hearings.

What is the extent of the problem? How many children are affected by prenatal exposure to drugs?

Researchers agree that approximately 11 to 20 percent of all newborns are prenatally exposed to drugs; in major urban areas, approximately 15 percent of all newborns have been exposed. However, researchers do not agree on the number of children affected (Chasnoff 1988; National Institute on Drug Abuse 1990; NDCS 1990).

Reported statistics, unless otherwise specified, relate to children prenatally exposed to a variety of drugs, for example, crack cocaine, heroin, methadone, cocaine, amphetamines, PCP, marijuana, or alcohol. Researchers have found that most of the women testing positive for drugs are polysubstance drug abusers; that is, they use multiple illegal drugs as well as the legal drugs, tobacco and alcohol (Streissguth 1989, 1990, 1991). This report does not give extensive, separate treatment to the documented deleterious effects of tobacco and alcohol on the fetus.

Data Limitations

There are serious limitations to the data reported on the number of children prenatally exposed to drugs; therefore, it must be read with the following caveats:

- Reported statistics do not address issues of the intensity or timing of the fetus' exposure to drugs. Exposure can be anything from a woman having smoked marijuana a few times during the early months before realizing she was pregnant, to a severely addicted woman who smoked crack and ingested other drugs regularly throughout her pregnancy. Therefore, the data on drug exposure yields much higher estimates than the number of children who may be affected (Dicker and Leighton 1991).

- The reported statistics should be viewed with the understanding that most of the data are not nationally representative since many of the hospitals reported on are located in major urban centers. States with reporting mandates should have statewide representative data. Marshall (1991) indicates that Florida, Illinois, Indiana, Massachusetts, Minnesota, Nevada, Oklahoma, and Utah have mandated child abuse reports based solely upon a child's being born drug dependent or testing positive for drugs. Therefore, underreporting may occur since in many of these states it is a criminal offense for a woman to take illegal drugs during pregnancy. If found guilty in some states, women may lose their children.

- The data are biased toward showing a disproportionate number of minority babies prenatally exposed to drugs since most of the statistics come from public hospitals serving mainly inner-city residents, while most private hospitals and physicians, unless mandated, do not report on maternal drug use or prenatal drug exposure (Chasnoff 1988; National Institute on Drug Abuse 1990; *Time* magazine May 1991; Besharov 1989; Gomby & Shiono 1991; General Accounting Office 1990; Revkin 1989).

Because of these limitations and since national data have not been systematically collected in the past, there are wide-ranging estimates of the number of drug-exposed children, particularly the number prenatally exposed to crack cocaine.

Statistics

- According to a 1988 nationwide survey of 36 hospitals, an estimated 375,000 newborns, 11 percent of all newborns, had been perinatally drug-exposed (Chasnoff/NAPARE 1988). A similar survey of 18 hospitals (14 public and 4 private) in 15 large urban areas found that the reported proportions of newborns who had been exposed to drugs in utero ranged from 4 to 18 percent, a substantial increase from 1985 (U.S. House of Representatives Select Committee on Children, Youth and Families 1988).

- Nationally, between 550,000–739,000 babies are born prenatally exposed to drugs (National Institute on Drug Abuse 1990).

- It is estimated that in 1991, over 4.5 million of the 59.2 million women aged 15–44 (the height of childbearing years) had used an illicit drug in the past month; slightly more than 600,000 had used cocaine and 3.3 million had used marijuana in the past month (National Institute on Drug Abuse 1991).

- New York, Los Angeles, Detroit, and Washington, D.C., hospitals report that the percentage of newborns showing the effects of drugs is 20 percent or higher (*Time* magazine, May 13, 1991).

Number of Children Exposed to Cocaine

Estimates of the number of children prenatally exposed to cocaine range from 30,000 to 100,000 a year. A 1990 report by the U.S. Department of Health and Human Services' Office of the Inspector General estimated that there are 100,000 crack-exposed babies born annually. Besharov (1989), using 1988 data from the District of Columbia and

New York City, estimated that 30,000 to 50,000 babies (1 to 2 percent of all of the babies born each year) were perinatally exposed to crack. Dr. Evelyn Davis testified (July 30, 1991) that approximately 1,900 babies, 13 percent of all births between January 1986 and December 1990, were born at Harlem Hospital Center with urines positive for cocaine. However, it is difficult to collect data on cocaine or crack cocaine use alone since most women are polysubstance users.

Trends in the Cities

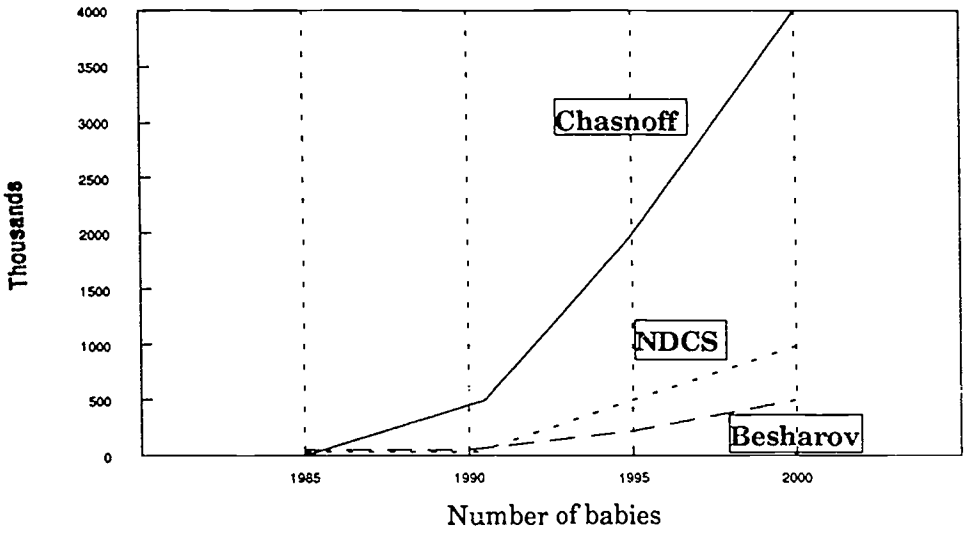
Around the country the number of children born prenatally exposed to drugs is increasing. For example, in *New York City*, the number of babies affected "just about doubled" for 3 years in a row to the current number of 8,000. In *Los Angeles County*, the number increased from 543 to 1,300 babies. In one *Boston* hospital, the percentage of babies born exposed to drugs increased from 3 percent in 1985 to 18 percent in 1989 (*Society* July/August 1990).

Other cities show similar trends. In *Dallas, Texas*, the number of babies affected increased from 65 of approximately 3,410 total births to 192 of 3,360 total births between 1987 and 1988. In *Washington, D.C.*, the number increased from 4 percent of approximately 1,078 births to 15 percent of 1,105 births between 1987 and 1988 (U.S. House Select Committee on Children, Youth and Families 1989).

Projections to the Year 2000

The wide variation of projections of the number of drug-exposed babies in the year 2000, from 500 to 4,000, is set forth in figure 1. The projections are based on estimates from a 1988 national survey of 36 hospitals by Dr. Ira Chasnoff, who estimates that 375,000 babies are born perinatally exposed to all illicit drugs, and Dr. Douglas Besharov of the American Enterprise Institute, who, through a process of deduction described in *The Children of Crack*, estimates that 30,000 to 50,000 babies are born perinatally exposed to crack cocaine.

Figure 1.—Drug-exposed babies, 1985 projections for 2000



SOURCE: U.S. Department of Health and Human Services, Office of the Inspector General, 1990.

National Data Collection Efforts

The National Institute on Drug Abuse (NIDA) is collecting national data on the number of drug-exposed children and the impacts on infants and developing children. In March 1990, NIDA began the Pregnancy and Health Survey, which will provide national estimates on the prevalence of drug use during pregnancy, the number of newborns exposed to drugs during pregnancy, and information about the characteristics of the mothers and infants. Survey data are expected in 1993. NIDA is also conducting long-term studies of the effects of the prenatal use of cocaine, marijuana, alcohol, and tobacco on developing children (Feig 1990; ADAMHA budget 1992).

Also in 1990, NIDA conducted its annual survey of households on the use of cigarettes, marijuana, cocaine, and alcohol. Survey data on women revealed that the heaviest use of cocaine is among women in the age groups of 18–25 (4.8 percent) and 26–34 (4.5 percent), women who have the highest birth rates (see figures 2-3d). Note that the prevalent use of alcohol and cigarettes among these women poses a greater threat to a larger number of babies than does cocaine.

NIDAs 1991 survey revealed that more than 4.5 million (7.7 percent) of the 59.2 million women aged 15–44 (the height of childbearing years) had used an illicit drug in the past month. Slightly more than 600,000 women aged 15–44 had used cocaine and 3.3 million had used marijuana in the past month. Among women aged 15–44, the lowest rates of

drug use were found among women whose children were under 2 years of age, current use of any illicit drug was 5.9 percent, and past year use of cocaine was 2.5 percent. Women aged 15–44 with no children had the highest rates at 11.4 percent for current use and 4.7 percent for past year use.

Figure 2.—Birthrates in the United States, by age: 1987

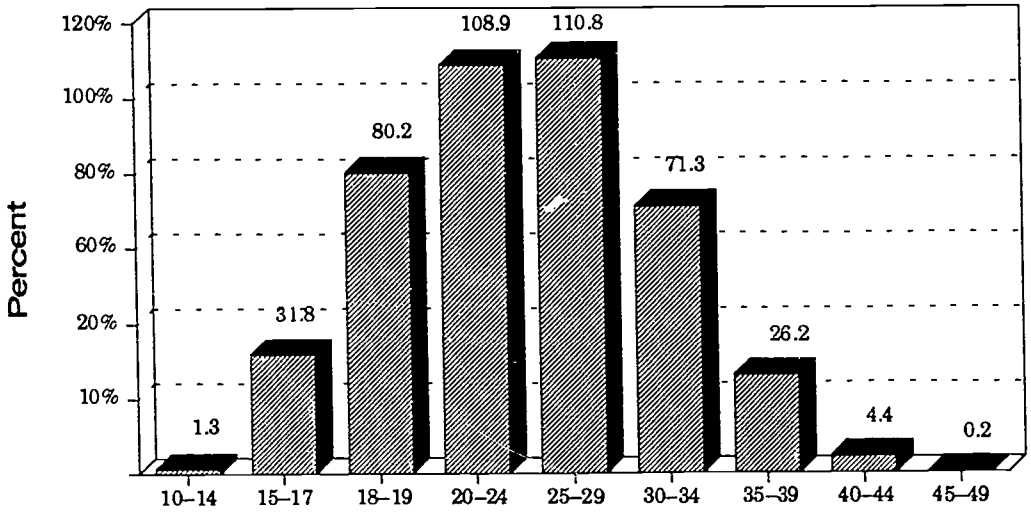


Figure 3a.—Cigarette use among U.S. women in the past year

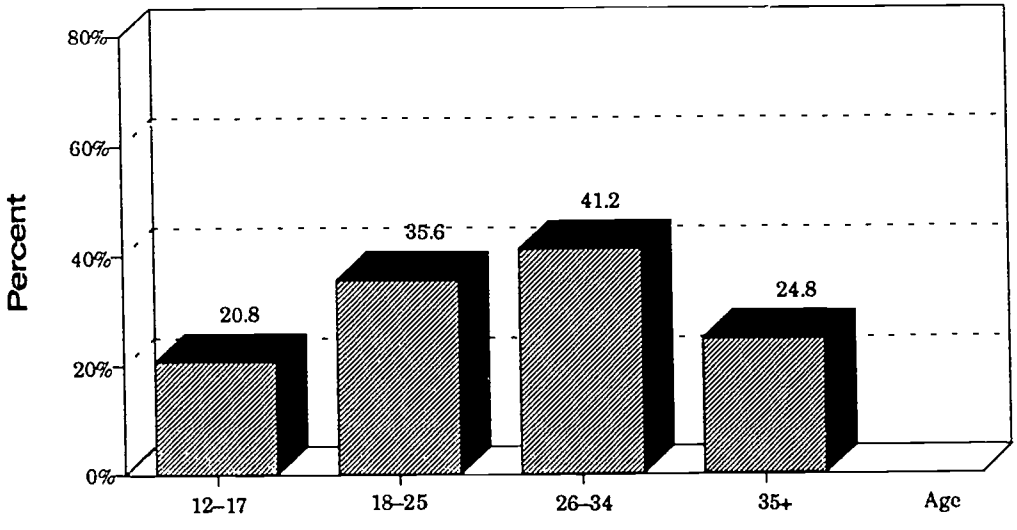


Figure 3b.—Marijuana use among U.S. women in the past year

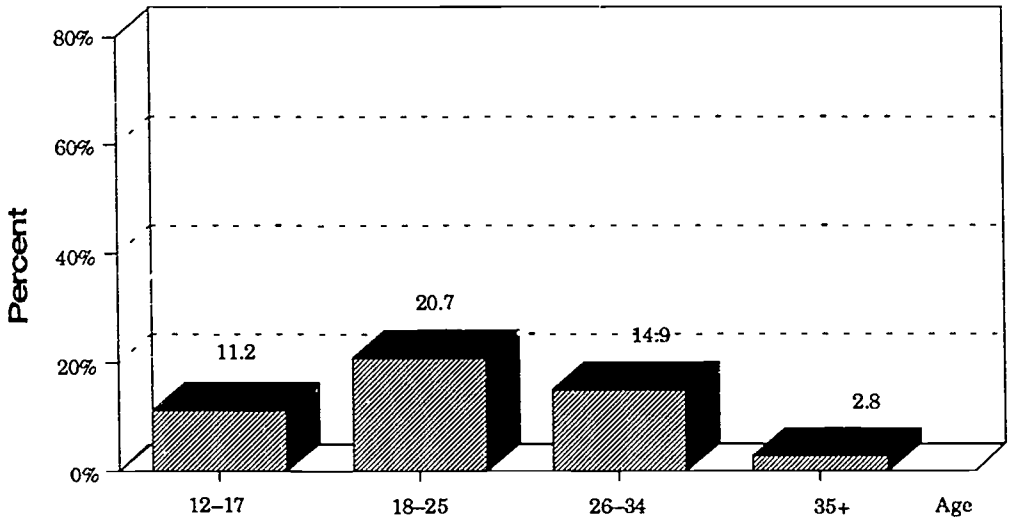


Figure 3c.—Cocaine use among U.S. women in the past year

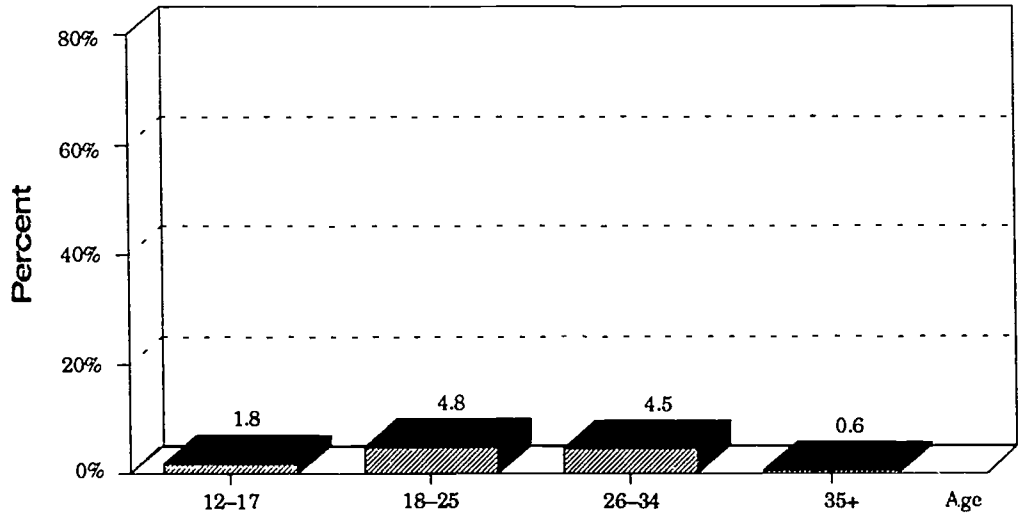
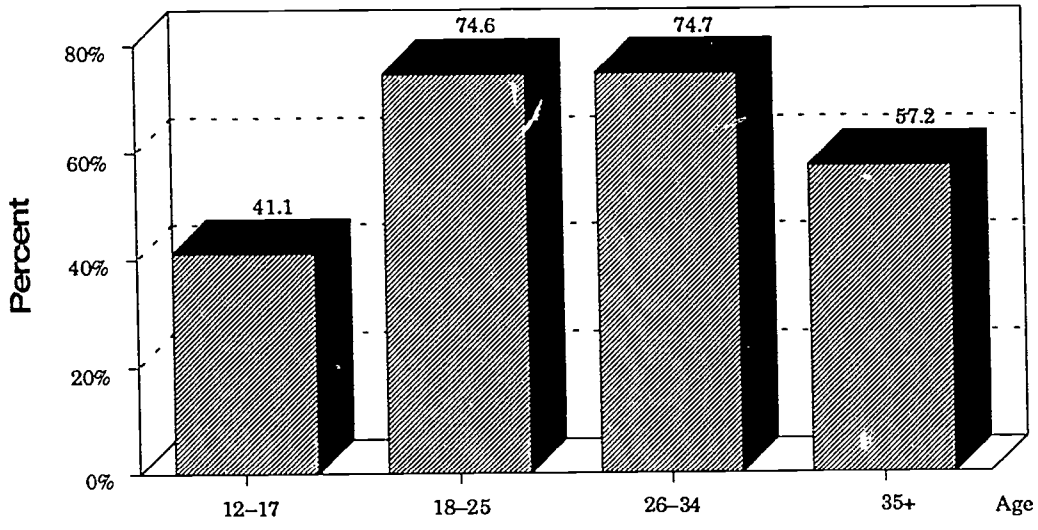


Figure 3d.—Alcohol use among U.S. women in the past year



SOURCE: Gomby, D. and Shiono, P., *The Future of Children*, spring 1991 (figures 2 and 3).

Effects of Alcohol on the Fetus

While there is a great deal of media coverage about the effects of illicit drugs on the fetus, especially crack cocaine, there is far less coverage on the effects of alcohol (a legal drug) on the fetus. Alcohol passes directly through the placenta to the fetus shortly after it is consumed by the mother.

Alcohol has been documented as a more serious threat to a fetus's physical and mental health and well-being than has crack cocaine. Fetal Alcohol Syndrome (FAS), birth defects resulting from prenatal alcohol exposure, has been documented as the leading cause of preventable mental retardation in the Western World (Abel and Sokol 1986; Streissguth, Barr, et. al 1986). FAS has four main characteristics: central nervous system dysfunction, abnormal facial features, behavioral deficits, and growth deficiency.

Children with Fetal Alcohol Effects (FAE) exhibit some FAS symptoms. The severity of the abnormality increases in relationship to the pregnant woman's alcohol consumption. One out of every 750 newborns (about 5,000 babies per year) has FAS, and at least 50,000 infants are born each year with FAE (U.S. Department of Health and Human Services 1988).

To what extent is a child's potential to be educated negatively affected by prenatal exposure to drugs?

The prognosis of the potential for educational success by drug-exposed children is excellent. Most experts, researchers, and practitioners working with such children appear to agree that given developmentally appropriate early intervention educational experiences and interdisciplinary, transagency, family-oriented attention to psychosocial traumas causing behavior and learning problems (without regard to the etiology or cause), the prognosis for the educational success for almost all of these children can be assured. Thirty to 40 percent of them will display developmental delays in language, attention, and social interaction if they do not have effective early interventions, such as participation in Head Start-type programs (Griffith 1991). Without comprehensive, early interventions that include social, health, and education services, it is likely that drug-exposed children, especially poor children, are at-risk of failure (Burnison 1991; Davila 1991; Schipper 1991; Davis 1991; Shedlin 1991; Delapenha 1991; Powell 1991; Knight 1991; Jones & Lopez 1990; Stone 1990; Griffith 1991; Poulsen 1989).

Almost all of this school-age population will be in regular classrooms, not special education classes, since their average developmental functioning level tests in the normal range. So, teachers should expect that children prenatally exposed to drugs will be in their classrooms and that they will be responsible for and can teach them, unless the children are severely emotionally disturbed or educationally handicapped. In that case, these children will qualify for special education services through existing systems for identifying such students (Davila 1991; Poulson 1989; Stone 1990).

Identifying and Labeling Children

Most experts emphasize the detrimental emotional and educational effects that schools or teachers will have if they identify, label, or segregate children because it is believed the children have been prenatally drug-exposed. There appears to be no educational reason to set up systems of early identification and labeling of children believed to have been exposed.

Schools and teachers should be especially wary of setting up systems to identify drug-exposed children that ask mothers to "tell" if they used illegal drugs during pregnancy. For many reasons, mothers and caretakers are unlikely to give accurate information.

Excerpts From Testimony Before Congressional Select Committee on Narcotics Abuse and Control

Testimony from a diverse group of experts before the U.S. House of Representatives Select Committee on Narcotics Abuse and Control on July 30, 1991, showed unanimous agreement on the excellent prognosis of the potential for educational success by drug-exposed children given effective early intervention.

- "Almost 100 percent of these children test within normal range cognitively. They can be taught, they can learn."—Dr. Judith C. Burnison, executive director, National Association for Perinatal Addiction Research and Education.

- "Recently, we have been concerned by reports in the media and elsewhere that suggest that children prenatally exposed to drugs must be placed in special classes. Early evidence from research indicates that most children prenatally exposed to drugs can be educated in the regular classroom with appropriate early intervention services. Our activities will be designed to promote the inclusion of these children in regular classroom environments to the greatest extent possible."—Robert R. Davila, former Assistant Secretary of Education for Special Education and Rehabilitative Services.

- "If as a nation we are going to adequately address this problem, there are certain fundamental concepts that must be fully understood and conveyed to policymakers, practitioners, and the general public: (1) many children that have been drug-exposed can lead fully productive lives given proper early intervention; (2) all children exposed to illicit drugs while in utero are not necessarily disabled as defined by the Individuals With Disabilities Education Act, and therefore, are not necessarily in need of special education; (3) all children exposed to illicit drugs while in utero are at risk of experiencing developmental delays and lifelong complications and are in need of comprehensive, integrated interventions that include social, health, and educational services; (4) failure to address the needs of these children and their families early on will result in greater costs to society; and (5) emphasis on prevention activities (i.e., education about risks associated with drug use, prenatal care, adequate nutrition, access to health care) and other human services needs to become a high priority relative in our country's war on drugs."—William V. Schipper, executive director, National Association of State Directors of Special Education.

- "The majority of drug-exposed children ... will do well if their needs are recognized early and intervention provided. With early intervention many of these children will not require special education after age 5 years." Dr. Evelyn Davis, Department of Pediatrics and Department of Child and Adolescent Psychiatry, Harlem Hospital Center, New York.

- "Labeling a young child as a 'crack or cocaine baby' has very negative connotations for the child in relation to the way adults view him: the expectations they have for his behavior and school achievement... The protective and facilitative factors that need to be built into each classroom, outlined by the Los Angeles City Schools PED Program, are similar to those found in any good preschool program; however, these program elements are essential (not optional) for children that are more vulnerable due to their prenatal exposure to drugs. Teachers should be instructed to expect that children prenatally exposed to drugs will be present in their classrooms, even though they may not know who they are."—Linda B. Delapenha, project director, Hillsborough County Public Schools, Tampa, Florida.

- "It is critical that we attempt to support and maintain these children in settings with their nonexposed peers to the degree possible. It is not appropriate, nor is it financially feasible to segregate these children from their peers unless the degree of severity of their needs would make accommodations within the regular classroom setting unreasonable. Instead, what we need to do is to train teachers to work with these children as they would any other 'at risk' child in their classroom." Dr. Diane Powell, director, Project D.A.I.S.Y., District of Columbia Public Schools.

- "We have found, and our findings are supported..., that programs can be developed which will minimize the damage these children suffer and even produce school-age youngsters better prepared to succeed in school than many non-drug exposed children."—Charlie M. Knight, superintendent, Ravenswood City School District, East Palo Alto, California.

Psychosocial Traumas

Researchers and practitioners indicate that when exploring reasons why children are experiencing learning and behavior problems, postnatal psychosocial traumatic conditions should be considered as the most likely causes of the problems exhibited by children, even those who have been documented as drug-exposed. These conditions include divorce and separations, death, poverty, neglect, child abuse, chronic exposure to high-crime or violence, poor nutrition and prenatal care, inadequate housing or homelessness, inadequate medical care, and inadequate and unpredictable caregivers (Kronstadt 1991; Amaro et al. 1990; Amaro, Zuckerman, Cabral 1989; Finnegan 1989; Mondanero 1977).

Almost none of the media reports on how drug-exposed children are "acting out" in the classrooms substantiate or document that the children have been prenatally exposed or that drug exposure is the only possible explanation for why those children are exhibiting behavior and learning problems. None explore if there are other drug-exposed children in the same classrooms who are not acting out and are among the top achievers. Some children documented as drug-exposed have been found to be gifted and talented. Project D.A.I.S.Y. teachers (see Profiles section) report that in their classrooms of both documented and undocumented children prenatally exposed to drugs, they cannot tell the differences in the behaviors or learning achievement of exposed and nonexposed children. Nonexposed children often enter a period of "acting out," exhibiting many of the behaviors identified for drug-exposed children. Upon investigation, teachers find that the child is a nonexposed child. After further investigation, they usually find that the child is experiencing some psychosocial trauma, which when addressed resolves the child's acting out problem.

What are the behaviors and learning deficits that appear to be the effects of prenatal drug exposure or psychosocial traumas?

Researchers and practitioners agree that there is no prototype of behaviors and learning deficits among children that can be definitively attributed to prenatal exposure to drugs. However, it is believed that the extent, duration, and type of exposure as well as a child's genetic predispositions may determine whether there are effects or the extent of the effects on the child (Poulsen 1989; Jones & Lopez 1990; Howard et al. 1989; Griffith 1991; Chasnoff & Griffith 1989). Long-term effects are not known at this time.

They also agree that

- Drug-exposed children with problems do not exhibit behaviors or learning deficits that are that different from children with learning disabilities, attention deficit disorders, or other emotional or behavioral problems.

- It is impossible to distinguish between the behaviors and learning deficits caused by poor prenatal care and postnatal medical and psychosocial factors—divorce, poverty, neglect, physical and emotional child abuse, inadequate medical care, living in high-crime or violence-prone conditions, unstable living or housing conditions, nonnurturing and inadequate caregivers, being a latch-key child—and those that may be caused by prenatal exposure to drugs.

  Increasingly, children from all socioeconomic spectrums are being exposed to destabilizing psychosocial traumas. Therefore, it is believed that any child who exhibits behavior and learning problems will benefit from the same interventions that have been documented as working for children with similar behaviors and learning deficits (Abel 1991; Amaro et al. 1990; Bradbury 1990; Burns & Burns 1988; Frieze & Browne 1989; Gelles & Cornell 1985; Isikoff 1989; Matos, 1978; O'Connor 1989; Rosenberg et al. 1987; Strauss & Gelles 1988; U.S. Department of Health and Human Services 1988).

- Researchers and practitioners should focus on identifying and addressing the child's behaviors interfering with learning, not on identifying which children have been exposed to drugs (Barth 1991; Burkett et al. 1990; Finnegan 1989; Griffith 1991; Howard, Beckwith et al. 1989; Reed 1987; Chasnoff 1988; Krondstat 1989; Weston et al. 1989; Bradley 1989; Illsley 1989; Lipsitt 1988; Schorr & Schorr 1988; Sigman 1982; Madden, Payne & Miller 1986; Poulsen & Ambrose 1988; Schnoll 1986).

Collaborative findings on the topic from other experts include the following:

- A large proportion of drug-exposed children appear to possess normal IQs but may have developmental deficits (Jones and Lopez 1990).
- Some drug-exposed children may have abnormal social and play behaviors (Howard et al. 1989).
- Drug-exposed infants may have abnormal motor development, including tremors in their arms and hands as they reach for objects, and unusual muscle tone, reflexes, or movement patterns. As toddlers and preschoolers, many of these children are easily frustrated and distracted, exhibit frequent temper tantrums, head-banging, and have difficulty processing information. However, by the time they are school-age, almost all have generally outgrown these behaviors (Griffith 1991; Chasnoff and Griffith 1989).
- "Some kids will show significant developmental disabilities, some will be thriving and resilient, the majority will likely be within the normal ranges of development and intelligence with moderate, more subtle behavioral and social problems; still others will become low threshold children who will suffer varying forms of dysfunction and who will need a very structured, protective environment" (Stone 1990).

Social Policy and Service Delivery Issues

Dr. Marie Kanne Poulsen of the Center for Child Development and Developmental Disorders in Los Angeles makes the following points in her book entitled *Perinatal Substance Abuse Social Policy and Service Delivery Issues:*

- The maternal use of drugs during pregnancy places all newborns at risk for developmental, learning, behavioral, and psychosocial problems. However, there is no 1:1 relationship between type of drug used, chronicity of use, and eventual developmental outcome. Rather there is a continuum of the impact that the prenatal use of drugs may have on the developing child ranging from the child being significantly compromised to being relatively unscathed.
- Many children are not severely compromised, but evidence neurobehavioral immaturities. The development outcome of these at-risk children is as contingent on the postnatal social environment as it is on the original perinatal insult.

- The development outcome of a child who has been prenatally exposed to drugs is dependent on a host of prenatal and postnatal social and biological factors beyond the impact of the drug exposure. Other significant prenatal factors include the inherent vulnerability of the fetus, prenatal care, absence of maternal infection, prenatal nutrition, and gestational age at time of drug influence.

- Postnatal factors include (1) medical fragility of the infant; (2) extent and degree of neonatal neurodevelopmental risk factors; (3) degree to which a protective environment can help the infant compensate for his neurodevelopmental immaturities; and (4) degree to which an infant is provided a safe, stable, predictable environment with a single, consistent, loving, interactive caregiver. Overwhelmed birth and foster mothers, group homes and multiple placements provide significant compounding psychosocial risks to the child already affected by biological risk factors.

- Compounding biological and psychosocial risk factors impact the organization of the child's behavior, influencing his regulation of self, attachment to caregivers, peer relationships, learning strategies, development of cognitive schemas, attention and concentration, and self-esteem.

- The danger of labeling/stereotyping/segregating children as products of perinatal substance abusing mothers can not be overestimated. Issues to be addressed in this regard include (a) risk factors seen in children at risk due to perinatal substance exposure are also oftentimes seen in children at risk due to other prenatal and perinatal insult. Children at risk due to perinatal substance exposure are unique in certain parameters, but as a whole, they are more like other children at risk than different; (b) the majority of children at risk due to perinatal substance exposure also have significant developmental strengths that should be identified and capitalized upon in intervention strategies. A relatively small percentage of children will be significantly developmentally disabled; (c) there is the danger that a label can engender a self-fulfilling prophesy, giving an appreciation for that tenet of child development that says, 'children will eventually become that which their parents/teachers expect them to be'; (d) there is danger in assigning their mothers the Scarlet Letter to wear in the home, at school and in the community (the Scarlet Letter of the 1900s has proved to stand for "Addiction"), and in the subsequent harmful effect it may have on the mother-child.

Indicators of the Need for Early Intervention Services

Researchers have identified several inhibitors to academic achievement that might be present in children suffering from prenatal or postnatal medical and psychosocial traumas. Griffith (1991) in the NAPARE study of 300 children prenatally drug-exposed found normal patterns of social, emotional, and cognitive development for most children. However, he also found 30-40 percent of the children showing delays in language development and/or difficulties in paying attention.

Researchers have also reported that some children have difficulty in modulating and controlling their behaviors and less task persistence (Griffith 1991; Howard, Beckwith, Rodning, & Kropenske 1989; Strauss 1986; Streissguth 1989; Wilson 1989). Still others report that some drug-exposed children have low thresholds to overstimulation, difficulties with social relationships, and low frustration tolerance (Poulsen 1991; Griffith 1991; Poulsen & Ambrose 1990; Cole, Ferrara, Johnson, Jones, Schoenbaum, Tyler, Wallace, & Poulsen 1989). Some children have had these problems in the past. And, as in the past, teachers must be familiar with the behaviors, learning, and developmental indicators exhibited by children that indicate the need for special services or attention to special needs.

Finding such behaviors should not now be "read" as a signal that the child has been prenatally drug-exposed and that trying to solve the problem is hopeless. Instead, such behaviors should be seen as a signal that an adult needs to investigate and find out what is causing the "acting out" behavior or learning problems and to use this information to modify the environment and instruction to resolve the problem. A transagency, transdisciplinary approach to problem solving is needed when the problem cannot be remedied by the school's services. In these cases, the school should provide referrals to social service and health care professionals (Davila 1991; Schorr & Schorr 1988).

Indicators

The Los Angeles (California) Unified School District's PED (Prenatally Exposed to Drugs) Program for infants and toddlers lists the following perinatal substance abuse behavior, learning, and developmental indicators of the need for early intervention services:

Motor and Neurological Development

- Tremulousness, tremors when reaching, increasing startling.
- Poor quality of visual following.
- Poor visual attention to people and objects.
- Blanking out, "staring spells," bizarre eye movements.
- Decreased awareness of body in space.
- Fine motor dexterity difficulty.
- Gross motor clumsiness.

Affective and Behavioral Development

- Variability of emotion, rapid shift from apathy to aggressiveness.
- Irritable, explosive, and impulsive behaviors.
- Depressed affect, decreased laughter.
- Difficulty in comforting self and being comforted.
- Marked difficulty with transition and changes.
- Increased testing of limits (e.g., insists on doing tasks on own terms; persistent refusal to comply to simple commands).
- Inability to self-regulate or modulate own behavior (e.g., easily becomes over excited, cannot calm down).

Social/Attachment Development

- Decreased use of eye contact to initiate social interaction.
- Decreased use of gestures to initiate social interaction.
- Decreased/absent stranger and separation anxiety.
- Indiscriminate attachment to new people.
- Aggressiveness with peers.
- Decreased compliance to verbal direction.
- Decreased response to verbal praise.
- Decreased use of adults for solace, comfort, and object attainment.
- Decreased use of adults to gain recognition for accomplishments.

(continued on following page)

Problem-Solving, Attention, and Concentration Strategies

- Poor on task attention
- Increased distractibility to extraneous sounds and movements.
- Inability to accommodate in problem-solving situations.
- Impulsive responses before "reflecting."
- Persistent use of ineffective problem-solving strategies or easily "gives up" without trying other strategies.
- Decreased visual scanning of all components in problem-solving situations.
- Decreased use of trial and error strategies in problem-solving situations.
- Delay in acquisition of sense of task completion.

Language Development

- Fewer spontaneous vocalizations from early infancy.
- Delayed acquisition of words.
- Decreased use of acquired words/ gestures to communicate wants and needs.
- Prolonged use of "in-class" errors in picture/object identification at preschool level.
- Prolonged infantile articulation at the preschool level.
- Difficulty in "word finding" at the preschool level.

Play

- Shows decreased spontaneous play with increased aimless wandering.
- Does not apply acquired adaptive skills in spontaneous stacking, marking, and container play.
- Cannot organize own play, appears perplexed and confused, cannot select materials and focus adaptively.
- Shows delay, discontinuity, and disorder in representational play.
- Easily overstimulated by too many things and people and by too much noise, movement and excitement.
- Has difficulty with peer relationships in unsupervised play.

NOTE: A special education research project aimed at infants and toddlers, PED has provided useful information on educating young children prenatally exposed to drugs. However, based on its longitudinal research findings, the program is not recommending that drug-exposed children be identified as drug-exposed, nor placed in special education classes simply because they have been exposed. PED has also found, as have other researchers, that most of these children outgrow many of the earlier developmental behaviors displayed as infants and toddlers by the time they are ready for school.

What are the characteristics of programs designed to educate children affected by prenatal drug exposure or psychosocial traumas?

Programs designed to educate children affected by prenatal drug exposure or psychosocial traumas contain the following major components:

- Developmentally appropriate education programs;
- Teacher training;
- Parent and family outreach; and
- Multidisciplinary and transagency support teams and services to holistically address obstacles to educating children experiencing behavior and learning problems, without regard to the obstacles' causes.

Elements of Effective Early Intervention Programs

The U.S. Department of Education's Office of Special Education and Rehabilitative Services (OSERS) has identified the following elements of effective early intervention programs for children with developmental delays or at risk for developmental delays:

- **Family-centered**. Programs should focus not only on the child but the entire family.
- **Community-based**. For children with special needs, programs should be community-based and should use the social and educational resources in the family's community.
- **Collaborative**. Multidisciplinary teams of service providers should be trained to work together to help the family solve the often complex health and education needs of young children with disabilities or at risk for disabilities. Effective teams have included pediatricians, social workers, and public health nurses.
- **Facilitate transitions**. As the child moves from infant programs to preschool programs to school, planning for the transition process should occur for families in need of specialized programs.
- **Provide training**. Identification, assessment, and intervention have been identified by OSERS research as critical components of training programs to improve the skills of service providers.

The Los Angeles School District's PED Program identified the following key components for programs designed to educate drug-exposed children and children suffering from psychosocial traumas:

- **Respect.** Children at risk need nurturing adults who respect each child's work and play space and who do not make unrealistic demands nor unpredictably appear or disappear.
- **Peer sensitivity**. Children at risk need a teacher who realizes that a child becomes sensitive and aware of the needs and feelings of others only by repeatedly having their own needs met.
- **Decisionmaking**. Children at risk need a teacher who recognizes that it is important that they be allowed to make decisions for themselves. Freedom to choose and to assume the responsibility for those choices gradually expands the child's physical, social, emotional, and intellectual growth, promotes self-esteem, problem-solving mastery, and moral values.
- **Home/school partnership.** Children at risk and their families are best served when the home is recognized as an essential part of the curriculum. Facilitating parental/caregiver goals helps to establish a close working relationship between home and school. Intervention strategies that strengthen the positive interaction between child and family increase parental confidence and competency.
- **Transdisciplinary model**. Children at risk and their families are best served by coordinated professional interventions. To accomplish this successfully, time must be allotted for teachers to meet and plan with assistants and for support services of medical staff, social workers, psychologists, speech and language, and adaptive physical education to come together to develop a comprehensive plan to meet the special needs of the child and family.

The PED Program also identified the following key components for classroom organization, management, and curriculum development in *Today's Challenge, Teaching Strategies for Working With Young Children Prenatally Exposed to Drugs/Alcohol:*

- A creative curriculum that promotes learning by doing;
- Play, with adults helping children extend its complexity and duration;

- Routines and rituals, to provide a predictable setting and continuity and reliability;
- Rules explicitly stated and limited;
- Transition time plans, recognizing transition as a process with a beginning, middle, and end;
- Assessment while children are actively involved in play, transitions, or self-help;
- A flexible room environment, in which materials can be removed to reduce stimuli or added to enrich the activity; and
- An adult-child ratio low enough to promote attachment, predictability, and coping.

Teaching Strategies

The Hillsborough County Public Schools, Tampa, Florida, identified the following strategies for teaching young children prenatally exposed to drugs:

Physical Environment of Classroom

Special attention must be paid to arranging the physical environment of the classroom for the at-risk child. The best ideas for arrangements come from programs in early childhood education (e.g., High Scope) and special education (e.g., ERIN, the Early Recognition Intervention Network). The at-risk child needs the following in terms of the physical classroom setup:

- A setting where classroom materials and equipment can be removed to reduce stimuli, or added to enrich the activity.
- Assistance in self-organization that can be facilitated by interacting within an orderly, child-appropriate environment.
- More structure and clarification within the environment than do other children. All children are more successful, particularly at the beginning of the year, if their environment is constant and clear.

Examples of ways to design the physical environment for the special needs child to experience success in the classroom include the following:

1. Work spaces within the class should be clearly defined; for example, the way furniture is used (four chairs and a table) or two places at an easel can indicate work areas for children. Masking tape or contact paper over construction paper can be used to section off tables, placemats, or carpet to define working spaces. Hula hoops can become movable boundaries for a child's individual activity.

2. Area signs are decorative and functional. These symbols help children associate specific behaviors, activities, and materials with a particular space. Area signs are realistic drawings of materials or activities that can represent an area (e.g., a crayon for the art area). Pictures can be hung as mobiles from the ceiling, or mounted on folders to stand up on a table.

3. Material labels are objects, small pictures, and names of classroom items that can be used to key the items to areas where they are kept or used. Labeling shelves and places for use solves many classroom clean-up problems.

4. "Child signs" are cards on which you put each child's name and picture (or symbol). They are used to designate personal spaces and belongings within the classroom.

5. Use cuing techniques to help children learn to use the environment in an orderly manner, such as procedure cards, footprints to designate numbers of children at a center or how to line-up, direct arrows for traffic patterns, traffic lights to represent open and closed areas of the classroom.

Daily Schedules and Routines

A predictable daily routine helps to provide an orderly framework for children's activities. By being aware of the daily schedule, children learn to organize themselves to participate more effectively. The ability to predict and anticipate the order of daily activities reduces stress and confusion about what will happen next and gives children a sense of security, control, and independence.

The at-risk child needs a picture char , that provides a visual reminder of the sequence of the daily routine. This also helps the young child learn the sequence of the day. When it is time to change activities, "blame" can be transferred from the teacher to the chart for the child who is not ready to make the transition.

When a change needs to be made in the daily schedule (e.g., for fire drills, vision/hearing screening, picture taking), the teacher should try to keep as much of the day on the established schedule as possible. For instance, if pre-reading instruction is interrupted, it is better not to reschedule the activity but to proceed with the remainder of the day as scheduled. The daily schedule becomes a teaching tool for both planning and reviewing the school day, something that facilitates both learning and stress reduction for the special needs child.

Children are confronted with many new expectations for behavior in the classroom, often in the form of routines. Handwashing, putting materials away, snack time, lining up, and using the easel are examples of routines children face in the classroom. Each of these activities presents an opportunity for teaching desirable behavior. Teachers need to consider the following points:

1. Think through the activity and break it down into steps.

2. Introduce the routine in small groups by using the daily schedule to clarify when the routine is done.

3. Develop procedure cards that contain pictures of each step of the activity.

4. Point to each pictured step while giving simple directions.

5. Demonstrate each step yourself, making sure you point out the space and materials used.

6. Use humor to add emphasis and avoid potential problems: "ham up" your act by demonstrating the wrong way to do a routine (e.g., try to soap hands without wetting them first). Discuss the consequences with the group. Then show the right way.

7. Select volunteers to go through the routine or use peer models to reinforce appropriate behavior.

8. After the routine is fully understood, post pictures in the area to serve as an immediate visual reminder while the routine is being done.

Transitions

Many children have difficulty making transitions in the classroom, but the special needs child is particularly vulnerable to changes in routine. As children move from one activity to the next, they can lose control of themselves if they do not know what to expect and what is expected of them. Some suggestions for helping children make transitions follow.

1. The daily routine should have as few transitions as possible.

2. Plan the routine so that active times alternate with quieter times and there is a gradual increase or decrease of the tempo of activity.

3. Provide warnings before activity changes—one at 10 minutes, then 5 minutes, then 1 minute. These warnings can be a signal (bell, lights) or an adult speaking with a group of children.

4. Not all activities require the same amount of clean-up time, so some centers, such as blocks, should begin first.

5. Clearly signal the end of work time and the end of outside time so that everyone is aware that it is time to move to the next activity.

6. Review what will happen during the transition time before children start to move.

7. Designate meeting places for transition times (between small-group time and outside time, meet by the door).

8. Once the children have gathered, help them make up special ways to move to the next activity (sing a song, hands up in the air, touch ears).

9. Start the next activity right away, even if all the children have not gotten there yet. This lets them know that something fun is going to happen next, so it pays to get there quickly.

10. Do dry-runs." What will we do? Let's practice it.

11. Give positive reinforcement when things go well.

12. Lining up and mass bathrooming should be avoided if at all possible. If you have a teaching aide, let this person take one half of the class at a time to the bathroom while you give small group instruction to the rest of the group.

13. When dismissing children from large group or table activities to line up, be sure to select small numbers of children at a time. For example, "All boys wearing blue" or "the red table" may line up.

After reviewing the characteristics of programs designed to educate children affected by prenatal drug exposure or psychosocial traumas, it may become apparent that the instructional, management, and organizational strategies used by these programs represent much of what is known about effective early childhood education programs. School staff, parents/caregivers, and community leaders may decide that since all or even most of their children are not meeting high academic expectations, there is a need for comprehensive reform of their school's early childhood education program. Comprehensive reform takes leadership, group commitment, planning time, and resources, including implementation and evaluation resources.

Profiles of Promising Programs

Programs and projects in this section, and mentioned throughout the report, were identified by the frequency of their being identified as programs that meet the educational needs of drug-exposed children in the review of literature, congressional hearings, and site visit interviews with researchers and practitioners. They are known as doing "cutting edge" work in educating drug-exposed children. They contain the best "working knowledge" available on these children and how to best work with them. They have not, however, been validated as educationally effective through the analysis of 2-3 years of evaluation data by the U.S. Department of Education's Project Effectiveness Panel.

Most of the programs use the developmentally appropriate practice standards published by the National Association for the Education of Young Children. They also use Early Recognition Intervention Network (ERIN)-type and High Scope-type strategies and those developed and used by special education teachers in dealing with children with developmental delays in language, cognition, and behaviors.

These and other programs specifically designed for drug-exposed and at-risk children appear not to be inventing new curriculum or instructional methodologies designed especially for such children. Instead, the programs seem to be trying to find more creative and effective ways of teaching *all* children, especially those who are failing to learn effectively using traditional methods.

Project D.A.I.S.Y.
District of Columbia Public Schools

Major program components: developmentally appropriate education practices, teacher training, parent outreach, multidisciplinary teams

Project D.A.I.S.Y. (Developing Appropriate Intervention Strategies for Young Children) is a 3-year longitudinal intervention project for children aged 3 to 5 who have been prenatally exposed to illegal drugs or alcohol. The project's primary goal is to identify observable behaviors of prenatally exposed children and to develop intervention strategies to support the inclusion of these children in settings with their nonexposed peers.

Begun in the 1990-91 school year and operational in four schools throughout the District of Columbia, the project serves 60 children in 4 multiaged, developmentally appropriate classrooms that integrate prenatally exposed children with their nonexposed peers in a regular early childhood education setting. Exposed children must have documented evidence through birth records or parental disclosure of a history of substance use during pregnancy. The teacher-student ratio is 2 to 15 (5 students have been identified from the DC General Hospital Birth to Three Tracking System as substance-exposed prenatally; 10 are students for whom no risk factors have been identified).

D.A.I.S.Y. classrooms are designed for children to learn through interaction and exploration. Instructional approaches used include Emergent Literacy, High-Scope, Math Your Way, the Social Curriculum, and an adapted Montessori curriculum. The guiding premise of the instructional curriculum is child centered, with the understanding that the primary work of young children is play, which serves as an indicator of their mental growth and social development.

D.A.I.S.Y. staff are supported by a multidisciplinary consultation team comprised of a clinical social worker, speech language pathologist, and a clinical psychologist. The team also provides direct support services, such as home visits and monthly school-based parent groups meetings, to participating children and their families.

For further information, contact Project D.A.I.S.Y., District of Columbia Public Schools, Rudolph Elementary—Annex, 2nd and Hamilton Street NW, Washington, DC 20011. Telephone (202) 576-6937.

PED Program
Los Angeles (California) Unified School District

Major program components: developmentally appropriate education practices, teacher training, parent outreach, multidisciplinary teams

PED, the Prenatally Exposed to Drugs Program, serves children in publicly funded child care settings who display developmental delays in language or cognition. Most of the children have been prenatally exposed to illegal drugs or alcohol, identified as abused or neglected, or born to teenage mothers. Twenty to 24 children and their families participate in the program, which is operated by the Los Angeles Unified School District through their publicly funded child care programs. Family involvement in the child's education program and providing services directly to the child and the child care workers are major focuses of the program.

PED combines knowledge from child intervention, family systems, and cultural diversity research as it examines child coping behavior as an outgrowth of biological and environmental factors. As the first step in designing an intervention program, staff are taught how to determine what a child's behavior is communicating. Staff are given assistance in analyzing how the home and school settings and expectations may be exacerbating the child's difficulties. Thus, the focus is on modifying the environment and adult behavior as well as changing the child's behavior. Center staff receive special training, in addition to the special education and support staff assigned to meet the children's education needs. Families participate in parent-to-parent support activities, in addition to receiving assistance with child behavior outside the child care setting.

Since 1988, the Los Angeles Unified School District has been operating a pilot project for preschool children who were prenatally exposed to drugs. As an outgrowth of the project, the District produced a manual of strategies that have been successful in working with children in the pilot classrooms. The classrooms contained only pilot children and had an adult-child ratio of 1 to 3. The project has adapted and modified these strategies for use in larger child care settings.

For further information, contact PED Program, Los Angeles Unified School District, Division of Special Education, 450 North Grand, Los Angeles, CA 90051. Telephone (213) 625-6718.

Operation PAR
St. Petersburg, Florida

Major program components: developmentally appropriate education practices, parent outreach, family support, services, multidisciplinary teams

In 1988, Operation PAR (Parental Awareness and Responsibility) received funding from the Office of Substance Abuse Prevention to demonstrate a program that would impact multigenerational substance abusers. Operation PAR designed a program that served infants and children affected by maternal substance abuse and their families. In addition to the major program components, other components include: early intervention, screening, evaluation, referral and follow-up using intensive case management; education services to professionals and the public; and early intervention developmental child care.

During its second year of operation, the center-based program expanded from 25 to 31 children and created a family day care home program for 14 children. The program serves infants (2 months) to children 5 years of age. Within this age range, four classes were established. Staff-child ratios are based on the ages of the children in each classroom.

Classrooms are divided into six learning areas: language arts, dramatic play, blocks, manipulative play, sand and water, and art and music. Students use these areas each day through individual exploration and small group activities. Learning area use depends on the developmental levels of the students as well as their individual needs and interests. The curriculum, aimed at preparing children to begin a formal academic program by developing their skills to an appropriate level so that their future learning experiences will be successful, addresses the observed developmental differences and behaviors of drug-exposed children. Several supporting strategies are used to ensure the program's success. The program's child development component, for example, provides a strong motivation for mothers to remain in case management, where they are able to see improvements in their children's behavior, learning abilities, and developmental skills.

For further information, contact Operation PAR, 2000 4th Street South, St. Petersburg, FL 33701. Telephone (813) 896-2672.

Teaching Strategies for Young Children: At Risk and Drug-Exposed
Hillsborough County School District, Tampa, Florida

Major program components: developmentally appropriate education practices, teacher training

Teaching Strategies for Young Children: At Risk and Drug-Exposed is an inservice teacher training program designed to assist regular classroom teachers of young children. Program topics include: Overview of the At-Risk and Drug-Exposed Child, Classroom Organization (How the Classroom Should Look); Scheduling and Routines in the Classroom; The Teacher as a Facilitator with an At-Risk Population; Teaching Social Skills, Organization, and Building Self-Esteem; and Teaching Language Through Motor Skills. The training model is a training-of-trainers model. Course participants receive a notebook of materials that includes readings designed especially for the course, and newspaper and journal articles. The class is designed for 6 weekly sessions of 3 hours each.

The program is based on a developmentally appropriate approach to early childhood education as outlined by the National Association for the Education of Young Children. No specific student curriculum is recommended, although curricula such as High Scope, ERIN, and Montessori are used to show how strategies can be implemented using them. A multisensory approach to teaching is stressed. Techniques involving visual cues and environmental prompts are introduced.

The Hillsborough Educational Partnership Foundation, a tax exempt organization supporting the Hillsborough County Public Schools, received a 2-year grant from the Robert Wood Johnson Foundation to compile materials and share the school district's training program with other school districts around the country. The training program was first offered in October of 1990 to Hillsborough County teachers.

For further information, contact Teaching Strategies for Young Children: At Risk and Drug-Exposed, Hillsborough County Public Schools, 411 East Henderson Avenue, Tampa, FL 33602. Telephone (813) 896-2672.

New York City Public Schools/Harlem Hospital Center Collaborative Project New York, New York

Major program components: developmentally and therapeutically appropriate programs, teacher training, family support services, multidisciplinary teams

The Harlem Hospital Therapeutic Nursery is a preschool program specifically designed to address the educational and emotional needs of children prenatally exposed to drugs, primarily cocaine. Established in February 1991, the program is an outgrowth of the Harlem Hospital Developmental Center, which was established more than 20 years ago to serve preschool children with a variety of medical and nonmedical handicaps. The program is a collaborative effort between the New York City Public Schools and the Departments of Pediatric Rehabilitation Medicine and Child-Adolescent Psychiatry at Harlem Hospital Center.

Fourteen children aged 2 to 5 are currently enrolled in the program. Two of the children were not prenatally exposed to drugs or alcohol. The teacher-pupil ratio is seven children to one master teacher and one support teacher. Within a secure and accepting environment, children's individual needs are met through carefully planned and monitored clinical and educational interventions. Accordingly, teachers design and implement activities that encourage growth across developmental domains, specifically in the areas of communication, self-organization, and social skills. Scheduled meetings of the multidisciplinary team encourage ongoing communication, program continuity, and evaluation. Essential to the success of the program is the working partnership between caregivers and staff.

The program integrates therapeutic and traditional early childhood instructional strategies. Specific approaches include: engaging children with materials that extend attention and encourage imagination and problem solving; developing activities in which children learn to make decisions; encouraging dyadic interactions with peers to promote skill development; encouraging social interaction through arrangement of materials; and encouraging self-confidence through positive experiences.

For further information, contact New York City Public Schools, Citywide Programs, Division of Special Education, 400 First Avenue, New York, NY 10010. Telephone (212) 779-7200.

Head Start Substance Abuse Initiative*
U.S. Department of Health and Human Services

Major program components: developmentally appropriate education practices, teacher training, parent outreach, multidisciplinary teams

In 1990, the Head Start Bureau developed an initiative to address the growing needs of Head Start programs to respond to the problem of alcohol and drug abuse. The initiative addresses three areas of need which affect Head Start programs as they work with children and families:

- The need of children from families involved with alcohol or drug abuse, or children who have exhibited harmful effects of exposure to substances, whether prenatal or postnatal;
- The need of families at high risk for involvement in alcohol or drug abuse, or who are already abusing substances, along with the needs of Head Start staff attempting to assist these families; and
- The need for Head Start programs to become participants in community-based efforts which address substance abuse strategies for prevention, for strengthening their capacity to support families affected by alcohol or drugs, and for accessing effective treatment services.

The Bureau assembled a work group of interdisciplinary experts to develop and help implement the initiative. The work group offered the following recommendations for implementing the initiative: develop training and technical assistance resources; establish interagency collaboration at the federal, state, and local levels; encourage information dissemination and exchange; and provide program development and administration.

The initiative has four key features: a resource "desk reference" on substance abuse; information pamphlets; collaboration with other federal, state, and local resources; and program information memorandum on substance abuse.

For further information, contact the U.S. Department of Health and Human Services, Head Start/Administration for Children, Youth and Families, 330 C Street SW, Washington, DC 20013. Telephone (202) 245-0436.

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*Excerpts from the National Head Start *Bulletin*, Issue Number 35

National Association for Perinatal Addiction Research and Education Chicago, Illinois

Major program components: placement in developmentally appropriate programs for children; training for medical, social services, and education professionals; multidisciplinary teams

The National Association for Perinatal Addiction Research and Education (NAPARE) was conceived at a 1987 conference in Chicago. Members include nurses, social workers, physicians, addiction counselors, child welfare workers, foster parents, midwives, physical therapists, and educators. Two education-related NAPARE projects are described below.

- **Developmental Followup Study.** Funded in 1986, this is the longest running longitudinal study of children exposed in-utero to cocaine. It leads the nation in developing research data on this high-risk population of children. The mothers of the 400 children now in the study were enrolled during pregnancy, and their drug use patterns were tracked throughout gestation. Neonatal outcomes were analyzed against the patterns of drug use. The children receive medical and developmental evaluations at regular intervals. Children may be referred to either Head Start or other preschool programs or special education or other therapeutic services.

- **State Funded Prekindergarten for At-Risk Three- and Four-Year-Old Children.** The Chicago Board of Education has provided funds to establish a prekindergarten at the Women's Treatment Center. Most of the children enrolled in the program were not exposed prenatally to drugs but have been exposed by living in drug environments. The mothers are in treatment at the Center. One special education early childhood teacher and one early childhood teacher are provided by the City of Chicago Public Schools. Methodologies developed for working with these high-risk children will be used in designing classroom strategies for preschool and school-age children affected by parental drug use.

For further information, contact the National Association for Perinatal Addiction Research and Education, 11 East Hubbard Street, Suite 200, Chicago, IL 60611. Telephone (312) 329-2512.

Ravenswood City School District Parent and Child Intervention Program
East Palo Alto, California

Major program components: developmentally and therapeutically appropriate practices for children, teacher training, parent outreach, family support services (primarily referrals), multidisciplinary teams

Ravenswood is the first school district in California to offer an integrated intervention program for infants and young children prenatally exposed to drugs. The Ravenswood Parent and Child Intervention Program (PCIP) assesses the health, social, and education needs of such children and provides both long- and short-term mediation while providing treatment, support services, and parent education for their mothers. The program's primary goals are to provide appropriate early and extended intervention services which increase prenatally drug-exposed children's opportunities for success in school; provide a comprehensive, structured recovery and parenting program for the substance-abusing mother or guardian; and expand the base of information and training currently available for teachers.

Based in the Ravenswood City School District's Child Development Center, PCIP currently serves 40-50 infants and toddlers aged 0-4. PCIP uses a modified version of the High Scope curriculum. In addition to a head teacher, teaching assistants, and parent volunteers, PCIP staff are supported by a multidisciplinary team comprised of a treatment coordinator, a program director, and a project director. Staff are required to enroll in accredited early childhood education classes at nearby colleges. Parents are required, under the guidance and coaching of the teachers, to work in the classroom with their children. They can also participate in parent support groups in addition to their treatment groups.

The San Mateo County Department of Social Services, Child Protective Services Program, is the primary referral source for the program; however, self-referrals and referrals from other local community agencies also are accepted.

For further information, contact Parent and Child Intervention Program, Ravenswood City School District, 2160 Euclid Avenue, East Palo Alto, CA 94303. Telephone (415) 329-6760.

Recommendations: What Schools and Teachers Can Do

1. **Cease and desist using the nomenclature "crack babies" and "crack children."** "Crack children" basically do not exist except as a figment of the media's imagination. Identifying children using these derogatory terms is antithetical to setting an appropriate climate and high expectations for achievement for all children. The terms "crack babies" or "crack children" are likely to set up a low achievement self-fulfilling prophecy syndrome (Powell 1991; Poulsen 1989; Delapenha 1991). Also, since most women who use drugs during pregnancy are polysubstance users, it is not clear which drug consumed during pregnancy, if any, may be causing a learning and/or behavioral problem (Zuckerman 1991; Frank et al. 1988; Streissguth et al. 1990).

2. **Do not identify, label, and segregate children because it is believed that they have been prenatally drug-exposed.** There appears to be no educational reason to set up systems of "early identification" and labeling of children believed to have been prenatally exposed. Teachers should expect to have children prenatally exposed to drugs in their classrooms and to be responsible for teaching them, unless the children are severely emotionally disturbed or educationally handicapped. In that case, they will qualify for special education services through existing systems for identifying such students (Davila 1991; Poulsen 1989; Stone 1990).

   More important to this issue is the fact that researchers believe that postnatal psychosocial traumatic conditions—such as divorce, separations, death, poverty, neglect, child abuse, chronic exposure to high-crime or violence, poor nutrition, poor prenatal care, inadequate housing, homelessness, shelter living, inadequate medical care, and inadequate and unpredictable caregivers—are most likely the causes of the disruptive behaviors and learning problems exhibited by children, even those who have been documented as drug-exposed (Kronstadt 1991; Amaro et al. 1990; Amaro, Zuckerman, Cabral 1989; Finnegan 1989; Mondanero 1977).

   Research shows that the very visible effects of prenatal drug exposure seen in infants appear to disappear by the time children are elementary school age (Chasnoff 1988; Doberczak et al. 1988; Black and Schuler, undated). Almost none of the media reports on how drug-exposed children are "acting out" in the classrooms document that the children have been prenatally drug-exposed or that drug

exposure is the only possible explanation for why those children are exhibiting behavioral and learning problems. None explore if there are other drug-exposed children in the same classrooms who are not acting out and are among the top achievers. Further, some children documented as drug-exposed have been found to be gifted and talented.

Be wary of school or classroom identification systems that ask mothers to "tell" if they used illegal drugs during pregnancy. These systems may be encouraging those women to incriminate themselves and subject themselves to criminal charges in states with criminal sanctions for women who use drugs during pregnancy, such as in Florida, Illinois, Indiana, Massachusetts, Nevada, Minnesota, Oklahoma, and Utah (Marshall 1991).

3. **Provide all teachers with preservice and inservice development programs** that prepare and encourage them to use instruction and management strategies found to be successful in teaching young children who are difficult to reach. Teachers should be encouraged to use these strategies daily in their classrooms' instruction and management practices. In addition, all teachers should be thoroughly prepared and expected to teach students from home environments that have not traditionally been thought of as supportive of academic achievement or that may be experiencing instabilities that cause children to exhibit psychosocial traumatic behaviors and learning problems. As the numbers of poor children increase, the problems associated with poverty increase, such as homelessness, chronic exposure to violence, poor nutrition, destabilized home lives, divorces, and drug and child abuse.

   Since the ravages of destabilized home lives and drug and child abuse has increased across all socioeconomic spectrums, all teachers will find that using the best that is known from research and promising practices is imperative—not optional—in educating an increasing number of children in our schools who are experiencing learning and behavioral problems stemming from health and psychosocial traumas (Abel 1991; Amaro et al 1990; Bradbury 1990; Burns & Burns 1988; Frieze & Browne 1989; Gelles & Cornell 1985; Isikoff 1989; Matos 1978; O'Connor 1989; Rosenberg et al. 1987; Strauss & Gelles 1988; U.S. Department of Health and Human Services 1988).

4. **Provide developmentally appropriate early childhood education programs for all children,** but especially poor children who will be most at risk of not experiencing academic success without educationally sound, developmentally appropriate preschool experiences.

5. **Plan the guidance of social-emotional development as an intricate part of the curriculum.** Positive social behavior should be modeled and taught directly, not incidentally, especially for children experiencing behavioral difficulties. Such behaviors include perseverance, industry, independence, helping, cooperation, negotiating, solving interpersonal problems nonviolently, self-control, dealing with fears, and intrinsic motivation.

6. **Be aware that programs working with drug-exposed children advocate following standards set by the National Association for the Education of Young Children,** especially the one that limits class size to an adult-child ratio of 2 adults with no more than 20 children for 4- and 5-year olds; and 2 adults for 25 children for 5-8 year olds, one of whom may be a paraprofessional, or no larger than 15-18 with one teacher (Bredekamp 1986).

7. **Organize multidisciplinary, transagency teams of health and social services providers** to help children and their families solve the complex problems that often transcend the school's and teachers' purview of solutions. Teams members from outside of the school should include pediatricians, child development specialists, social workers or child and family service workers, mental health workers, public health nurses, and drug prevention or abuse programs serving the school population. School team members should include teachers, administrators, teacher aides, school psychologists, social workers, nurses, and speech and language specialists. Case managers are also needed. Clearly, staff development will be needed by teachers and team members. Preservice programs and school improvement planning efforts will also have to address this need for designing and functioning successfully in new partnership configurations that work together in providing comprehensive health, social, and education services to schools, children, and their families.

   The role of teachers should be to identify students in need of special services to appropriate support and resource staff in the school. Support and resource staff should work collaboratively with teachers to address problems while the students remain in the classroom. Another role for teachers may be making referrals for students severely disabled to appropriate persons who will follow up on the referrals. It is important to remember that since classroom teachers must focus on classroom organization, management, instruction, and student learning goals, an easy referral and resource staff assistance system is needed that does not take away from the teachers' primary focus—teaching children.

8. **Establish effective home and school partnerships** that encourage caregivers to become actively involved in their children's education. Plans and activities should reflect the new realities of families (i.e., working mothers, single parent households, step families, foster parents, latch-key children, child care providers functioning as primary caretakers, and homeless and living in shelters). Schools must consider the needs of families in varied configurations and the realities of those situations if they are to develop effective home and school partnerships. It is important for schools to work with others, such as mentors, advocates, role models for children, to provide empathetic nurturing and stability for each child.

9. **Plan active, intensive drug-prevention programs for all children,** especially those living in communities with a widespread drug culture.

10. **Cooperate with others in the community to provide drug-prevention treatment information and seminars for women of child-bearing age,** including middle school and high school students, and other caretakers. Share and discuss with them the effects of drugs on the fetus and the prenatal and postnatal risks the use of drugs and participation in the drug culture present to children's growth, development, and futures.

Resources

A variety of resources are available and should be explored by local school district teachers and administrators. These include programs, initiatives, information networks, and clearinghouses. Some of the major resources are described below.

A Systemic Approach to Dealing with Fetal Alcohol and Other Drug Affected Children in the Educational Setting

Ethel Simon-McWilliams
Associate Executive Director
Northwest Regional Educational Laboratory
Western Center for Drug-Free Schools and Communities
101 SW Main Street, Suite 500
Portland, OR 97204
(503) 275-9500

Field Office
164 Bishop Street, Suite 1490
Honolulu, HI 96813
(808) 532-1904

Far West Laboratory for Educational Research
730 Harrison Street
San Francisco, CA 94107
(415) 565-3000

Southwest Regional Laboratory
4665 Lampson Avenue
Los Alamitos, CA 90720
(213) 598-7661

This project provides a 5-day training curriculum on identifying and addressing the problems of children affected by Fetal Alcohol and Other Drug Effects. Training materials are extensive and the training interactive (worksheets, case studies, discussions of readings and videotapes). Several sections specifically address the questions in this report, for example, Section H - Effects of Drug Use on the Fetus, Section M - Effective Instructional Strategies for the Classroom, Section N - Successful Classroom Environments, and Section O - Strategies for School Administrators.

Clearinghouse for Drug Exposed Children

Lora-Ellen McKinney
Director, Clearinghouse for Drug Exposed Children
Division of Behavioral and Developmental Pediatrics
University of California, San Francisco
400 Parnassus Avenue, Room A203
San Francisco, CA 94143-0314
(415) 476-9691

The Clearinghouse for Drug Exposed Children is collecting and disseminating relevant research data, public policy developments, and medical, psychological, and educational advances related to providing services to drug-exposed children. The Clearinghouse's goals are to

1. Consolidate and monitor resources currently available in the San Francisco/Bay Area community. The data base will consist of the intervention programs, social service agencies, private practitioners, and related services that are specifically designed to meet the needs of drug-exposed children.

2. Provide referral and treatment information via telephone (415) 476-9691 in the San Francisco/Bay Area. Computer bank references for a variety of relevant services will provide a central place where information about services for drug exposed infants and children can be obtained.

3. Monitor relevant research in the area of prenatal drug exposure. Clearinghouse staff consistently monitor relevant research journals and will provide updates on new information on the prenatal and later developmental effects of drug exposure.

4. Provide a community forum for the collaboration of experts in medicine, education, psychology, law enforcement, service provision, and government policy.

5. Provide a newsletter that lists available treatment resources, chronicles new research, highlights community groups providing innovative and effective services, and reports on community efforts to combat the negative effects of drugs.

The Clearinghouse for Drug Exposed Children is supported by the Stulsaft Foundation, the University of California, San Francisco's Department of Pediatrics/Division of Behavioral and Developmental Pediatrics, and the Chancellor's Office of Public Service Programs.

Drug-Exposed Children in Educational Settings: A Technical Assistance Package

Laura Feig
Office of the Secretary/ASPE
U.S. Department of Health and Human Services
200 Independence Avenue SW, Room 404E
Washington, DC 20201
(202) 245-1805

Charlotte Gillespie
U.S. Department of Education
Drug Planning and Outreach Staff
Office of Elementary and Secondary Education
400 Maryland Avenue SW, Room 1073
Washington, DC 20202
(202) 401-3030

This project will develop a consensus among experts regarding the current knowledge base on educating drug-exposed children. Three products will be produced: (1) a policy manual for administrators, (2) a video with accompanying users' guide for use by school personnel, and (3) a monograph reviewing research relevant to the needs of drug-exposed children. Two versions of written and audiovisual materials will be produced, one for elementary schools and one for Head Start and other preschool programs. Materials will be available in 1993.

This project is cooperatively funded by the U.S. Department of Health and Human Services/ASPE, U.S. Department of Education/OESE, Head Start, the National Institute on Drug Abuse, and the Office of Substance Abuse Prevention.

Clearinghouse on Handicapped and Gifted Children

Kathleen McLane
ERIC Clearinghouse on Handicapped and Gifted Education
Council for Exceptional Children
1920 Association Drive
Reston, VA 22091-1589
(703) 264-9474

The Council for Exceptional Children has developed a series of 11 publications entitled *Mini-Library—Exceptional Children At Risk.* Publication titles include the following:

- *Born Substance Exposed, Educationally Vulnerable*
- *Alcohol and Other Drugs: Use, Abuse, and Disabilities*
- *Special Health Care in the School*
- *Depression and Suicide: Special Education Students At Risk*
- *Homeless and in Need of Special Education*
- *Abuse and Neglect of Exceptional Children*
- *Rural, Exceptional, at Risk*
- *Language Minority Students with Disabilities*
- *Double Jeopardy: Pregnant and Parenting Youth in Special Education*
- *Programming for Aggressive and Violent Students*
- *Hidden Youth: Dropouts From Special Education*

The Clearinghouse has also developed an ERIC Digest, a 1-page summary of the content of each of the 11 publications. These summaries have been encased in an INFO Packet, which contains a copy of each of the 11 ERIC Digests.

Drug-Free Schools and Communities Program

Allen King
Director, Drug-Free Schools and Communities Program
Office of Elementary and Secondary Education/SIP
FOB-6, Room 2123
U.S. Department of Education
400 Maryland Avenue NW
Washington, DC 20202
(202) 401-1599

The Drug-Free Schools and Communities Program supports several discretionary grants programs that could be useful to educators working with children prenatally

exposed to drugs. Programs include:

- **Drug-Free Schools and Communities Demonstration Grants to Institutions of Higher Education** awards grants to institutions of higher education (IHEs) and consortia of IHEs for model demonstration programs coordinated with local elementary and secondary schools for the development and implementation of quality drug and alcohol abuse prevention programs.

- **Federal Activities Grants Program** provides assistance to state education agencies, local education agencies, institutions of higher education, and other nonprofit agencies, organizations, and institutions to support drug and alcohol abuse education and prevention activities.

- **School Personnel Training Program** provides financial assistance to state education agencies, local education agencies, institutions of higher education, or a consortia of the organizations to establish, expand, or enhance programs and activities for teaching elementary and secondary school teachers, administrators, and other school personnel about drug and alcohol abuse education and prevention.

- **Drug-Free Schools and Communities Program—Emergency Grants** provides funds to school districts that demonstrate a significant need for additional assistance in combatting drug and alcohol use.

- **Training Programs for Educators—Innovative Alcohol Abuse Education Programs** awards grants to public or private organizations, institutions, or agencies to train educators, who serve children in grades 5-8, on mitigating problems associated with alcoholism in the family.

- **Drug-Free Schools and Communities Counselor Training Grants Program** awards grants to SEAs, LEAs, IHEs, and consortia of IHEs to establish, expand, or enhance programs and activities for the training of counselors, social workers, psychologists, or nurses who are or will provide drug abuse prevention counseling or referral services in elementary and secondary schools. Grants may also be awarded to private nonprofit agencies that have an agreement with a local education agency to provide training in drug abuse counseling for individuals who will provide counseling in the schools of that local education agency.

Head Start Substance Abuse Initiative

Susan Weber
Special Assistant to the Commissioner
Administration for Children, Youth and Families
Head Start Bureau
U.S. Department of Health and Human Services
200 Independence Avenue SW
Washington, DC 20201
(202) 245-0436

Head Start has a "Head Start Substance Abuse Initiatives" paper which outlines the objectives and issues, head start activities to support these objectives, strategy to fund head start substance abuse projects, collaborations with other federal programs and national organizations, and special regional initiatives.

Head Start has published a special issue of the Head Start *Bulletin*, outlining Head Start's substance abuse workplan and resources currently available on this issue, and a resource guide for Head Start grantees and other programs interested in collaborating with Head Start on substance abuse issues. The guide describes Head Start's approach to addressing substance abuse and annotates a variety of training and technical assistance materials, organizations, and other resources which can be of assistance.

Head Start has also developed Program Information Memoranda to Head Start Grantees to provide guidance for grantees on suggested Head Start substance abuse issues, objectives, and activities which are appropriate to the Head Start mission, comprehensive in scope and integral to the ongoing operation of the grantee's program.

National Association for Perinatal Addiction Research and Education (NAPARE) National Training Forums

Ira Chasnoff
11 East Hubbard Street, Suite 200
Chicago, IL 60611
(312) 329-2512

NAPARE is conducting a longitudinal study on children perinatally exposed to drugs. At annual multidisciplinary conferences, participants are updated on the latest NAPARE findings and other promising research and practice. Conference highlights usually include "How to" models for successful treatment programs, family interventions, and parent and caregiver training; basic and advanced study tracks; a core program on

drug-affected children for educators and school administrators; discussion of the legal issues; updates on child development studies; new insights in dual diagnosis and mental health; and special health needs of rural populations. Special "town meetings" address each discipline's vision of its role and expectations of other disciplines for a give-and-take model for taking multidisciplinary action in the community.

National Perinatal Addiction Prevention and Technical Assistance Resource Center

Averette Parker
Director, Center for Substance Abuse Prevention (C-SAP)
Substance Abuse and Mental Health Services Administration
Public Health Service
U.S. Department of Health and Human Services
5600 Fishers Lane
Rockville, MD 20857

C-SAP's National Perinatal Addiction Prevention and Technical Assistance Resource Center focuses on improving the quality of health services offered to pregnant women, new mothers, and their children. The Center will convene experts, provide training, offer technical assistance services to community programs, conduct field assessments of data collection systems, promote information exchange on successful programs strategies, and develop a national learning network of experts and practitioners.

C-SAP's Substance Abuse Prevention Conference Grants provide financial support for domestic conferences that coordinate, exchange, and disseminate information about prevention and intervention of alcohol and other drug abuse.

Office for Civil Rights Policy on Children Prenatally Exposed to Drugs

Alice Wender
Office for Civil Rights
Policy, Enforcement, and Program Service
U.S. Department of Education
Switzer Building, Room 5431
330 C Street SW
Washington, DC 20202
(202) 205-8481

The Office for Civil Rights (OCR) has developed a policy on educating drug-exposed children. OCR also has a technical assistance package, entitled "The Application of Section 504 to Children Prenatally Exposed to Drugs," for its staff to use in informing educators and the public about the policy. The OCR policy and technical assistance documents are based on this report, *Educating Young Children Prenatally Exposed to Drugs and At Risk*. Of particular policy note to educators are the following excerpts from the OCR policy and technical assistance document:

- Children who exhibit behavioral problems or learning deficits, and require special school services, should be referred for special services through the established referral procedures.

- I want to make it clear that children should not be automatically identified as handicapped solely because of their prenatal exposure to drugs or their mothers' drug dependency. Although there is evidence that there may be negative outcomes for children prenatally exposed to drugs, no evidence exists to justify categorically classifying children who are prenatally exposed to drugs as handicapped. I raise this concern only because it has been brought to our attention that some educators are automatically labeling these children as 'crack children' and referring them for special education placement.

- In determining whether a child who has been prenatally exposed to drugs is a 'qualified handicapped person,' within the meaning of Section 504, the question always must be whether the child has a physical or mental impairment that substantially limits a major activity *and* qualifies for participation in the program or activity operated by the recipient.

- You should know that the preschool education programs funded under Part B of the Individuals with Disabilities Education Act (also referred to as IDEA), and administered by the Office of Special Education and Rehabilitative Services in ED, must make a free appropriate public education available to all children with disabilities ages three through five. All of the rights and protections of Part B of IDEA must be afforded to these children and their parents or guardians. The requirements of IDEA are independent of the obligations for recipients that operate preschool programs under Section 504 and its implementing regulations.

- An appropriate education means the provision of regular or special education and/or related aids and services designed to meet the educational needs of individuals with handicaps, as adequately as the needs of nonhandicapped persons are met; and designed to meet the requirements of Section 504. These requirements include the following:

  - Educational services designed to meet the individual educational needs of handicapped students as adequately as the needs of nonhandicapped students are met;

  - The education of each handicapped child with nonhandicapped students to the maximum extent appropriate to the needs of the student with a handicap, and a periodic reevaluation of students who have been provided special education and related services;

  - Nondiscriminatory evaluation and placement procedures to guard against misclassification or inappropriate placement of students; and

  - Establishment of due process procedures that enable parents and guardians to review evaluation and placement decisions and that provide for an impartial hearing with opportunity for participation by parents and representation by counsel, and a review procedure.

- A recipient that operates a public elementary or secondary education program must conduct an evaluation of any person who, because of handicap, needs or is believed to need special education or related services, before taking any action with respect to the initial placement of the person in regular or special education and any subsequent change in placement. According to Section 504, the evaluation and

placement procedures administered by school districts must ensure that children are not: (1) misclassified; (2) unnecessarily labeled as handicapped; or (3) incorrectly placed based on inappropriate selection, administration, or interpretation of evaluation materials.

- Recently, the Office of Educational Research and Improvement (OERI) in ED, conducted a study to identify promising practices at the preschool and primary grade levels, and recommended several techniques to assist educators in working effectively with children who are prenatally exposed to drugs. The education practices recommended by OERI do not necessarily represent the standards of compliance with Section 504, nor are these practices Department of Education requirements. However, these recommendations may provide front-line educators and trainers of these educators with useful information on how to work with many preschool and primary children affected by prenatal exposure to drugs. (The 10 recommendations to educators are cited.)

Office of Special Education and Rehabilitative Services (OSERS)

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In addition to the Special Education Program, OSERS supports the Early Education Program for Children with Disabilities (EEPCD) within the Office of Special Education Programs. EEPCD supports research, demonstrations, and other activities to improve special education and early intervention services for infants, toddlers, and young children with special needs from birth through age 8. Included in this group are infants and toddlers served in the Grants to Infants and Families Program and children ages 3 through 8 who require special education as a result of a disability or are at risk of a disability. Children who have been prenatally exposed to drugs may be eligible for services.

The program supports a research institute on interventions for infants, toddlers, and young children exposed to drugs. EEPCD also supports four model demonstration projects and one outreach project that develops and disseminates model programs for serving children prenatally exposed to drugs. They include the following:

- **Children's Hospital Center** in Akron, Ohio, is designing a model of family-centered services for foster care families of infants and toddlers prenatally exposed to drugs. Contact: Susan Leib, project director, (216) 379-8590.

- **Project Infant Care** at Duke University Medical Center is developing a model to provide support to women using cocaine during pregnancy and their infants. Contact: Karen O'Donnell, project director, (919) 684-5513.

- **Los Angeles (California) Unified School District project,** Delivering Special Education Services to Preschool-Age Children in Urban Culturally Diverse Child Care Centers to Preschool-Age Children, is developing a model for serving children in publicly funded child care settings who display developmental delays in language or cognition. Contact: Shizuko Akasaki, project director, (213) 625-4564.

- **Steps for Kids Outreach Project**, Boston City Hospital, is providing an outreach model of co-location of services or "one stop shopping" for women who need substance intervention and their children with special needs. Contact: Margot Kaplan-Sanoff, project director, (617) 534-5650.

- **Project CAPS: Caregiver and Parent Support,** a hospital-based intervention for high risk infants at George Washington University, Washington, DC, is developing and implementing a comprehensive identification, intervention, and referral program for biologically and/or environmentally at-risk infants, their families, and child care providers. Contact: Barbara Browne, project director, (202) 994-6170.

- **Early Childhood Research Institute-Substance Abuse,** administered by the University of Kansas in collaboration with the University of Minnesota and the University of South Dakota University Affiliated Program, is developing, field testing, and disseminating new or improved collaborative interventions for infants, toddlers, and preschoolers who are developmentally delayed, at risk for developmental delay, or disabled because of maternal use of alcohol or drugs, especially crack cocaine and other street drugs. Contact: Judith Carta, principal investigator, (913) 321-3143.

Teaching Strategies for Young Children: At Risk and Drug-Exposed

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See the Profiles section for a description of this program.

Other Sources

Early Recognition Intervention Network (ERIN)
376 Bridge Street
Dedham, MA 02026
(617) 329-5529

ERIC Clearinghouse on Elementary and Early Childhood Education
University of Illinois
College of Education
805 West Pennsylvania Avenue
Urbana, IL 61801
(217) 333-1386

ERIC Clearinghouse on Handicapped and Gifted Children
Council for Exceptional Children
1920 Association Drive
Reston, VA 22091-1589
(703) 620-3660

ERIC Clearinghouse on Urban Education
Teachers College, Columbia University
Institute for Urban and Minority Education
Main Hall, Room 303, Box 40
525 West 120th Street
New York, NY 10027-9998
(212) 678-3433

High Scope Educational Research Foundation
600 North River Street
Ypsilanti, MI 48198
(313) 485-2000

Lincoln Council on Alcoholism and Drugs, Inc.
914 L Street
Lincoln, NB 68508
(402) 475-2694

March of Dimes Birth Defects Foundation
1275 Mamaroneck Avenue
White Plains, NY 10615
(914) 428-7100

National Association for the Education of Young Children
1834 Connecticut Avenue NW
Washington, DC 20009
(202) 232-8777

National Association of State Alcohol and Drug Abuse Directors
444 North Capitol Street NW
Suite 530
Washington, DC 20001
(202) 783-6868

National Black Child Development Institute
1463 Rhode Island Avenue NW
Washington, DC 20005
(202) 387-1281

National Clearinghouse for Alcohol and Drug Information
PO Box 2345
Rockville, MD 20852
(301) 468-2600
1-800-SAYNOTO

National Council on Alcoholism and Drug Dependence, Inc.
(and local affiliates)
National Office
1511 K Street NW, Suite 926
Washington, DC 20005
(202) 737-8122

National Council of La Raza
810 First Street NE
Suite 300
Washington, DC 20002
(202) 289-1380

National Information Center for Children and Youth with Handicaps
PO Box 1492
Washington, DC 20013
1-800-999-5599

National Maternal and Child Health Clearinghouse
38th and R Streets NW
Washington, DC 20057
(202) 625-8410

Office of Substance Abuse Prevention (OSAP)
5600 Fishers Lane
Rockwall II
Rockville, MD 20857
(301) 443-0373

Perinatal Network of Alameda/Contra Costa
2131 University Avenue
Suite 216
Berkeley, CA 94704
(415) 849-9223

Prevention Resource Center
822 South College Street
Springfield, IL 62704
1-800-252-8951

U.S. Department of Education
Office of Educational Research and Improvement
Comprehensive School Health Education Program/FIRST Program
555 New Jersey Avenue NW
Washington, DC 20208
(202) 219-1496

Universal Health Associates, Inc.
1701 K Street NW, Suite 600
PO Box 65464
Washington, DC 20035
(202) 429-9506

Wisconsin Clearinghouse
University of Wisconsin-Madison
PO Box 1468
Madison, WS 53701
(608) 263-2797

Glossary

Amphetamines – Stimulant drug that causes intoxication, withdrawal, delirium, and delusional disorders.

Cannabinoids – Any chemical constituents of marijuana.

Cocaine – A bitter crystalline alkaloid obtained from coca leaves; highly addictive stimulant.

Congenital – Existing before or at birth.

Crack cocaine – A slang or street name used for cocaine which is chemically altered in smokable form. It is a highly addictive substance, causing addiction in many users after 1-3 uses.

Deficit – Deficiency or lack; an impairment in a particular function.

Embryo – A young organism in the early stages of development; from conception to 8th week of gestation.

Fetal alcohol effects – Associated with prenatal alcohol exposure, but inadequate physical or behavioral symptoms for a diagnosis of fetal alcohol syndrome.

Fetal alcohol syndrome – A medical diagnosis based on a cluster of physical and behavioral characteristics in three areas: (1) growth retardation before and/or after birth; (2) a pattern of abnormal features of the face and head; and (3) evidence of central nervous system abnormality. This is associated with a history of maternal alcohol consumption during pregnancy. The unborn offspring; 8th week after fertilization until birth.

Gestation – The period of intrauterine development from conception to birth.

Hallucinogens – A substance that produces hallucinations, an alternation in perception which may be auditory, visual, tactile, olfactory, gustatory, or any combination.

Heroin – A bitter, white crystalline narcotic.

Hyperactivity – Excessive or abnormal activity.

Maternal – Pertaining to mother.

Methadone – A narcotic analgesic used for maintenance treatment of heroin addiction.

Microcephaly – Abnormal smallness of the head, congenital, and usually associated with mental retardation.

Neonatal – Newborn infant up to first month after birth.

Neurobehavioral – Behaviors stemming from neurological origins.

Opiads – Nonsynthetic narcotics derived from opium.

Paternal – Pertaining to father.

Perinatal – The period shortly before and after birth generally considered to begin with completion of 28 weeks of gestation and ending 4 weeks after birth.

Polydrug use – The use of two or more drugs simultaneously or interchangeably in an attempt to augment or modulate the effects of one drug with the other.

Postnatal – Happening after birth.

Prenatal – Existing or occurring before birth.

Psychosocial – Pertaining to or involving both psychological and social factors.

Syndrome – A group of symptoms or signs that collectively characterize a particular disease or abnormal condition.

Teratogen – Drug or agent that causes abnormal development in utero.

Toxicologic screening – Urine test for poison or drugs.

Tremulous – Shaking, trembling, or quivering.

Trimester – A period three months into which the nine months of pregnancy can be divided.

SOURCE: Western Regional Center for Drug-Free Schools and Communities.

Acknowledgments

I am grateful to my colleagues who provided comments.

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Special thanks to Wilma Prudhum Greene in the Office of Educational Research and Improvement for editing the book. Also, special, special thanks to Allen D. Jackson, who spent many evenings and weekends providing computer assistance in preparation of this publication.

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ISBN 0-16-041868-2

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