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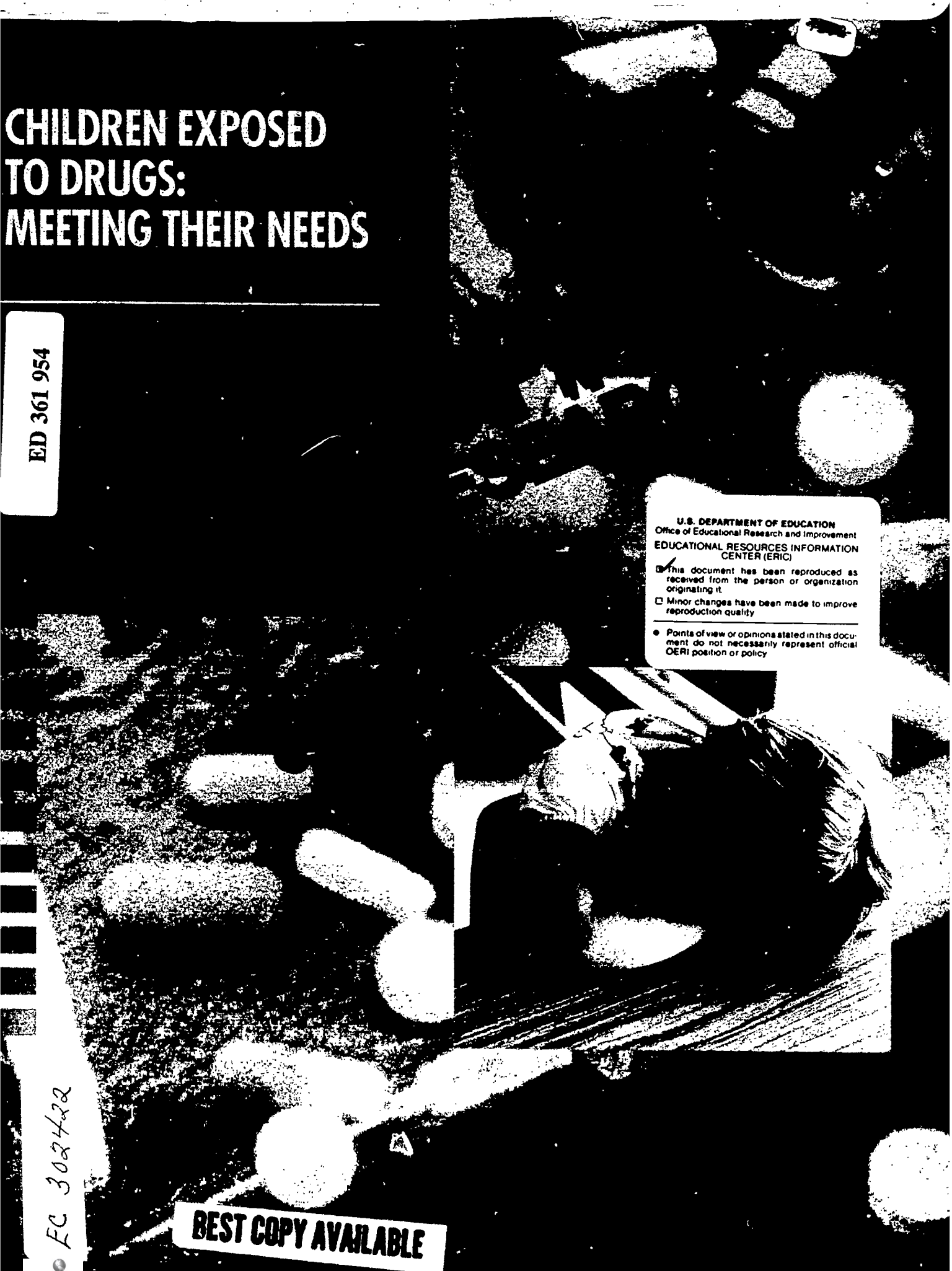
ABSTRACT

This guide attempts to apply research findings on children exposed to drugs during the prenatal period to practical educational considerations. Section I is an overview of the prevalence and impact of substance exposure, including chapters on the effects that prenatal substance exposure and living in a drug-abusing environment have on children. Research findings from studies on children exposed to drugs are summarized. Section II presents programs and services that are proving successful with this population. It describes federal, state, and community early intervention programs as well as training programs for both teachers and parents. Also presented are practices that foster the development of these children and specific ideas from successful programs and practices. Section III identifies a variety of classroom management and instructional strategies, including more examples of effective programs as well as a number of teaching tips. Section IV contains an annotated list of organizations, consultants, publications, and other resources of interest to practitioners and policymakers. The appendices contain information on the Drug-Free Schools Recognition Program, sample behavior modification charts, and a classroom rating scale for teachers. (Contains 120 references.) (DB)

CHILDREN EXPOSED TO DRUGS: MEETING THEIR NEEDS



HOT TOPICS:

Usable Research

CHILDREN EXPOSED TO DRUGS: MEETING THEIR NEEDS

Dianne Wilkes
1993

SERVE

SouthEastern Regional Vision for Education

affiliated with the
School of Education
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and
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ABOUT SERVE AND THE *HOT TOPICS* SERIES . . .

SERVE, the SouthEastern Regional Vision for Education, is a coalition of educators, business leaders, governors, and policymakers seeking comprehensive and lasting improvement in education in Alabama, Florida, Georgia, Mississippi, North Carolina, and South Carolina. The name of the laboratory reflects a commitment to creating a shared vision for the future of education in the Southeast.

The mission of SERVE is to provide leadership, support, and research to assist state and local efforts in improving educational outcomes, especially for at-risk and rural students.

Laboratory goals are to

- address critical issues in the region,
- work as a catalyst for positive change,
- serve as a broker of exemplary research and practice, and
- become an invaluable source of information for individuals working to promote systemic educational improvement.

Each year, SERVE emphasizes one of the national goals established by the President and National Governors' Association. A special three-year project, SERVEing Young Children, will focus on ensuring that all children are ready to begin school.

SERVE offers a series of publications entitled ***Hot Topics: Usable Research***. These research-based publications focus on issues of present relevance and importance in education in the region and are practical guidebooks for educators. Each is developed with input from experts in the field, is focused on a well-defined subject, and offers useful information, resources, descriptions of exemplary programs, and a list of contacts.

Several *Hot Topics* are developed by SERVE each year. The following *Hot Topics* are presently available:

- Appreciating Differences: Teaching and Learning in a Culturally Diverse Classroom
- Children Exposed to Drugs: Meeting Their Needs
- Comprehensive School Improvement
- Interagency Collaboration: Improving the Delivery of Services to Children and Families
- Problem-Centered Learning in Mathematics and Science
- Reducing School Violence
- Schools for the 21st Century: New Roles for Teachers and Principals
- Using Technology to Improve Teaching and Learning

To request publications or to join the SERVE mailing list (everyone on the mailing list will receive announcements about laboratory publications), complete the order forms at the back of this publication or contact the SERVE office in Tallahassee (see next page).

Collaboration and networking are at the heart of **SERVE**'s mission, and the laboratory's structure is itself a model of collaboration. The laboratory has four offices in the region to better serve the needs

of state and local education stakeholders. The contract management and research and development office is located at the School of Education, University of North Carolina at Greensboro. The laboratory's information office, affiliated with Florida State University, is located in Tallahassee. Field service offices are located in Atlanta, Greensboro, Tallahassee, and on the campus of Delta State University in Cleveland, Mississippi. Addresses are provided below.

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QUIZ
What Do You Know About Children Exposed to Drugs?

Directions: Indicate which of the following statements about children exposed to drugs are true and which are false. The correct answers are provided on the next page.

___ **1.** Drug and alcohol use during pregnancy is a problem only in poor, minority populations living in urban areas.

___ **2.** Children who were born prenatally exposed to alcohol or other drugs are ineducable.

___ **3.** Children who were prenatally exposed to cocaine suffer the most severe long-term effects of children born substance-exposed.

___ **4.** Most children who were prenatally exposed to drugs are abandoned by or taken away from their mothers.

___ **5.** Children who were prenatally exposed to drugs are irreparably damaged and have little chance of becoming productive and happy adults.

___ **6.** Since children who are substance-exposed are usually placed in special education programs, regular classroom teachers do not need to know how to work with them.

___ **7.** Teachers need an extraordinary amount of retraining to be able to successfully teach children who have been prenatally or environmentally exposed to drugs.

___ **8.** Children who have been exposed to alcohol and other substances are uncontrollable and violent.

___ **9.** Classifications of children exposed to drugs as "cocaine children" or "drug-exposed babies" are necessary to ensure they are provided the appropriate interventions.

___ **10.** Children who are prenatally exposed to alcohol or other drugs are fundamentally different from other children.

Answers to Quiz

1. **FALSE.** Children born prenatally exposed to alcohol or other drugs come from all socioeconomic backgrounds, races, and geographic areas.

2. **FALSE.** With appropriate techniques, most children who have been substance-exposed learn as well as their peers.

3. **FALSE.** With appropriate interventions, many children prenatally exposed to cocaine improve more dramatically than children exposed to other substances. The long-term effects of prenatal exposure to alcohol, for example, can be far more severe than prenatal exposure to cocaine.

4. **FALSE.** The vast majority of substance-abusing mothers keep their children.

5. **FALSE.** With appropriate interventions, many children exposed to drugs can lead normal, healthy lives.

6. **FALSE.** Since the majority of children who have been substance-exposed are of normal intelligence, most are placed in regular classrooms; therefore, regular classroom teachers need to know how to meet their special needs.

7. **FALSE.** Since the majority of teachers already use the techniques that are successful with children exposed to drugs, the only additional training that most teachers require is in how to meet the children's special needs.

8. **FALSE.** Although some children have difficulty controlling impulses and aggression, most respond well to therapeutic interventions, and their behavior and ability to socialize improves as they mature.

9. **FALSE.** Children who have been prenatally or environmentally exposed to drugs need not be labeled if educators and other professionals involved with their care focus on the symptoms rather than the causes of problems.

10. **FALSE.** Children who have been exposed to alcohol and other drugs are more like their peers than unlike them.

INTRODUCTION

Drugs* are ensnaring millions of Americans, including women of childbearing age, and the number of women using drugs during pregnancy has increased dramatically over the last decade. Researchers now estimate that one in ten newborns has been prenatally exposed to drugs.

The devastating effects of drug exposure have significant implications for educators now that drug-exposed babies have reached school age. Whether they are the victims of prenatal drug exposure or environmental exposure from living with substance-abusing families, these children have a wide range of symptoms, including intellectual and social-emotional problems, that can put them at risk for school failure.

Yet there is hope.

Researchers are finding that efforts to mitigate the damage from prenatal and environmental exposure to drugs are proving effective. Far from being a lost generation, children exposed to drugs are responding so well to early interventions and appropriate teaching techniques that most are capable of performing successfully in regular classrooms.

Because the study of prenatal and environmental exposure to drugs (with the exception of alcohol) is less than a decade old, most research on the effects of drug exposure has been conducted on infants. Longitudinal studies of school-aged children exposed to drugs are not yet complete, and model educational programs have not yet been validated. Even so, early findings from research and practice are identifying educational and other interventions that best serve children exposed to drugs. *Children Exposed to Drugs: Meeting Their Needs* highlights many of these practices as it examines the problem of substance exposure and identifies interventions that are working. It is designed as a guide for both practitioners and policymakers.

Section I is an overview of the prevalence and impact of substance exposure, including chapters on the effects that prenatal substance exposure and living in a drug-abusing environment have on children. Section I also includes "Research Findings" from studies on children exposed to drugs.

Section II presents programs and services that are proving successful with children exposed to drugs. It begins with descriptions of federal, state, and community early intervention programs serving substance-exposed children and their families. Chapter 4 examines district programs for children exposed to drugs and identifies training programs for both teachers and parents. In Chapter 5, school practices that foster the development of children exposed to drugs are presented. Section II also features "Dynamite Ideas" highlighting successful programs and practices.

Section III identifies a variety of classroom management and instructional strategies for teachers of children exposed to drugs, includes examples of effective programs as further "Dynamite Ideas," and offers a number of "Teaching Tips."

**In this document, the terms "drug" and "substance" refer to illicit substances as well as alcohol, tobacco, prescription drugs, and other legal substances that, when ingested by a pregnant woman, adversely affect the development of her baby.*

Section IV contains an annotated list of organizations, consultants, publications, and other resources of interest to practitioners and policymakers. The Appendices contain information on the Drug-Free Schools Recognition Program, sample behavior modification charts, and a classroom rating scale for teachers. The Appendices are followed by an extensive list of references.

Section I

THE IMPACT OF SUBSTANCE EXPOSURE ON CHILDREN

Chapter 1: Prenatal Exposure to Drugs

- Extent of Prenatal Exposure to Drugs
- Effects of Prenatal Exposure to Drugs
- Effects of Commonly Abused Substances
- Contributing Factors

Chapter 2: Environmental Risks

- Bonding and Attachment
- Substance-Abusing Families
- Foster Care

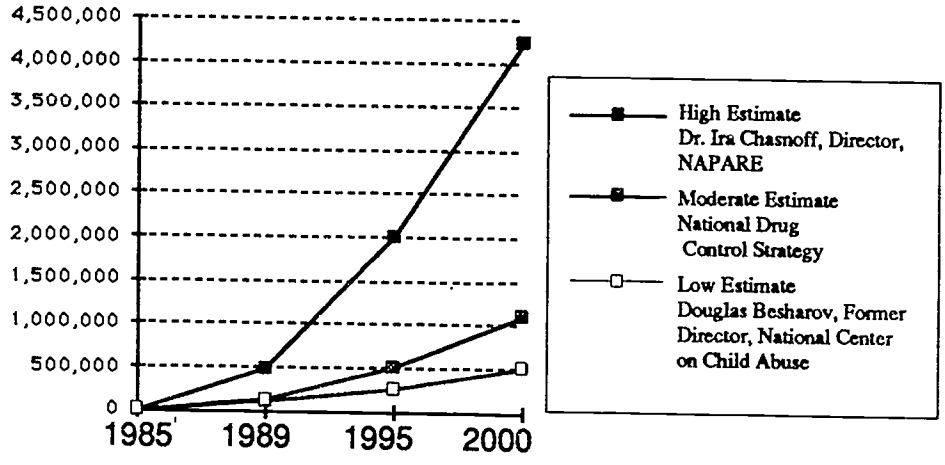
Chapter 1

PRENATAL EXPOSURE TO DRUGS

Some researchers believe that fewer than half of drug-exposed newborns are identified. Most estimates on the extent of prenatal substance exposure are based primarily on self-reported drug use or infant birth records collected by individual hospitals and research centers. As a result, figures on the number of children who are exposed to drugs are inexact (National Association for Perinatal Addiction Research and Education [NAPARE], 1989).

While there is disagreement about the exact number of affected babies, researchers agree that prenatal drug exposure is an alarming problem growing at an alarming rate. Figure 1 below depicts estimates from leading researchers of the number of drug-exposed children born in the United States by the end of the century.

FIGURE 1
Projected Numbers of Drug-Exposed Children



Source: Office of Inspector General, 1990a.

EXTENT OF PRENATAL EXPOSURE TO DRUGS

During the last decade, the incidence of prenatal substance exposure has increased dramatically in the United States, largely because of the appeal of "crack," a highly addictive derivative of cocaine, to women of childbearing age (U.S. General Accounting Office [GAO], 1990; National Drug Information Center [NDIC], 1986). The nation has also witnessed a disturbing increase in the number of children born with below average birthweight—an indicator of serious health risks and learning impairment—which experts attribute to an increased incidence of prenatal drug exposure (Newman & Buka, 1990).

■ *How many pregnant women use alcohol and other drugs?*

While exact figures on the number of substance-abusing pregnant women are not available, leading researchers agree that at least 1 in 10 women uses drugs during pregnancy (Cook, Petersen, & Moore, 1990; NAPARE, 1989; Select Committee on Children, Youth, and Families, 1989).

- Fifty percent of the women receiving prenatal care at D. C. General Hospital in Washington, D. C., test positive for illegal drugs (Koppelman & Jones, 1989).
- A 1991 study of maternal drug use in South Carolina found that 2.5 percent of the delivering women had ingested alcohol or cocaine 8-48 hours prior to delivery (State Council on Maternal, Infant, and Child Health [MICH], 1992).
- Of the 1,226 women who gave birth at Boston City Hospital between 1986 and 1988, 27 percent had smoked marijuana and 18 percent had used cocaine during their pregnancies (Select Committee on Children, Youth, and Families, 1989).
- At the Family Center of Jefferson Medical College in Philadelphia, the number of women receiving obstetric care who tested positive for cocaine rose from 7 percent in 1985 (when crack cocaine was first introduced in this country) to 58 percent in 1988 (Harpring, 1990).

■ *How many babies are affected?*

Studies indicate that as many as 11 percent of the country's newborns—approximately 375,000 infants each year—are affected by prenatal exposure to drugs (Hodgkinson, 1992; NAPARE, 1989).

- Approximately 100,000 infants are born each year exposed to cocaine, according to National Drug Control Strategy estimates (Sullivan, 1990).
- Forty thousand babies are born annually with birth defects from alcohol abuse (Sullivan, 1990).
- As many as 1 in 100 Native American babies is born with fetal alcohol syndrome (Cook et al., 1990).
- The number of drug-exposed babies rose over 700 percent—from 96 in 1987 to 700 in 1989—at Pinellas County's Drug-Involved Family Unit in St. Petersburg, Florida (U.S. Department of Health and Human Services [HHS], 1991a).
- Cocaine-exposed babies account for 80 percent of the substance-affected babies born to women participating in the treatment program at Northwestern Memorial Hospital's Perinatal Center for Chemical Dependence in Chicago (NAPARE, 1989).

Approximately 100,000 infants are born each year exposed to cocaine, according to National Drug Control Strategy estimates.

"Crack is destroying people—I've never seen mothers like this before. "

Jing Ja Yoon
Chief of Neonatology,
Bronx Lebanon Hospital

■ *How widespread is the problem of prenatal exposure to drugs?*

No longer confined to inner cities, substance abuse in pregnancy is found in rural, suburban, and urban settings as well (Select Committee on Children, Youth, and Families, 1989).

- Women living in rural areas in South Carolina use marijuana at roughly the same rate as women in urban areas (MICH, 1992).
- Before 1985, the birth of a substance-exposed baby was rare at St. Mary's Hospital in Palm Beach County, Florida. Now, one drug-addicted baby is born there per day (Gregorchik, 1992).
- In Virginia, a 1990 statewide survey of pregnant women receiving public health care services revealed that 18 percent were using licit and illicit drugs, 15 percent were using alcohol, and 32 percent smoked cigarettes ("Substance-Exposed Babies," 1991).
- Approximately 16 percent of the 105 at-risk preschoolers attending one preschool program in rural Gadsden County, Florida, have been positively identified as substance-exposed.
- In a 1989 study of 5,000 women in Alabama of childbearing age who were screened for marijuana, cocaine, opiates, amphetamines, and barbiturates, no difference was found between urban and rural drug use for any of the drugs tested (George, Price, Hauth, Barnette, & Preston, 1991).

■ *How extensive is the problem of prenatal substance exposure in the Southeast?*

Like most regions of the United States, the Southeast has experienced a dramatic increase during the last decade in the number of babies born substance-exposed.

- Each year in Georgia, between 7,900 and 12,400 women use alcohol or other drugs during pregnancy, according to the Georgia Department of Human Resources.
- In 1991, approximately 15 percent of the children born at Grady Hospital in Atlanta, Georgia, tested positive for prenatal exposure to drugs (Whitford, 1992).
- According to officials with the Mississippi State Department of Health, of the 2,628 pregnant women screened in a 1992 study, approximately seven percent reported using drugs during their pregnancy.
- In South Carolina, roughly one in four babies is born to a mother who uses alcohol or illicit drugs (MICH, 1992).
- The number of cases involving substance-exposed newborns handled by the Florida Department of Health and Rehabilita-

tive Services more than tripled in three years, from 1,930 cases in 1988 to 6,219 cases in 1991 (Zervigon-Hakes & Lockenbach, 1991).

- A 1990 statewide survey in Virginia found that 62 percent of the 1,371 children under age five who received services from child development clinics exhibited symptoms of prenatal drug exposure ("Substance-Exposed Babies," 1991).
- According to officials at Jackson Memorial Hospital in Miami, Florida, 684 babies were born there prenatally exposed to drugs in 1991.
- In a 1991 study of over 6,000 women in Alabama, 8.4 percent of the pregnant women tested positive for drugs (Alabama Department of Public Health, 1992).

■ *Why do women addicts become pregnant?*

Many pregnancies are unplanned. Because drug use interferes with menstrual cycles, many addicts believe that they cannot become pregnant. Others are too preoccupied with drugs to take precautions against pregnancy.

Some women become pregnant deliberately to fulfill a psychological need or to answer a more desperate need. One mother, for example, stated that she needed a baby "to slow me down, to keep me off the streets" (Howard et al., 1989, p. 8). In a more chilling case, an addict whose veins had collapsed from chronic drug use became pregnant to create new veins for injecting drugs ("Substance-Exposed Children," 1991).

■ *Are some women more likely than others to use drugs during pregnancy?*

Women of all ages, races, and economic levels abuse drugs during pregnancy. Drug abuse by low-income minority women often receives much more attention because most research on prenatal substance exposure has been conducted on recipients of public assistance. Women receiving public aid are also far more likely to be tested and reported for substance abuse during pregnancy than women who see private physicians.

In a recent national survey, 16 percent of the white women of childbearing age reported that they had used cocaine at some time in their lives, compared to 9 percent of the African-American women surveyed and 6 percent of the Hispanic women. Forty-eight percent of the white women surveyed reported having used marijuana as compared to 42 percent of the African-American women and 18 percent of the Hispanic women (Adams, Gfroerer, & Rouse, 1989).

RESEARCH FINDINGS

Prevalence Study of Drug Use Among Women Giving Birth

In 1991, South Carolina's State Council on Maternal, Infant, and Child Health commissioned a study on the number of delivering women who used alcohol, illegal drugs, and non-prescribed drugs. The first study of this scope in the nation, the project's purpose was to recommend policies for the prevention and intervention for substance exposure.

To provide accurate estimates of the prevalence of prenatal substance use in South Carolina, the research was based on anonymous specimens from approximately 4,000 women and 1,200 infants. The specimens were collected at hospitals whose patients are representative of the state's population as a whole.

Findings:

- Over 15,000 infants are born each year to mothers who use alcohol, illegal drugs, or non-prescribed drugs.
- Approximately six percent of delivering women use cocaine.
- Over eight percent of the women tested positive for marijuana use.
- Almost ten percent of the pregnant women use barbiturates, and almost seven percent use opiates.

Source: MICH, 1992.

RESEARCH FINDINGS

Prenatal Drug Use in Pinellas County, Florida

In 1989, the National Association for Perinatal Addiction Research and Education (NAPARE) studied the prevalence of drug use by pregnant women in Pinellas County, Florida, as well as the reporting practices for such cases. Conducted in conjunction with Operation PAR (Parental Awareness and Responsibility), Inc., a St. Petersburg drug treatment program, the study involved 715 pregnant women, 380 of whom received prenatal care at public clinics and 335 of whom were seen by private practitioners. Each woman was screened for cocaine, marijuana, opiates, and alcohol during her first prenatal visit.

Findings:

- Of the 715 women screened, 15 percent tested positive for cocaine, marijuana, opiates, and/or alcohol.
- No significant differences were found in the rates of drug use for public and private patients.
- No significant differences were found in the rates of drug use for white women and African-American women.
- African-American women were ten times more likely than white women to be reported to county health authorities for substance abuse during pregnancy.

Source: Harpring, 1990.

The rate of daily alcohol use is much higher for white women than for African-American or Hispanic women, and "binge" drinking (five drinks or more in a day) is three times higher among white women than African-American and Hispanic women (U.S. Department of Health and Human Services, 1988).

■ *How many pregnant substance abusers receive prenatal care?*

Many drug-addicted women do not receive prenatal care. Although proper health care can significantly minimize the effects of prenatal substance exposure, fear of being prosecuted or having their children taken away prevents many women from seeking health care during their pregnancies. Some substance-abusing women do not see a doctor until they are in labor; even worse, others deliver at home to avoid detection ("Substance-Exposed Babies," 1991).

A physical examination during the first trimester of pregnancy (at an average cost of $15-$50) can prevent needless handicaps and save as much as $100,000 annually in the cost of caring for and educating a single child with severe handicaps (Hodgkinson, 1989).

- Sixty-four percent of the mothers of Florida's substance-exposed babies receive no prenatal care (Zervigon-Hakes & Lockenbach, 1991).
- Florida ranked last in the U.S. for early prenatal care usage among African-American women in 1989 (Whitfill, Liu, & Johnson, 1989).

■ *What is the risk of AIDS?*

In addition to other potential problems, some children exposed to drugs in utero are also at risk for the Human Immunodeficiency Virus (HIV) infection, a precursor to AIDS. This risk stems from the mother's use of contaminated needles to inject drugs or from the careless sexual behavior often associated with drug abuse (Gittler & McPherson, 1990).

- Intravenous drug users comprise approximately 21 percent of AIDS cases (Feig, 1990).
- The Centers for Disease Control estimates that over 10,000 children in the United States are infected with HIV. Most are the offspring of intravenous drug users (Feig, 1990).
- Nearly one-third of HIV-infected newborns develop AIDS (Zervigon-Hakes & Lockenbach, 1991).
- Dade County, Florida, has the second highest number of reported pediatric AIDS cases of any county in the nation, and

Florida has the second highest rate of AIDS cases of the states in the U.S. (Zervigon-Hakes & Lockenbach, 1991; Hodgkinson, 1993).

■ *How many pregnant women's substance abuse is diagnosed?*

Substance abuse in pregnancy is one of the most commonly missed of all obstetric and neonatal diagnoses. Health care providers typically fail to recognize or confront substance use by pregnant women, and few hospitals have established protocols for testing pregnant women and newborns for substance exposure.

According to NAPARE president Ira Chasnoff, M.D., many cases of prenatal exposure go unrecognized until after a baby is born addicted, often with severe physical or neurological damage. This lack of recognition, Chasnoff asserts, accounts for the high rate of infant morbidity and mortality of exposed babies (Chasnoff,1988).

Even when screening for suspected substance abuse is conducted, the results may prove inconclusive. Tests for alcohol use, for example, often produce false negative results since alcohol is metabolized and excreted eight hours after consumption. Cocaine cannot be detected by laboratory tests 36 hours after it is ingested.

The rate of daily alcohol use is much higher for white women than for African-American or Hispanic women.

■ *What substance-abuse treatment is available to pregnant women?*

Few detoxification facilities accept women; of those that do, many are not suitable for women with children, most do not accept pregnant women, and almost all have long waiting lists (Besharov, 1989). Pregnant women are often excluded from treatment programs because of legal liability issues. Most treatment facilities lack prenatal and obstetric services, and some of the techniques that are appropriate for treating a mother's drug addiction can be harmful to a developing fetus. For example, withdrawal from methadone, which is widely used to treat addiction, can be more severe for both fetuses and infants than withdrawal from heroin; methadone-exposed children aged 6-15 also experience greater neurobehavioral problems than children who were prenatally exposed to heroin (Davis & Templer, 1988).

- Two-thirds of the hospitals surveyed in 1989 by the Select Committee on Children, Youth, and Families reported that they had no place to refer substance-abusing pregnant women for treatment (Weston, Ivins, Zuckerman, Jones, & Lopez, 1989).
- In 1990, only 135 residential beds were available for the 3,500 reported pregnant addicts in Florida (Harpring, 1990).

- A 1990 survey by the National Association of State Alcohol Drug Abuse Directors, Inc., found that only 11 percent of the estimated 280,000 drug-using pregnant women nationwide received drug treatment (U.S. General Accounting Office, 1990).

■ *What are the health costs of prenatal substance exposure?*

Because many drug-exposed newborns are premature, below normal birthweight, and/or suffering from drug withdrawal, they often require intensive and extended hospital care. "Boarder" babies, most of whom have been abandoned by their mothers, may remain in hospitals for months until foster care can be arranged. While Medicaid pays a large portion of the bill, hospitals absorb much of the cost of care for these babies. In other words, the cost is shouldered by both taxpayers and paying patients.

- Drug-exposed newborns stay in the hospital an average of 13 days longer than healthy infants at an added cost of nearly $23,400 per child (Select Committee on Children, Youth, and Families, 1989).
- The cost of care for the 915 drug-exposed babies born in Los Angeles County in 1986 was $32 million.
- Nationwide costs may be as high as $650 million annually for crack cocaine-exposed babies' first year of life (Cheatham, 1992).

Two-thirds of the hospitals surveyed in 1989 by the Select Committee on Children, Youth, and Families reported that they had no place to refer substance-abusing pregnant women for treatment.

■ *How does the extent of prenatal substance exposure affect social services?*

Babies who were prenatally exposed to drugs are among the most expensive children cared for by the nation's social systems, according to a 1989 study conducted by the Select Committee on Children, Youth, and Families. Parental substance abuse is also responsible for dramatic increases in child welfare caseloads and foster care placements across the country.

- Nationally, child abuse cases due to drug dependency rose 72 percent from 1985 to 1987 (Office of Inspector General, 1990a).
- In 1989, substance abuse was the "dominant characteristic" in the child abuse caseloads of 22 states and the District of Columbia, according to a study by the National Committee for the Prevention of Child Abuse (Besharov, 1989, p. 8).

- Of the two million reported cases of child abuse and neglect each year, over 50 percent involve substance abuse (Center for Early Education and Development, 1990).
- Substance-exposed children now account for 60-75 percent of foster care caseloads in the nation (Select Committee on Children, Youth, and Families, 1989).

■ *How is prenatal substance exposure affecting education?*

Children who are prenatally or environmentally exposed to drugs bring to schools a host of problems that are challenging the expertise of educators and straining already over-burdened educational resources. Special education enrollments are increasing, and educators are requiring training in such areas as teaching children exposed to drugs, interacting with substance-involved families, and collaborating with social service agencies (Senate Majority Staff, 1991).

- Soon an average of two children in every classroom in Florida will be substance-exposed (Sullivan, 1990).
- According to former Secretary of Health and Human Services Louis Sullivan, if current trends continue, children exposed to drugs will one day comprise 60 percent of the students in some inner city schools (Sullivan, 1990).
- Since early intervention services are provided to only 10 percent of the children who have been drug-exposed, most of the problems related to drug exposure are not discovered until the children enter kindergarten (Treaster, 1993).
- The cost to educate children exposed to drugs may be as much as four times the cost to educate the average child (Sullivan, 1990).

"These children have the potential to swamp every system involved with their care—hospitals, child protective services, foster care, and schools."

Congressman George Miller, Chairman
Select Committee on Children, Youth, and Families

How Could a Mother

Jeffrey M. Georgi*

If we are honest, somewhere deep inside most of us resounds the question: "How can a mother do this to her baby?" Confronted by television commercials which graphically show emaciated, struggling infants born to cocaine-using mothers, we are driven to seek quick solutions to an immediate crisis. The power of these images seduces well-meaning citizens to demand revenge against the mothers who dare assault their children with the poison known as cocaine. The human cry is that there is no excuse for such behavior. There is no excuse, for no excuse is necessary. Gone are the days when we burn witches at the stake—gone are the days when we herd lepers into isolation—gone are the days when we attempt to exorcise the epileptic's demons—so too must be gone the days when we persecute women for an illness they did not choose.

I wish I could tell you exactly why cocaine has such a tenacious hold on the addicted. Unfortunately, neither I nor medical science has the complete answer. But we are getting closer. This is what we know. When a person ingests cocaine the cocaine potentiates neurotransmitters, most notably, dopamine. The potentiation of dopamine translates into pleasure with a capital "P." The immediate and short-term effects of cocaine are a potent increase in concentration, an elevation in the person's subjective sense of their own personal power, and a heightened experience of pleasure. . . .

Of interest and of importance, we also know that some people seem biologically vulnerable to the euphorogenic effects of cocaine. Simply put, some people use cocaine and find nothing special about it at all; other people use cocaine and love it. For reasons we cannot yet totally explain, we know that cocaine, particularly when smoked, produces a high that is significantly more seductive and more powerful than the subjective response to amphetamines and other central nervous system stimulants.

We know that shortly after the exposure to cocaine, when the high subsides, most people experience depression and anhedonia, which pushes them to further use. In street parlance, cocaine users start "chasing the high." With the memory of the high so intense and the after effects of the high so depressing, a pharmacological push is on for binge use. After prolonged and consistent exposure to cocaine, the available dopamine within the brain is temporarily depleted. Such a depletion may indeed define the biological foundation of the profound depression experienced by many cocaine users. It may further explain their inability to experience pleasure at all without continued use of the drug.

Not only are there biological realities contributing to cocaine addiction, but there are sociological variables as well. Cocaine is the poor woman's winning lottery ticket, if only for twenty minutes. I am in no way suggesting that only the working poor, the poor, or the underclass fall prey to cocaine addiction—it is indeed an equal opportunity illness. There are countless middle class and affluent men and women who are addicted to cocaine. But, if ever there was a drug uniquely suited for those who face situational despair and cultural depression and hopelessness, cocaine is it. If you grow up in a dead-end world with limited family supports, stunted dreams and aspirations defined by a television set that promises a world you know you can never have; if you are the recipient of a welfare system that rewards irresponsible reproduction and undermines personal initiative; if you face each new day with

the profound confrontation of your own powerlessness, it is only natural to seek momentary relief from a drug guaranteed to give you an intense sense of personal power, potency, and pleasure. It does not surprise me that women use cocaine. What surprises me is that we all don't use this drug.

There is still more that we know about chemical dependency in general and cocaine addiction in specific. For the cocaine-dependent woman, her continued use is not a bad habit similar to biting your fingernails nor is it a matter of simple choice, any more than depression is an active choice on the part of those chronically depressed. Addiction is a mental disorder that erodes willpower and denies free choice. It pharmacologically drives patients to continually use their drug despite negative life consequences. With powerful pharmacological and sociological triggers, cocaine craving gnaws away at abstinent addicts until, in exhaustion, they give into the demands of their drug. Over time, the aggressively addicted cocaine addict uses drugs not so much for the euphorogenic side effects of the drugs but rather as a desperate attempt to break the cycle of anhedonia, depression, and despair. Addiction is a vicious disease and the addict is just as much a victim of his or her illness as is the middle-aged man suffering from coronary artery disease, the 39-year-old woman struggling with adult-onset diabetes, or the 61-year-old grandfather dying of lung cancer.

In my own clinical practice there is clear anecdotal evidence indicating that the potency of motherhood has a greater impact on arresting active alcoholism and heroin addiction than it has on cocaine dependency (I cannot tell you why). There is further anecdotal support for my belief that the hormonal changes inherent in pregnancy and post-partum depression can represent cocaine-relapse triggers which need specific therapeutic intervention. I do not believe these high-risk times are simply coincidental—but rather I believe there is a biological foundation to these relapse patterns. We need to be clearer regarding the neurochemical pathways of cocaine and why some people are so vulnerable to this drug. Unfortunately, research has not yet provided the answers to these and other questions—so we need more research.

HOW CAN A MOTHER USE COCAINE WHEN SHE KNOWS IT MAY HARM HER BABY? . . . She uses cocaine because she is addicted! The cocaine-using mother is not the villain any more than her child is the villain—they are both victims. If there are villains for today, they are people like me who have failed to get the message across that these women need treatment, not punishment. If there are villains for today, they are you and I who have consistently allowed our politicians to put women and children as our lowest social priority.

We can fight this disease called cocaine dependence—we may even be able to beat it—but it will take money, research, political courage, and treatment.

*Text of speech delivered to the Lt. Governor's Conference on Cocaine, Charlotte, North Carolina, December 9, 1991. (Adapted with permission.)

EFFECTS OF PRENATAL EXPOSURE TO DRUGS

The rapidly growing body of research on prenatal exposure to alcohol and other drugs strongly indicates that drug use during pregnancy can create a multitude of problems for the developing fetus, infant, and child. As is often the case in new fields of research, there is some disagreement about the level of impact of prenatal exposure, but all researchers agree on one point: **drug use by a pregnant woman puts her developing baby at great risk.**

Researchers also agree that

- babies who were prenatally exposed to drugs are much more likely than drug-free newborns to be born with low birthweight,
- drug-exposed infants are at a much greater risk for Sudden Infant Death Syndrome (SIDS), and
- prenatal drug exposure is more likely to affect children's behavioral and neurobehavioral patterns than their growth (Cook et al., 1990).

Drug use during pregnancy can create a multitude of problems for the developing fetus, infant, and child.

■ *What drugs are most commonly abused by pregnant women?*

Although crack cocaine is making the headlines, alcohol and cigarettes are by far the most commonly abused drugs by pregnant women.

■ *How do drugs affect the developing fetus?*

Some people believe that the fetus is protected from dangerous substances by the mother's placenta. Actually, the opposite is true. Alcohol and other drugs flow rapidly and easily from the mother's bloodstream through the placenta to the baby. Because the fetal liver is not fully developed, such substances also remain in the fetus for a much longer time than in the mother. Cocaine, for example, has been found in six day-old infants who were exposed to the drug two to three days before birth (Schneider, Griffith, & Chasnoff, 1989).

Drugs that are inhaled or injected tend to reach the fetus faster and in higher concentrations than drugs taken orally.

■ *How does the timing of drug exposure affect the fetus?*

- Drug use at any time during pregnancy poses significant risks to the developing fetus.

- Drug use during a pregnancy can bring about a spontaneous abortion, stillbirth, or premature labor.
- Because the central nervous system begins developing during the first eight weeks of pregnancy, the embryo is especially vulnerable to chemical injury; consequently, exposure to toxic doses of drugs at this stage of development can result in malformations of organs and limbs or death.
- Drug exposure during the third through the ninth months of pregnancy is likely to result in retarded fetal growth and subtle mental and behavioral deficits.
- Drug use near the time of delivery may precipitate premature labor.

■ *How do the dosage, frequency, and level of drug use affect the fetus?*

Because there is a fundamental dose-response relationship between the drug and the mother, the larger the drug's dose, the more toxic its effects are on the fetus. Still, while chronic and binge drug use are more likely to cause damage, even very limited drug use has been linked to fetal injury. In other words, there is no "safe" dosage or time for drug use during pregnancy.

Because there is a fundamental dose-response relationship between the drug and the mother, the larger the drug's dose, the more toxic its effects are on the fetus.

■ *What is the difference between "drug-addicted" and "drug-exposed" babies?*

Not all drugs are physically addictive; therefore, not all babies exposed to drugs are born "hooked." The three categories of effects suffered by infants prenatally exposed to alcohol and other drugs are as follows:

1. **Addiction**—The baby is born addicted to a drug, such as heroin, and undergoes withdrawal, lasting for days, weeks, or months, depending on the drug. Afterwards, the infant may develop more or less normally.
2. **Toxicity**—Toxicity occurs when large doses or prolonged use of drugs cause direct injury to the developing fetus. Toxic effects most often result in malformations or central nervous system deficits.
3. **Teratogenicity**—Teratogenic effects are injuries to the metabolic, endocrine, or central nervous system functions that can result in structural damage to the fetus. More complex than addiction or toxicity, teratogenicity may or may not be apparent at birth; in fact, some teratogenic effects may not emerge until childhood or adolescence. Because teratogenic effects take a variety of forms, identification and intervention is difficult (Weston, Ivins, Zuckerman, Jones, & Lopez, 1989).

The southeast states have among the highest rates of low birthweight babies in the U.S., with Mississippi ranked highest of the fifty states.

■ *What is the significance of low birthweight?*

One of the most common consequences of prenatal exposure to alcohol and other drugs is low birthweight, which is defined as less than 2500 grams (5.5 pounds) at birth. Low birthweight results when babies are born too early or fail to grow properly in the womb because of placental insufficiency, maternal malnutrition, or restricted blood flow to the fetus.

About seven percent (270,000) of the babies born in the United States each year are born with below-normal weights. While advances in medical technology have helped reduce infant mortality, the incidence of low birthweight has increased, largely due to the growing numbers of drug-exposed babies, who are four times more likely than other babies to be born with below-normal weights (Newman & Buka, 1990).

In addition to indicating that a baby did not thrive in the mother's womb, low birthweight puts the infant at significant risk during the first year of life. Babies with low birthweight

- account for two-thirds of all neonatal deaths.
- are 40 times more likely than babies of normal weight to die during their first month of life.
- are 20 times more likely to die in the first year of life (Zervigon-Hakes & Lockenbach, 1991).

Children who are born with very low birthweight (less than 3 pounds, 3 ounces), are 200 times more likely than other babies to die in the first month after birth (Institute of Medicine, 1985).

■ *How many children are born with low birthweight in the Southeast?*

The southeast states have among the highest rates of low birthweight babies in the U.S., with Mississippi ranked highest of the fifty states. As indicated in the chart on p. 15, Georgia is the only southeast state in which the number of low birthweight babies decreased over the last decade.

■ *What are the educational implications of low birthweight?*

Low birthweight is the most prevalent of the preventable causes of learning impairment. Children born with below- normal birthweight

- often have neurodevelopmental handicaps, including cerebral palsy and seizure disorders, that are linked with learning disabilities and behavioral problems in the classroom;

FIGURE 2
Low Birthweight Babies in the Southeast

State	Percent Born in 1980	Percent Born in 1989	National Rank
Alabama	7.9	8.3	5
Florida	7.6	7.7	11
Georgia	8.6	8.3	5
Mississippi	8.7	9.4	1
N. Carolina	7.9	8.1	7
S. Carolina	8.6	9.2	2
United States	**6.8**	**7.0**	—

Source: Center for the Study of Social Policy, 1992.

- are more likely to have problems such as delayed speech and language development, cognitive disorders, attention deficits, and hyperactivity, which lead to poor school performance; and
- are more susceptible to chronic respiratory problems that can interfere with school attendance.

As indicated in Figure 3 (p. 16), low birthweight is associated with poor school performance for grades K-12.

EFFECTS OF COMMONLY ABUSED SUBSTANCES*

At present, little is known about the effects of prenatal exposure to specific drugs. With the exception of alcohol, very few large-scale studies have examined fetal reactions to individual substances; still fewer have examined the impact of the timing and amount of drug exposure. Because most substance-abusing pregnant women use more than one drug and because "street" drugs are rarely in pure forms, isolating the effects on the fetus of specific drugs is extremely difficult.

Even less is known about the long-term effects of prenatal substance exposure on children's development. Because crack cocaine was first

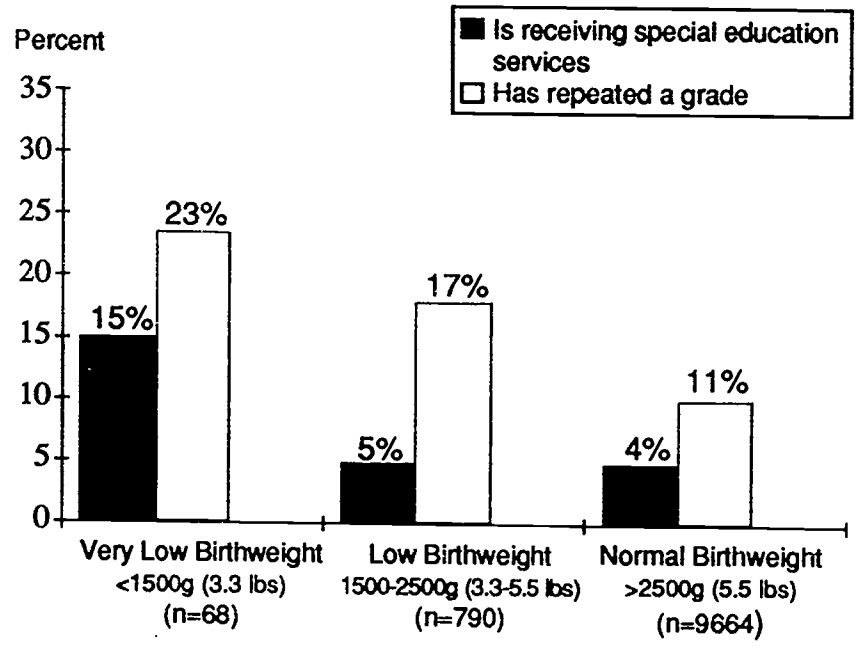
**Unless otherwise indicated, information about the following drugs is taken from the Office for Substance Abuse Prevention's publication* Alcohol, Tobacco, and other Drugs May Harm the Unborn *by Paddy S. Cook, Robert C. Petersen, and Dorothy T. Moore, 1990.*

Of children born with very low birthweight, only 30 percent have IQs above 90, as compared to 65 percent of those born at normal birthweight.

Lucile Newman and Stephen L. Buka
Every Child a Learner, 1990

introduced in the U.S. during the mid-1980s, researchers can only speculate on its lasting effects. Although several longitudinal studies are underway, researchers are having difficulty discerning which effects are caused by prenatal drug exposure and which are the result of environmental factors associated with substance-involved families.

FIGURE 3
Relation of Birthweight to School Performance for Children Aged 4-17



Source: McCormick, Gortmaker, & Sobol, 1990. Based on 10,522 children in the National Health Interview Survey, Child Health Supplement.

Because much of the research on prenatal substance exposure has been conducted on poor women and children receiving public aid, researchers also have difficulty distinguishing outcomes of prenatal drug exposure from those due to poverty and related factors. In most studies the effects of prenatal drug use are likely to be exacerbated by poor nutrition, poor general health, inadequate prenatal care, and other factors associated with poverty.

For these reasons, the effects of prenatal exposure to specific drugs described on following pages should be viewed as possible or likely, rather than certain, outcomes:

Alcohol

Alcohol is the most widely used—and abused—drug in the United States. Ethanol, its active ingredient, is a central nervous system depressant that slows down bodily functions such as heart rate and respiration. Alcohol produces feelings ranging from well-being, conviviality, and relaxation in small doses to depression and hostility in large doses. Chronic heavy drinking can result in liver disorders, high blood pressure, heart disease, deficiencies in the body's immune system, and impaired brain functioning.

- *How does prenatal exposure to alcohol affect the infant?*

Frequent or heavy drinking throughout pregnancy may cause serious birth defects, the most severe of which is the constellation of symptoms termed *fetal alcohol syndrome* (FAS). A diagnosis of FAS requires at least one feature from each of the following three categories:

1. Retarded growth before and/or after birth—with abnormally small head circumference, weight, and/or length
2. Central nervous system disorders—with signs of abnormal brain functioning, delays in behavioral development, and/or intellectual impairment
3. Abnormal craniofacial features (at least two)—small head, small eye or short eye openings, poorly developed philtrum (the groove above the upper lip), thin upper lip, short nose, or flattened midfacial area

Other abnormalities associated with FAS include crossed eyes and near-sightedness, malformations of the ears, heart murmurs, liver and kidney problems, retarded bone growth, upper respiratory problems, and hernias.

Of the babies affected by prenatal exposure to alcohol, almost three times as many suffer from fetal alcohol effects as FAS. Exposed to lower levels of alcohol, these babies may have ear and eye defects, heart defects, physical deformities, joint and limb malformations, birthmarks, cerebral palsy, mental retardation, and neurological abnormalities.

Infants of heavy drinkers often suffer from feeding difficulties, problems self-regulating physiological states and sleeping patterns, and unresponsiveness. The child's resulting restlessness and irritability often inhibits the process of bonding with his or her parents.

Alcohol is the most widely used—and abused—drug in the United States.

RESEARCH FINDINGS

Behavior and Learning Disabilities in Children Exposed Prenatally to Alcohol

In a study conducted by the Learning Disorders Unit of Yale-New Haven Hospital, 87 children were evaluated for indications of prenatal alcohol exposure. The children, all of whom were of normal intelligence, had been referred because of learning problems.

Findings:

- Of the 87 children evaluated, 15 were found to have been exposed prenatally to large amounts of alcohol.
- None of the 15 alcohol-exposed children displayed the severe symptoms of Fetal Alcohol Syndrome, but all showed the deficits in growth, facial anomalies, and "soft" neurological irregularities that would suggest prenatal exposure to alcohol.
- Although all the children prenatally exposed to alcohol were of normal intelligence, subtle central nervous system impairments resulting from exposure to alcohol caused behavioral and learning deficits.

Source: Shaywitz, Cohen, & Shaywitz, 1980.

Because alcohol is excreted within eight hours after being ingested, tests for fetal alcohol exposure are often inaccurate. As a result, prenatal exposure to alcohol may not be diagnosed for several years.

■ *What are the effects of prenatal exposure to alcohol on the child?*

FAS is the leading cause of mental retardation in the U.S. and the third leading cause of birth defects (Cook et al,. 1990; Hand, 1992a). Prenatal exposure to alcohol may also cause subtle central nervous system deficits resulting in behavioral and learning abnormalities, including hyperactivity, impaired motor development, and developmental delays.

Cocaine

Cocaine is a powerful, short-acting central nervous system stimulant that is extracted from the South American coca bush. It is snorted through the nose, injected into a muscle or vein, or converted into a smokable form called "freebase."

Crack (named for the sound it makes when it is being smoked) is a nearly pure form of cocaine that comes in the form of a light brown or milky white pellet or "rock." Because it is smoked, crack cocaine delivers a burst of cocaine to the brain in less than 15 seconds, causing a dramatic high. Persons who smoke crack cocaine report feeling extremely powerful and sexually aroused. Yet within minutes the user is left craving more, as the euphoria is replaced by severe depression, paranoia, and irritability. As a result, crack cocaine users rapidly fall into a vicious cycle that can leave them physically and psychologically addicted in as little as two weeks (Koppelman & Jones, 1989).

Substance abuse experts believe that women use crack cocaine more than other illicit drugs because it is inexpensive ($3-$10), accessible, and does not require intravenous injection (GAO, 1990). According to Dee Ann Caudel of the Michigan Office of Substance Abuse Services, unlike depressants such as heroin, crack cocaine "makes women feel good and powerful. They like that feeling" ("Substance-Exposed Babies," 1991, p. 1). Of women seeking treatment for drug addiction, almost twice as many are addicted to cocaine as alcohol.

■ *How does prenatal exposure to cocaine affect the infant?*

When ingested during the early months of pregnancy, cocaine can cause a spontaneous abortion. Used later, it may result in prema-

ture labor, a fetal stroke causing irreversible brain damage, or a stillbirth delivery. Cocaine decreases blood flow to the fetus, cutting off the passage of growth-enabling nutrients and oxygen. In some cases, neurological and respiratory problems may result, or organs may be underdeveloped or malformed. Cocaine can also cause the placenta to pull away from the wall of the uterus before labor begins, causing extensive bleeding. This condition, known as *abruptio placentae*, is potentially fatal to both mother and child.

Babies exposed to cocaine in utero often experience tremors, stiff muscles, increased respiratory and heart rates, and difficulty sucking and swallowing. They are generally unresponsive to the human voice and face, lack the ability to interact with others, and are highly unstable emotionally. Because they are very sensitive to even the mildest environmental stimulation, newborns affected by cocaine cry a great deal. They do not fall asleep readily and once asleep are easily awakened. They may remain irritable for six to eight weeks after birth and may not respond well to their environments until they are two to three months old. Physicians also report a higher incidence of autism among cocaine-exposed children (Davis, 1993).

- *What are the effects of prenatal exposure to cocaine on the child?*

Research indicates that drug-exposed children differ from other children in intellectual functioning, quality of play, and security of attachment to their parents or parent figures. Their performance in school can be impaired by learning problems, attention deficit disorders, and language delays. Cocaine-exposed children often have tantrums, poor impulse control, and an inability to regulate behavior. Other long-term developmental problems associated with prenatal exposure to cocaine include irritability, mood swings, sleeping irregularities, eating problems, and difficulties with short-term memory (Davis, 1993; Kronstadt, 1989).

Cigarette smoking is the single most preventable cause of disease and death in the United States.

Tobacco

Cigarette smoking is the single most preventable cause of disease and death in the United States. Its yearly death toll is approximately 400,000. Tobacco smoke contains numerous toxins, including carbon monoxide, nitrous oxide, lead, hydrogen cyanide, and 43 known carcinogens. Nicotine, the active ingredient in cigarettes, is an addictive drug capable of either stimulating or relaxing the user.

Portrait of Chad

Chad, who is 14, was born with fetal alcohol syndrome, although it was diagnosed only a year ago.

Chad is adopted, which is typical of children with fetal alcohol syndrome. Most of the mothers of fetal alcohol syndrome children are unable to care for them. As a baby, Chad was left alone for long periods while his mother drank in bars. By the time he was 3, social workers had permanently removed him from his mother's custody, and he had lived in five foster homes. The effects of fetal alcohol syndrome make it hard to rear these children. Mothers often give up.

It is not unusual for FAS children to be shunted from one foster home to another. The day his adoptive mother took him home, she was handed a report that said he was mean to other children in foster care. His adoptive mother says she was so happy to get Chad that the report did not sink in. In the years since, Chad was seen by a number of specialists, but "no doctor had ever mentioned fetal alcohol syndrome," his adoptive mother said. She came across his condition almost by accident, after going to a program on drug abuse.

Chad had always had problems learning in school and making

continued on page 21. . .

■ *How does prenatal exposure to tobacco affect the infant?*

Babies born to women who smoke during pregnancy are likely to be significantly lower in birthweight and shorter in length than babies born to nonsmokers. In fact, the Surgeon General's current warning on cigarette packs states that "smoking by pregnant women may result in fetal injury, premature birth, and low birthweight." During their first year of life, children of smokers are at greater risk than the babies of nonsmokers of death from SIDS or respiratory problems. Prenatal exposure to tobacco is also suspected of contributing to heart defects, cleft palates, hernias, and central nervous system abnormalities.

■ *What are the effects of exposure to tobacco on the child?*

Maternal smoking during pregnancy has been linked to impaired intellectual and physical growth in children as well as behavioral problems such as a lack of self-control, irritability, hyperactivity, and disinterest (Rush & Callahan, 1989). Children who are exposed to smoke in utero or live in households with smokers are more likely to develop middle ear infections, colds, asthma, and other respiratory problems; recent studies are finding links between second-hand smoke and cancer. Longitudinal studies suggest that smoking has a cumulative negative effect on children's verbal performance (Newman & Buka, 1990).

Marijuana

Marijuana is a mind-altering drug made from the dried particles of the hemp plant. The strength of marijuana's effects depends on the amount of THC (delta-9-tetrahydrocannabinol) it contains as well as the effects of the potentially 2,000 secondary chemicals contained in marijuana tobacco. It is typically smoked in cigarettes, pipes, or water pipes or mixed with food and eaten. Marijuana's appeal is its intoxicating and sensory-distorting euphoria.

■ *How does prenatal exposure to marijuana affect the infant?*

Because the chemical content and potency of marijuana vary widely, consistent findings on its effects are few. Research suggests, however, that prenatal exposure to marijuana may result in premature births or low birthweight. Marijuana also appears to have a synergistic effect when it interacts with other drugs. For example, when combined with alcohol consumption, marijuana use has been found to be a strong predictor of fetal alcohol syndrome symptoms in newborns.

Newborns whose mothers smoked marijuana heavily during pregnancy have an increased incidence of low birthweight and may be irritable, tremulous, and deficient in visual functioning for the first month of life.

■ *What are the effects of prenatal exposure to marijuana on the child?*

Because marijuana is typically used in conjunction with other drugs, studies of its effects on children are limited and inconclusive.

Narcotics

Narcotics, central nervous system depressants, are opiates derived from poppy plants. They include illicit drugs, such as heroin and opium; therapeutic medications, such as codeine and morphine; and synthetic forms, such as Demerol, Darvon, Percodan, and Methadone, which are used to relieve pain. Narcotics come in a variety of forms, including powders, liquids, tablets, syrups, and capsules, and are taken intravenously or orally. Because they evoke feelings of euphoria, all narcotics have a high potential for abuse.

■ *How does prenatal exposure to narcotics affect the infant?*

The majority of infants born to mothers with a recent history of narcotics abuse suffer from severe withdrawal characterized by increased sensitivity to noise, irritability, poor coordination, and uncoordinated sucking and swallowing reflexes. Termed "neonatal abstinence syndrome," this withdrawal can last for up to six months (Chasnoff, 1988). Infants prenatally exposed to narcotics are also at risk for growth retardation, low birth-weight, and small head size. Approximately 80 percent of the babies born to heroin-addicted mothers suffer serious medical problems, such as brain hemorrhages and respiratory distress.

Since heroin and other narcotics are typically taken intravenously, a mother using these drugs is also at great risk for contracting—and infecting her baby with—hepatitis, endocarditis, and HIV. Intravenous drug use also increases the risk of miscarriage and stillbirth.

■ *What are the effects of prenatal exposure to narcotics on the child?*

Children prenatally exposed to narcotics may have slowed psychomotor development, impaired visual motor functioning, and such behaviors as hyperactivity, shortened attention spans, and frequent temper tantrums.

Portrait of Chad

. . . *continued from p. 20*

friends. Some in his school system know of the diagnosis, but knowledge of it is not widespread. His family decided it would only make things worse to tell people why he cannot do what other children can. While other children like to hang around friends, Chad does not. His mother has to make him play. He likes to rake the yard and do other simple, repetitive chores. He cannot do regular school work.

"I used to tell him he could be anything he wanted to be. He won't be a doctor, won't be the president of the United States," his mother said. Now she has more realistic hopes. "Maybe he could live out of our home."

Source: Hand, 1992. (Adapted with permission.)

RESEARCH FINDINGS

Developmental Abilities of Children Prenatally Exposed to Cocaine and Other Drugs

The Perinatal Center for Chemical Dependence in Chicago conducted a study of 263 two-year-old substance-exposed children at Northwestern Memorial Hospital. The children were categorized as cocaine/polydrug-exposed because most of their mothers used drugs such as marijuana and alcohol in addition to cocaine during their pregnancies.

Findings:

- The newborns of cocaine/polydrug-using mothers were more likely to be born prematurely, weigh less, be shorter, and have smaller head circumferences (a sign of diminished brain growth) than the drug-free newborns.
- By 12 months of age the two groups were not significantly different in weight and length, but the head circumference measurement still remained smaller in the drug-affected children at age two.
- Although they scored within the normal range for cognitive development, drug-exposed two-year-olds scored lower than the drug-free children on developmental tests measuring the ability to concentrate, interact with others in groups, and cope with an unstructured environment.

Source: Harpring, 1990.

Tranquilizers

Tranquilizers are drugs that affect the central nervous system. They are typically prescribed to relax patients or to combat severe depression. They "screen" nerve impulses by calming certain areas of the brain while allowing the rest to function normally. Tranquilizers are often used by substance abusers to enhance the effects of other drugs or to relieve withdrawal symptoms.

■ *How does prenatal exposure to tranquilizers affect the infant?*

Newborns of mothers who use tranquilizers may suffer such symptoms as a reduced ability to nurse, hypothermia, and breathing abnormalities. Infants who are exposed to Valium in utero often suffer tremulousness and other symptoms of withdrawal at birth. They are also at great risk for congenital defects, including cleft palates, lip anomalies, and malformations of the heart, arteries, and joints. A mother's use of Librium during pregnancy can result in central nervous system abnormalities in the infant. Dalmane can cause lethargy and abnormal muscle tone.

■ *What are the effects of prenatal exposure to tranquilizers on the child?*

Heavy use of tranquilizers can result in impairments similar to those associated with fetal alcohol syndrome.

Barbiturates

Barbiturates, which also affect the central nervous system, are used to treat anxiety or insomnia. These sedatives are typically used by drug abusers to relieve withdrawal symptoms.

■ *How does prenatal exposure to barbiturates affect the infant?*

Sudden withdrawal from barbiturates may put an infant at risk for seizures or even death. While the symptoms resemble those experienced by babies born addicted to heroin, withdrawal from barbiturates tends to be more prolonged and severe.

■ *What are the effects of prenatal exposure to barbiturates on the child?*

Barbiturates have been linked to congenital birth defects. Long-acting barbiturates, such as Phenobarbital, cause symptoms resembling fetal alcohol syndrome.

PCP (Phencyclidine)

PCP—"Angel Dust"—is a "designer" synthetic drug first developed in the 1950s as an anesthetic agent for surgery. Although PCP is illegal today, it is widely available due to its low cost and the ease with which it is produced. Notorious for its unpredictable effects, PCP acts at different times as a stimulant, depressant, or hallucinogen, producing feelings ranging from grandiosity to confusion to hostility. While the most popular method of ingesting PCP is by smoking marijuana, parsley, or tobacco sprinkled with PCP powder, it can also be inhaled, injected, or taken orally.

■ *How does prenatal exposure to PCP affect the infant?*

Newborns who have been prenatally exposed to PCP experience tremulousness, stiff muscles, and rapid changes between restlessness and calm. Caregivers indicate that these babies are more unstable and less consolable than infants prenatally exposed to other drugs.

■ *What are the effects of prenatal exposure to PCP on the child?*

While research on prenatal exposure to PCP is sparse, preliminary findings on its long-term effects indicate that, like other central nervous system drugs, PCP can cause abnormal neurodevelopment and developmental deficiencies that impair learning ability.

Polydrug Use

Among substance-abusing pregnant women, polydrug use tends to be the rule. Substances like alcohol and tobacco, for example, are often used in conjunction with a primary "drug of choice" such as crack cocaine.

■ *How does prenatal polydrug exposure affect the infant?*

With polydrug use, the whole is greater than the sum of the parts because the interaction of chemicals can be more harmful than the drugs in isolation. For example, studies have found that fetal growth is impeded much more when cocaine is combined with other substances such as cigarettes and marijuana than when it is used alone.

■ *What are the effects of prenatal exposure to more than one drug on the child?*

RESEARCH FINDINGS

Effects of Prenatal Polydrug Exposure

UCLA's Department of Pediatrics has been researching the effects of prenatal substance exposure since 1981. Comparing the development of toddlers whose mothers were polydrug users to the development of toddlers who were born drug-free, a team of researchers, led by Dr. Judy Howard, M. D., has discovered significant differences between the two groups in intellect, play, and attachment.

Findings:

The polydrug-exposed children

- scored significantly lower on developmental tests, but fell within the low-average range.
- showed striking deficits in their ability to participate in unstructured, free play situations requiring self-organization, self-initiation, and follow-through.
- engaged in play consisting of scattering, batting, and picking up and putting down toys rather than the representational play (sustained combining of toys, fantasy play, or curious exploration) more common in the comparison group.
- exhibited more impulsive, less goal-directed behavior than the comparison group.
- were less securely attached to their caregivers than the comparison group.

Source: Howard, Beckwith, Rodning, & Kropenske, 1989.

As with many individual drugs, the long-term effects of polydrug use are difficult to predict; however, since the short-term effects of polydrug use are more serious than the effects of the individual drugs, the long-term effects are likely to be more harmful as well. For example, when cocaine and alcohol are used separately, each produces a metabolite, a substance that either increases or decreases metabolism. When they are used together, a third metabolite is produced, which some researchers believe may be the cause of major developmental problems.

As with many individual drugs, the long-term effects of polydrug use are difficult to predict.

CONTRIBUTING FACTORS

While the extent of damage on a child from drug exposure is related to the type, timing, and amount of drug exposure, research indicates that the relationship is not as direct as might be expected. Other factors, including the fetus's constitution or genetic endowment, can influence the effects of prenatal drug exposure (Barth, 1991; Cook et al., 1990).

Chief among these prenatal factors is

Poverty—Children living in poverty are over four times more likely than other children to die of SIDS.
Mother's Health—Poor maternal nutrition and inadequate health care can compound the harmful influence of the toxic substances used by the mother during pregnancy.
Mother's Age—Babies born to teenage or over-forty mothers are at greater risk for low birthweight, premature birth, and disabilities.
Prenatal Care—Studies indicate that the incidence of low birthweight can be reduced as much as ten percent for substance-exposed babies whose mothers receive prenatal care.

Recent research has also found that cocaine can be absorbed by sperm, which may indicate a link between drug use by fathers and abnormal development in their offspring (Yazigi, 1991).

As a result of the interaction of these prenatal and environmental factors, some children who experienced only moderate drug exposure in utero have serious problems, while others who experienced extensive exposure have few impairments (Barth, 1991). In fact, different levels of damage have been found in fraternal twins born to alcoholic mothers.

National Association for Perinatal Addiction Research and Education

The Chicago-based National Association for Perinatal Addiction Research and Education (NAPARE) leads the nation in research conducted on the effects of substance exposure on children. Directed by Ira Chasnoff, M.D., NAPARE's membership includes nurses, social workers, physicians, addiction counselors, child welfare workers, foster parents, midwives, physical therapists, and educators.

NAPARE's education-related research includes the following projects and programs:

Developmental Follow-Up Study

Begun in 1986, this project is the longest-running longitudinal study of children prenatally exposed to cocaine. The mothers of the 400 children now in the study were enrolled during pregnancy, their drug use patterns were tracked throughout gestation, and neonatal outcomes have been analyzed within the context of the mothers' patterns of drug use. The children receive medical and developmental evaluations at regular intervals. When they reach school age, they are referred to a Head Start or other pre-school program; if they have serious deficits, they receive special education or other therapeutic services.

Child Study Center

The Center informs parents about the possible outcomes of drug exposure. It was established in 1990 in response to requests from parents and other caregivers for specialized medical and developmental evaluations of drug-exposed children.

State-Funded Pre-Kindergarten For At-Risk Three- and Four-Year-Old Children

The children enrolled in the state-funded pre-kindergarten housed at the Women's Treatment Center were not exposed prenatally to drugs but live in environments where drugs are abused. They are the children of women who are in treatment at the Center. A collaboration between NAPARE and the public school system, the program is funded by the Chicago Board of Education, which provides one special education teacher and one early childhood teacher. Methodologies developed for working with these high-risk children will be used in designing classroom strategies for pre-school and school-age children affected by parental drug use.

Source: Jackson (in press).

Chapter 2

ENVIRONMENTAL RISKS

Experts agree that children of substance-abusing parents have numerous school and behavioral problems whether they are born to drug-using mothers or raised by drug-using caretakers. Thus, the term *substance exposed* has come to mean *environmentally exposed* as well as prenatally exposed to drugs.

Environment plays a critical role—according to some experts the *most* critical role—in the life of the substance-exposed child. A structured environment in which a child is protected, nurtured, and loved can go a long way toward alleviating the damage caused by prenatal drug exposure.

The term *substance exposed* has come to mean *environmentally exposed* as well as prenatally exposed to drugs.

As with all children, the parents or other caretakers of children who have been substance-exposed play the most important role in their development. In addition to providing protection, food, and physical care, caretakers are central to children's intellectual and social-emotional growth. Prenatally drug-exposed children who grow up in happy, safe, and stable homes have an excellent opportunity for healthy development. Children—prenatally exposed to drugs or not—who grow up in chaotic or abusive environments or are moved from one foster home to another are unlikely to thrive physically, intellectually, socially, or emotionally.

What are environmental risks?

Environmental risks are physical or social factors that may inhibit children's healthy development. While statutory definitions of *at-risk* differ from state to state, a child is generally considered to be developmentally at-risk if he or she is

- under the care of a parent or guardian who is unable to perform adequate parenting functions (due to such problems as inadequate financial resources, psychological dysfunction, incarceration, or substance abuse);
- homeless, living in a home environment lacking adequate physical resources, living in foster or shelter care, or institutionalized;
- born to a teen mother; or
- a victim (or the sibling of a victim) of abuse or neglect (Dowd & Graham, 1989, p. ii).

A substance-exposed child's environment will almost always meet at least one of these criteria.

■ *What maternal factors contribute to the environmental risks for children exposed to drugs?*

Mothers addicted to drugs often have a variety of problems that interfere with effective parenting, including

- poverty
- high stress (including guilt about their babies' condition)
- low self-esteem, personality disorders, and emotional problems stemming from childhood abuse and life with a drug- and/or alcohol-abusing parent
- lack of family and social support systems and resources
- a drug-using partner and drug-using friends
- inadequate knowledge of child development and poor parenting skills (Feig, 1990; Kronstadt, 1989; "Substance-Exposed Babies," 1991)

Studies indicate that many of the problems of substance-abusing women originated in their childhoods.

■ *How do the behaviors of prenatally exposed infants put them at additional risk after birth?*

Sadly, the inherent characteristics of prenatally exposed children can also put them at risk. Because they have great difficulty interacting with caretakers, controlling their waking and sleeping states, and being comforted (Chasnoff, 1986), substance-exposed infants are often irritable and unresponsive to care. As a result, not only do they fail to receive the nurturing they need for healthy development, but they are candidates for neglect, abandonment, and abuse as well.

■ *How has crack cocaine increased the risk of substance exposure for children?*

Crack cocaine poses more threats to children than any other illicit drug in the past because a higher percentage of women—including mothers and mothers-to-be—are users.

- Crack cocaine addicts are much less likely than other substance abusers to obtain prenatal care, seeking it very late in pregnancy if at all.
- The family situations of crack-involved families tend to be much more chaotic than those of other substance abusers. The demands of addiction are so strong that the children of crack-addicted mothers are often neglected. In Washington, D. C., for example, almost 90 percent of parents reported for neglect are substance abusers (Besharov, 1989).
- Because cocaine induces extreme violence in some users, children whose parents use crack cocaine are at greater risk

of being battered. A Minnesota study found that cocaine-addicted parents experienced episodes of unpredictable, dangerous, and even violent behavior (Besharov, 1989). To illustrate, in New York City, the percent of child abuse and neglect fatalities resulting from adult drug abuse rose from 11 percent in 1985, when crack cocaine was introduced in the U.S., to 73 percent in 1987 (Koppelman & Jones, 1989).

- In both their numbers and the severity of their impairments, children prenatally exposed to crack cocaine are overwhelming health and social service agencies—and are beginning to overwhelm schools.

Meeting the demands of drug-exposed babies is difficult for the most capable of caregivers; when the primary caregiver is a drug-addicted mother, it is almost impossible.

BONDING AND ATTACHMENT

Soon after birth, healthy babies and mothers enter the give-and-take of human communication. During this time, the biologically programmed responses of an infant to its mother or primary caregiver cement the relationship between them. Through this interaction, an infant begins to bond with its mother, developing the sense of trust and attachment to a consistent caregiver that is essential for healthy intellectual, social, and emotional development (Corkery, 1992; Fahlberg, 1979).

Bonding is often extremely problematic for newborns affected by alcohol and other drugs. A substance-exposed newborn may be physiologically unable to respond to a caregiver in the ways necessary to develop a normal mother-child attachment. Drug-affected babies are likely to have health problems, lack the ability to effectively communicate their needs, and be unresponsive and extremely irritable.

Meeting the demands of drug-exposed babies is difficult for the most capable of caregivers; when the primary caregiver is a drug-addicted mother, it is almost impossible. Mothers under the influence of drugs may lack the energy or ability to attend to their children's needs. Drugs can also trigger severe mood changes, causing mothers to respond to their children's demands alternately with affection, anger, or indifference. Because they are often preoccupied with obtaining and using drugs, drug-addicted mothers may neglect their babies, abandon them for extended periods of time, or place them in the care of inadequate caregivers such as the baby's older siblings.

As a result of both the baby's unresponsiveness and the mother's inconsistent care, the critical process of bonding and attachment becomes even more difficult, and the mother-child relationship becomes even more unsatisfying. In a tragic cycle, the mother's feelings of frustration and inadequacy increase, and her ability or

willingness to provide the care the infant needs decreases. The infant becomes even more withdrawn and difficult to comfort, and thereby more vulnerable to further neglect or abuse (Schneider, Griffith, & Chasnoff, 1989).

Magid and McKelvey (1987) describe this condition as the "vicious cycle of the non-responsive infant" (p. 68). They believe that the cycle of anxiety and withdrawal begins at some point during the first year of life when the infant fails to develop the strong "internalized parent" essential to forming a sense of trust (p. 68). Although the process of attachment does not seem to be fully complete for about two years, the failure to bond with a primary caregiver is most devastating during the first months of an infant's life (Magid & McKelvey, 1987). The situation may not be much better when the primary caregiver is someone other than the drug-abusing mother. Lengthy hospital stays and multiple foster care placements also interfere with the development of a strong, secure relationship between an infant and primary caregiver.

SUBSTANCE-ABUSING FAMILIES

Unfortunately, a prenatally exposed child who lives with a drug-abusing family is unlikely to receive the attention that a healthy baby requires, much less a baby with special needs. Kumpfer and DeMarsh's 1986 study found that drug-dependent families had significantly higher levels of stress, parental depression, and family conflict than the control families. They also had fewer friends and less involvement in recreational, social, religious, and cultural activities. Additionally, substance-abusing parents were found to spend significantly less time with their children.

Howard et al. (1989) found the following common characteristics in substance-abusing families:

1. **Drug-abusing parents often come from a history of impoverishment, abuse, and intergenerational chemical dependence.** A significant number of substance-abusing parents are introduced to drugs and alcohol by their own parents. One mother participating in the research project was introduced to heroin by her father (and to shoplifting by her mother). Another said that when she was upset as a child, her mother would mix her a drink and say, "Drink this; it will make you feel better" (Howard et al., 1989, p. 8).
2. **Drug-addicted parents' primary commitment is to chemicals, not to their children.** As explained by one mother, substance-abusing parents are too busy "chasing the bag" (looking for drugs) to attend to their children's needs (Howard et al., 1989, p. 8).
3. **Disruption and chaos in a drug-abusing household often result in the neglect or disregard of the child's needs.** In one case, a

RESEARCH FINDINGS

Working with Substance-Using Families

Researchers on environmental substance exposure, Howard et al. (1989) have reached the following conclusions of interest to educators and other professionals interacting with substance-involved families:

- Addicted parents are often unable to function as protectors and advocates for their children.
- Normal patterns of interaction and conventional priorities are undermined by substance abuse.
- Because children who live in a drug culture are potentially in danger, professionals must ensure that the children are kept visible in the community and that their safety is closely monitored.
- Substance-involved families should be treated with respect and understanding.
- Clinical services for substance-involved families should be provided through a community intervenor who is able to establish an ongoing, stable, nurturing, and non-threatening relationship with the family.

Source: Howard et al., 1989.

three-month-old baby who was a subject of the UCLA study was found underneath a bed by a neighbor. The baby's parents and friends were "high" on drugs and oblivious to his presence.

4. **Parents who are drug users often experience distorted thoughts and perceptions.** Parents who are chronic users of mind-altering drugs can suffer from impaired memory, attention, and perception. Some mothers in the UCLA studies have had difficulty remembering their own children's birth dates.
5. **Drug-abusing families often live in dangerous areas.** Drive-by shootings and violence are daily occurrences in neighborhoods where drugs are used and sold.
6. **Substance-abusing parents lead unstable lives.** They move frequently, lack telephones, fail to keep appointments, and drop out of sight when abusing illicit drugs. Friends and family often collude with their flight from legal, health care, social service, and other authorities (Howard et al., 1989).

FOSTER CARE

Largely because of substance abuse, more infants are entering the foster care system, and children are staying in foster care longer than they ever have in the past (Feig, 1990). By the time they reach school age, many prenatally exposed children have lived in three different households—typically their mother's, their grandmother's, and a foster home (Cole et al., 1989). Today over 500,000 of the nation's children are living in foster care, and another one million live with relatives or in non-family care. Figure 4 depicts the increase during the last decade of children in the Southeast living outside their family's home.

FIGURE 4

STATE	Percent of Children Living with Relatives		Percent of Children Living Outside the Family		Percent Change from 1980-1990
	1980	1990	1980	1990	
Alabama	10.0	10.0	1.5	1.7	+0.2
Florida	8.5	9.0	2.5	2.8	+0.8
Georgia	9.6	9.5	1.8	2.1	+0.2
Mississippi	12.0	12.1	1.6	1.7	+0.1
N. Carolina	9.2	8.7	1.7	2.1	-0.1
S. Carolina	10.9	11.1	1.8	1.9	+0.3
United States	6.4	7.3	1.9	2.3	+1.3

Source: Center for the Study of Social Policy, 1992.

If current trends continue, over one million U.S. children will be placed in foster care by the year 2000 and another two million will live in other non-family care (Select Committee on Children, Youth, and Families, 1990).

- *What are the alternatives to temporary foster care?*

Recommendations for addressing the shortage of foster parents resulting from the recent surge in foster care placements have ranged from increasing foster care payments (the national average is $4,000 a year) to reinstituting orphanages for children exposed to drugs. To balance children's needs with parents' rights, some states are experimenting with arrangements that avoid a complete break in family ties:

Kinship Care—Children are placed with relatives, who receive full foster care stipends.
Permanent Foster Care—A child needing ongoing support, such as a child with severe disabilities, is permanently placed with foster parents, but the state agency stays involved to provide assistance as needed. This arrangement provides children with special needs the security of a permanent home as well as the medical and other services they require.
Permanent Guardianship—An individual accepts permanent responsibility for a child's upbringing. The guardian has all the legal rights of a parent and a social service agency is no longer involved; however, parents are able to maintain contact with the child. This type of arrangement works well for older children, children who are placed with relatives, or children whose long-term foster parents have developed a good relationship with the biological parents (Besharov, 1990).

To balance children's needs with parents' rights, some states are experimenting with arrangements that avoid a complete break in family ties.

- *How many drug-exposed children are abandoned by or taken away from their mothers?*

Less than 10 percent of substance-abusing women abandon their children or have their children permanently removed from their care. Of the children who are taken away from their parents, most are removed because of neglect or abuse, rather than substance abuse alone.

In response to the extraordinary problems of children of substance-abusing parents, the U.S. Congress enacted the Abandoned Infants Act in 1989, authorizing funding for a variety of child welfare and foster care services for drug-exposed newborns (Horowitz, 1990). Congress also allocated $19.5 million in 1991 for the Child Protective Services program, which is designed to protect children from substance-abusing parents ("Are They—or We—Ready?," 1991).

IMPLICATIONS FOR PRACTITIONERS AND POLICYMAKERS

Drug-exposed children are a diverse group.

Damage from prenatal exposure to cocaine, alcohol, and other drugs varies considerably, reflecting differences in the child's environment as well as factors present at birth. Therefore, assessments and interventions should be designed to meet individual children's needs rather than those of a "typical" substance-exposed child.

Environmental factors can have the same harmful effects on children as prenatal exposure to alcohol and other drugs.

Children of substance-abusing parents may have numerous learning and behavioral problems whether they are born to drug-using mothers or raised by drug-using caretakers. Therefore, intervention programs should include children who were prenatally exposed to drugs as well as children who are growing up in drug-abusing environments.

Environmental factors can reduce or exacerbate the effects of prenatal drug abuse.

The development of a child born prenatally exposed to drugs is determined largely by the child's home environment. Happy, healthy homes have a positive effect on children's development; unhappy, unhealthy homes have a negative impact. Accordingly, programs designed to assist children who are substance-exposed should be part of family-centered interventions that address family issues, such as enhanced parenting skills and improved home environments.

Individuals who work with children exposed to drugs must avoid simplistic or demeaning appraisals of drug-involved mothers.

Establishing a supportive relationship with substance-involved families is essential to serving their children; consequently, educators and others who work with children who have been exposed to drugs must acknowledge that drug addiction is an illness and have compassion for families who are struggling with substance abuse.

Teachers of children exposed to drugs should be prepared to deal with nontraditional families.

Many children exposed to drugs do not live with their biological parents. Often, their "parents" are grandparents, foster parents, aunts and uncles, older siblings, or neighbors.

Teachers and other professionals who have been trained to respect parents' primary leadership role in their children's lives must recognize that the substance-abusing parent may not be able to assume this role.

Teachers may need to assume a vital role in a substance-exposed child's life, ensuring not only that the child's educational needs are met but that his or her emotional needs are met as well. Teachers should also be prepared to work with other professionals to ensure children's safety, nutritional, and other basic needs are met.

Section II

SERVICES FOR SUBSTANCE-EXPOSED CHILDREN AND THEIR FAMILIES

Chapter 3: Federal, State, and Community Programs

- Early Intervention Programs
- Family Supports
- Services for Rural and Native American Populations
- Interagency Collaborations
- Community-School Partnerships
- Community-Based Programs

Chapter 4: School District Programs

- Programs Serving Children Exposed to Drugs
- Staff Development
- Parent Training

Chapter 5: School Programs

- Identification of Children Exposed to Drugs
- Protective Environments
- Home-School Partnerships

Chapter 3

FEDERAL, STATE, AND COMMUNITY PROGRAMS

Abolishing drug abuse has long been a priority in the U.S., as evidenced by numerous federal, state, and community initiatives in the areas of drug abuse prevention and law enforcement. Meeting the needs of at-risk youth has also become a priority, and legislation has been enacted at all levels recognizing the importance of timely intervention and coordinated care for children whose developmental or other problems are likely to lead to school failure. Most recently these efforts have been combined in medical, socio-emotional, and educational interventions specifically for substance-exposed children and their families.

Designed to address prenatal and environmental substance exposure, these interventions range from drug-abuse treatment for pregnant women and medical services for prenatally exposed infants to preschool programs for substance-exposed children and parenting classes for drug-abusing families. By targeting both the causes and results of chemical dependency, these interventions help mitigate the damage of prenatal drug exposure and create healthy home environments for drug-exposed children and their families.

To address the special needs of children exposed to drugs, a number of Head Start programs are now forming local partnerships with mental health centers and child welfare agencies to serve dysfunctional families, many of which have drug-abuse problems.

EARLY INTERVENTION PROGRAMS

Early intervention programs for children exposed to drugs are designed to foster their physical, cognitive, and socio-emotional development. Ideally beginning with prenatal care, early interventions include medical, educational, and social services. They can be such services as intensive medical care for drug-addicted newborns, massage therapy for infants, physical therapy for toddlers, and counseling for preschoolers.

Some substance-exposed children qualify for educational programs already serving at-risk children. For example, the Education of the Handicapped Act Amendments, which provide education and associated interventions to children who have disabilities, are developmentally delayed, or are at high risk for developmental disabilities, apply to the most severely affected children exposed to drugs. However, since many substance-exposed children do not meet eligibility criteria, efforts are underway to establish criteria that will enable all children who were prenatally exposed to alcohol and other drugs to receive services (Palanki, Burch, & Davies, 1992).

Officials with Head Start, the child development program for preschool children from low-income families, estimate that 20

percent of the children served are substance exposed. Congress and the President are committed to substantially increasing funding for Head Start so that every eligible child is served.

Congress is also allocating funds for programs designed for substance-exposed children and their families. For example, the recent reauthorization of Head Start mandates at least one Parent and Child Center in each state. Created to stimulate infants' and toddlers' development through a family-focused, whole-child approach, the centers provide parents comprehensive health and social services as well as instruction in child development and family management practices (Feig, 1990; Palanki et al., 1992).

Another educational program serving children exposed to drugs is the U.S. Department of Education's Early Education Program. This project, which is being piloted in California, involves expanding the Handicapped Children's Early Education Program to provide training and technical assistance to public and private agencies working with chemically dependent families (OIG, 1990b).

FAMILY SUPPORTS

Because environmental factors can have the same damaging effects on children as prenatal drug use, *interventions for children exposed to drugs have little chance of succeeding unless they are a part of family-centered interventions*. Accordingly, programs for substance-exposed children typically seek to improve a child's home environment by strengthening the family unit.

Recent studies on children born with low birthweight present some of the most compelling support for family-centered interventions. For example, programs designed to improve parent-child interactions and families' problem-solving capabilities have prevented the decline in cognitive development that typically occurs in low birthweight children (Newman & Buka, 1990).

Family-centered interventions generally involve one or more of the following services:

- **Drug Treatment**—drug treatment facilities suitable for mothers and pregnant women; day care, transportation, and other services designed to enable substance-abusing mothers to participate in treatment programs
- **Family Supports**—assistance with housing, education, and job training, as well as other services designed to help families build stable lives
- **Parent Training**—training in parenting, problem solving,

Healthy Infant Program

The goal of Alameda County's Healthy Infant Program (HIP) is to ensure quality health care and support services to substance-exposed infants and their families. Newborns identified as drug-exposed are enrolled in the HIP program prior to being discharged from the hospital. For the next one to two years, a case manager visits the family monthly and verifies with health providers that the child is receiving regular medical care.

As part of the program, substance-abusing parents are encouraged to take counseling from the staff substance-abuse therapist, attend group sessions, or enroll in drug treatment programs. HIP also sponsors weekly meetings of Cocaine Anonymous and Narcotics Anonymous to provide peer support for women recovering from drug use. Other support groups are offered for parents, grandparents, and other caregivers of children exposed to drugs.

An effective advocate for high-risk families, HIP has influenced the development of legislation enabling local agencies to more readily respond to families' needs.

For more information, contact Lori Williams, Healthy Infant Program, Highland General Hospital, 1411 E. 31st Street, Oakland, CA 94602, (510)534-8055.

Infant Care Project

Duke University Medical Center's Infant Care Project provides a continuum of services for substance-abusing pregnant women and their babies. Beginning with prenatal care, the services are provided throughout each child's first two years.

Project staff provide mothers with extensive information about their babies' behavior, development, and needs. They also discuss drug treatment options. To encourage mothers to keep appointments, project staff provide transportation to and from the medical center and give each baby a gift (such as diapers) at every appointment.

The extent of the staff's determination to ensure that mothers and babies receive services was demonstrated when it sent a chauffeured limousine to bring one mother to the clinic so she could keep her appointment. By going "the extra mile," project staff members made sure that the woman received the care she needed and, by demonstrating their dedication, they impressed upon her the importance of keeping clinic appointments.

For more information, contact Karen O'Donnell, Associate Professor, Department of Pediatrics, P. O. Box 3364, Duke University Medical Center, Durham, NC 27710, (919)684-5513, FAX (919)684-4564.

Sources: Alameda County Health Care Services, 1991; Karen O'Donnell, Infant Care Project.

stress reduction, and other skills designed to improve parent-child interactions

- **Child Abuse Prevention**—counseling and parent training for high-risk parents and caregivers of drug-exposed children (who are at much greater risk for neglect or abuse than healthy children)
- **Crisis Intervention**—intensive short-term interventions for families in crisis or parents on the verge of having their children taken away from them

The most effective family intervention programs offer comprehensive services. An excellent example is the Substance Abusing Mothers (SAM) Clinic at the Harbor/UCLA Medical Center in Torrance, California. Among the clinic's services are prenatal care, social service case management, treatment for chemical dependency, counseling, support groups, and a children's health clinic. The SAM Clinic's success is reflected in the large numbers of women who give up drugs during pregnancy (OIG, 1990b).

SERVICES FOR RURAL AND NATIVE AMERICAN POPULATIONS

Currently very few services are available to substance-exposed children and families living in isolated areas. In many rural communities, at-risk children and children with disabilities must ride buses for hours to receive essential services—if they receive them at all. As the problem of substance exposure is increasing in rural areas, however, so are outreach efforts, particularly in expanded in-home services.

Through in-home services, public health units, social workers, or other professionals provide interventions in a client's home. For instance, a home intervention might be designed to nurture a child-parent attachment and the communication that fosters children's learning.

To provide comprehensive services, many programs combine home-based interventions with center-based services. Florida's Infant Health and Development Program, for example, combines home and center services to offer families both ease of access and concentrated services. The program has succeeded in increasing the IQs of low birthweight babies and reducing the number of special education placements. In Marks, Mississippi, the Nutrition and Oral Hydration Therapy Project provides home- and center-based services to premature babies who have been referred for follow-up care by local physicians. Among the program's services are home visits to monitor the children's development and transportation to and from clinic appointments (Ford, 1991).

Dynamite Idea

Project Prevent

Atlanta's Project Prevent at Grady Hospital is an innovative and successful drug treatment program for pregnant women. The key to Project Prevent's success is its practice of hiring residents of area housing projects to locate pregnant drug abusers who are not receiving health care. Through home visits and "street work," these peer counselors, most of whom are former addicts, encourage pregnant drug users to obtain prenatal services as well as drug treatment. A post-delivery team provides assistance to high-risk infants and their families, ensuring that the infants receive necessary services and their families receive ongoing support.

Project Prevent has reduced the number of substance-exposed babies born at Grady Hospital from an average of 20 a month to 5. The number of infants needing intensive care has decreased significantly as well. Before Project Prevent was established in July 1991, Georgia taxpayers paid $3.6 million annually to care for drug-exposed newborns. In its first year, Project Prevent saved Georgia taxpayers over $1.2 million.

The Project Prevent program is being replicated at hospitals and clinics across the country.

For more information, contact Donna P. Carson, Director, Project Prevent, 100 Edgewood Avenue, Suite 810, Atlanta, GA 30303, (404)616-7732.

Sources: Project Prevent, 1991; Project Prevent Succeeds, 1993; Whitford, 1992.

Community Storytelling

The Community Storytelling project is an innovative approach to the prevention of and recovery from substance abuse. It is designed especially for Native Americans and people living in isolated rural areas. The Community Storytelling project encourages reflection on substance abuse through written participatory research (e.g., fact-finding tours) and experiential writing. A teacher's guide, *In Our Own Words: Community Story Traditions to Prevent and Heal Substance Abuse*, contains resources and example stories.

Explaining the effectiveness of community story-telling projects with rural and Native American populations, Tierney comments:

> "The war on drugs is won only when people fully realize they have other options. . . . The battle is doubly won when people can look to their culture not only for the roots of their problems, but for the strengths, values, and traditions upon which to build new lives." (Tierney, 1992, p. 47)

For more information, contact Michael Tierney, Family Worker Farm, 659 Big Ugly Creek Road, East Leet, WV 25536, (304)855-8557.

Rural Alabama Pregnancy and Infancy Health Program

Through the Rural Alabama Pregnancy and Infancy Health Program, women from the community serve as "lay helpers" to provide a support system to young mothers living in the poorest rural areas in Alabama. The program targets those counties in western Alabama where both the teenage pregnancy rates and infant mortality rates are close to 40 percent and the unplanned pregnancy rate is over 80 percent.

The lay helpers visit young women in their homes to provide prenatal education and help the mothers cope with problems related to pregnancy and motherhood. The lay helpers' primary goal is to provide the emotional support and encouragement necessary for the young mothers to improve their lives.

For more information, contact Sandra Hullett, M.D., Director, Rural Alabama Pregnancy and Infancy Health Program, Post Office Box 711, Eutaw, AL 35462, (205)372-3674/3281.

Baby Love Program

North Carolina's Baby Love Program provides health care and support services to rural children and pregnant women at community centers, migrant health centers, and the Cherokee Reservation. Founded in 1987, the goal of the program is to reduce North Carolina's infant mortality rate, which is among the highest in the country.

The program's maternity-care coordinators help mothers-to-be obtain prenatal care, substance-abuse counseling, nutritional counseling, and social services. As advocates for the women and children, the coordinators also provide comprehensive support services. For example, they help mothers enroll in training programs and obtain transportation, housing, and day care.

Since the Baby Love Program was established, fewer babies have been born with below-normal birthweight in North Carolina, and taxpayers have realized substantial savings in Medicaid costs.

For more information, contact Dorothy Cilenti, Mental Health Director, Wake City Department of Health, 10 Sunnybrook Road, Raleigh, NC 27610, (919)250-4630.

Sources: Ford 1991; Kadel, 1992; Tierney, 1992.

To be effective with rural populations, outreach efforts must go beyond the "word-of-mouth" methods traditionally used in populated areas. Services should be publicized through intensive public-awareness campaigns, featuring radio and television announcements, health fairs, and other approaches designed specifically for the target audience. Outreach should also involve networking with grassroots organizations such as civic and church groups and public health programs. Successful outreach programs use local "peer counselors" to communicate with families and tailor interventions to target groups. This approach is especially effective with populations such as Native Americans and migrant families (Healthy Mothers, Healthy Babies Coalition, 1986).

Experienced professionals recommend that people who work with Native Americans recognize the importance of the extended family by involving as many family members as possible. They should also be knowledgeable about tribal culture and the significance of tribal sovereignty. Recognizing the importance of tribal affiliations, people who work effectively with Native Americans also

- obtain the support of tribal councils;
- closely coordinate activities with tribal councils and, when appropriate, traditional healers;
- collaborate with Native American-owned and -operated services; and
- work cooperatively with other private and public programs serving Native Americans (Collins & Anderson,1991).

Professionals who work with Native American should also avoid putting individual members in conflict with the tribe.

INTERAGENCY COLLABORATIONS

Most practitioners and policymakers believe that collaborations are the best response to the alarming increase in the number of drug-exposed children in the United States. This increase has prompted social workers, health care providers, educators, and others to join together to address the complex and interrelated problems of poverty, dysfunctional families, and other underlying causes of drug abuse. Through interagency collaborations, they are accomplishing together what no single agency can accomplish alone.

Because the indicators of risk for learning problems—poverty, teenage parenthood, abuse, poor health, substance abuse—are related, efforts to address these problems should also be related. Such an approach to service delivery has several advantages:

Dynamite Idea

Head Start Substance Abuse Initiative

The Head Start Bureau's Substance Abuse Initiative assists local Head Start programs respond to the growing problems of alcohol and drug abuse in their communities. Begun in 1990, the initiative addresses three primary areas of need:

1. Children who have been prenatally exposed to alcohol or other drugs or who live with substance-abusing families.

2. Families who abuse alcohol or other drugs or who are at high risk for involvement in alcohol or drug abuse.

3. Communities that need Head Start programs to join local efforts to address problems related to substance abuse, identify strategies for preventing substance abuse, strengthen supports for families affected by alcohol or drugs, and improve access to effective treatment services.

The Substance Abuse Initiative work group provides training and technical assistance; interagency collaboration at the federal, state, and local levels; and information dissemination and exchange.

For more information, contact Head Start, Administration for Children, Youth, and Families, Dept. of Health and Human Services, 330 C Street, SW, Washington, DC 20013, (202)245-0436.

Sources: Collins and Anderson, 1991; Jackson (in press)

Dynamite Idea

Working Together Program Department of Social Services

Through its multidisciplinary Family Support Team, the Working Together Project in Columbia, S.C., provides intensive case management services to individuals who are HIV/AIDS-infected and their families. Because of the high correlation between HIV/AIDS and substance abuse, the program also addresses issues related to addiction and accepts pregnant women and women with children.

The Family Support Team includes a program coordinator; a social worker; specialists in the areas of prevention and outreach, addiction, and resources; a registered nurse; two case aides; and a secretary. Over 60 percent of the Family Support Team's time is spent in clients' homes.

The project provides:

- Drug and alcohol treatment,
- Individual and family counseling, including crisis intervention,
- Parent education,
- Twenty-four hour access to the Family Support Team, and
- Resource management (life skills, day care, housing, transportation, employment, and other referral services)

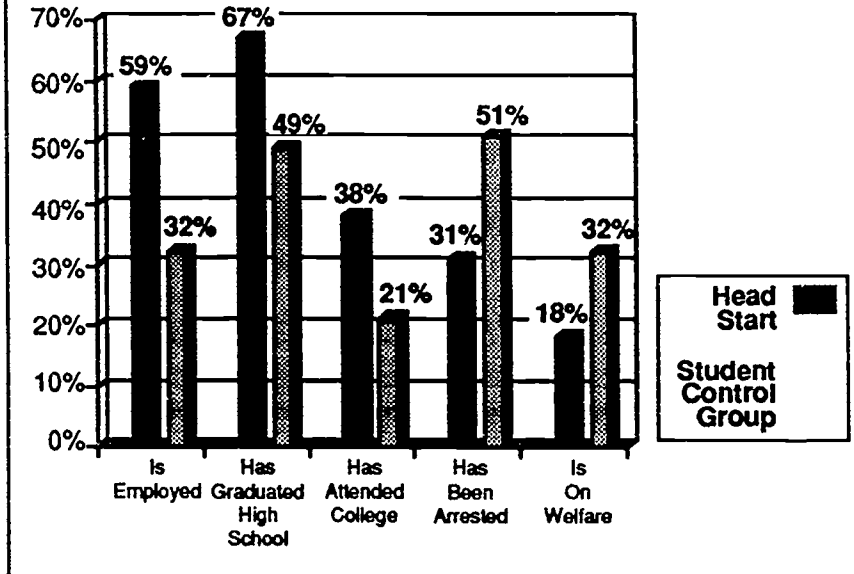
For more information, contact Debra E. Massey, Program Coordinator, Working Together Program, 220 Two Notch Road, Columbia, SC 29204, (803)735-7005, FAX (803)735-7131.

Source: Debra E. Massey, South Carolina Department of Social Services.

- A single point of access to services in a non-threatening setting can serve the needs of more children and families. Since schools and human service systems serve the same clients, an integrated approach can prevent the fragmentation and duplication that occurs when multiple agencies attempt to address the same problems.
- An integrated approach enables schools to better meet the cognitive and affective needs of students and enables human service agencies to better identify service needs, gain access to clients, and deliver services more efficiently. Because they reduce overlap in service delivery, integrated services can be more cost-effective (Dolan, 1992).

Head Start, one of the nation's oldest and most successful federally funded interagency collaborations serving children, was established in 1964 as a cooperative effort among federal, state, and local agencies. As depicted in the figure below, the program has had a dramatic impact on the children it serves.

FIGURE 5
First Head Start Group at Age 21 Compared to Control Group



Source: *Young Children Grow Up*, 1990

COMMUNITY-SCHOOL PARTNERSHIPS

Recognizing that schools alone cannot fulfill all the needs of all their students, communities across the country are forming partnerships with schools to help foster the healthy development of substance-exposed and other at-risk children. These community-based programs have the advantages of being tailored to local needs and of being flexible enough to try innovative approaches.

In addition to providing reciprocal services, local coalitions can also prevent tragic disabilities and save schools millions of dollars in special education costs by ensuring that every pregnant woman in the community receives at least one prenatal examination during the first trimester of pregnancy (Hodgkinson, 1989).

The following examples illustrate the range of services that are being provided through community-school partnerships in the Southeast:

Networking Committee, Decatur, Georgia—Established in 1988 to provide better services for students attending Oakhurst Elementary School and their families, the Decatur NetworkingCommittee's membership has grown from 6 to over 30 local agencies that work with the nine schools comprising the Decatur City School System. The umbrella organization represents private business, social services, the court system, parks and recreation agencies, churches, the United Way, and service organizations. Oakhurst and Fifth Avenue Elementary School, which function as nucleus sites, offer such services as parent education, health care, and after school care (Kadel, 1992).

Family Life Center, Ridgeland, South Carolina—Ridgeland's Family Life Center offers comprehensive services, including on-site mental health counseling, referrals and transportation to local health and social service agencies, and improvement plans for at-risk students and their families developed by case management teams (Kadel, 1992).

Comprehensive Child Health System, Gadsden County, Florida—The Comprehensive Child Health System uses a child "health passport" and computerized database to coordinate preschool health services for at-risk children (Zervigon-Hakes & Lockenbach, 1991).

Dynamite Idea

Juvenile Welfare Board

As an independent taxing district, Pinellas County's Juvenile Welfare Board assesses property taxes and contracts with nearly 50 agencies to provide child and family services, including programs for substance-abusing women and substance-exposed children. The program provides formal and informal service coordination as well as drug prevention and treatment services.

The Board has launched extensive media campaigns on the hazards of maternal drug use and has funded such projects as "one-stop shopping" neighborhood centers offering child care; parent training; and assistance with medical care, housing, food, and job training. It has also initiated the following educational programs:

- A pilot curriculum for preschoolers emphasizing self-esteem and drug abuse education.
- Training for teachers in play-based assessment.
- Summer training sessions for Pinellas County kindergarten and first-grade teachers.
- Recommendations to public schools on meeting the needs of children who have been prenatally or environmentally exposed to drugs.

For more information, contact Kate Howze, Community Relations Director, Juvenile Welfare Board of Pinellas County, 4140 49th Street, N., St. Petersburg, FL 33709-5797, (813)521-1853, FAX (813)528-0803.

Sources: HHS, 1991; Shores, 1991.

Office of Special Education and Rehabilitation Services

The Office of Special Education and Rehabilitation Services supports a research institute on interventions for infants, toddlers, and young children exposed to drugs and the following model programs for serving children prenatally exposed to drugs:

Steps for Kids Outreach Project, Boston City Hospital—An outreach model of services featuring "one-stop shopping" for women who require substance-abuse treatment and their children with special needs. For more information, contact Margot Kaplan-Sanoff, Project Director, at (617)534-5650.

Project CAPS: Caregiver and Parent Support, George Washington University, Washington, DC—A comprehensive identification, intervention, and referral program for biologically and environmentally at-risk infants, their families, and child-care providers. For more information, contact Barbara Browne, Project Director, at (202)994-6170.

Early Childhood Research Institute-Substance Abuse, Universities of Kansas, Minnesota, and South Dakota—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. For more information, contact Judith Carta, Principal Investigator, at (913)321-3143.

For more information, contact Gail R. Houle, Education Research Analyst, Office of Special Education and Rehabilitation Services, U.S. Dept. of Education, MES/Room 4613, 330 C. Street, SW, Washington, DC 20202, (202)732-1045.

Operation PAR, Inc. (Parental Awareness and Responsibility)

One of the first programs of its type in the nation, Operation PAR was established in 1970 to serve Pinellas County residents with substance abuse problems. In 1990, Operation PAR began accepting drug-exposed infants and their mothers. Today, PAR serves 44,000 people a year, making it the largest nonprofit organization providing substance abuse treatment, prevention, and training services in the southeastern United States.

Operation PAR offers over 20 programs designed to meet the needs of different age groups and populations with substance abuse problems, including a continuum of services for substance-abusing pregnant and postpartum women. PAR Village, the center's residential facility, allows each mother to bring up to two children to live with her while she completes PAR's 18 to 24-month residential substance-abuse treatment program. Outpatient drug-abuse treatment, case management, counseling, and parenting classes are also available.

For children who are drug-exposed, the Children's Developmental Center offers therapeutic day care designed to promote the development of cognitive, motor, language, and social skills. Center staff provide transportation to and from the center, hot lunches, and snacks. The children's mothers spend regular supervised time at the center interacting with their children to enhance bonding, and they participate in parenting skills workshops and parenting support groups. The goal of the center is to stop multigenerational chemical dependency and lessen the developmental lag that can exist between children exposed to drugs and their drug-free peers.

For more information, contact Donna M. Sicilian, Coordinator of Children's Services, Child Development Center, 2000 4th Street, S., St. Petersburg, FL 33705, (813)896-2672.

Sources: Jackson (in press); Shores, 1991; U.S. Department of Health and Human Services, 1991b.

COMMUNITY-BASED PROGRAMS

Based on their research on community programs serving at-risk children, Palanki et al. (1992) conclude that programs with a "whole child" approach are the most effective in fostering children's learning. These programs generally have most of the following characteristics:

Flexibility—The programs address a variety of problems and enable clients to select the services that best meet their needs. Regulations are flexible enough to enable institutions to respond to immediate needs and to collaborate with other agencies in providing services.

Intensity—Populations most in need receive the most services.

Continuity—The programs avoid lapses in services by providing transitional services (e.g., between age groups) and sustaining benefits over time; programs serving the same population provide complementary services.

Universality—The programs are available to all eligible clients and do not have policies, such as stigmatizing labels, that discourage clients from seeking services.

Participation—Clients participate in making decisions about the program's policies and services.

Collaboration—Cooperative working relationships are formed with other programs.

Comprehensiveness—The programs offer a broad spectrum of services.

"Improvements in one area can actually improve other areas simultaneously, producing a "win-win" game instead of a "zero-sum" game. If health wins, education wins as well. If education wins, prisons win as well." (Hodgkinson, 1989)

Chapter 4 SCHOOL DISTRICT PROGRAMS

In many areas where prenatal substance abuse is a recognized problem, school districts are taking the lead in meeting the needs of drug-exposed children. Many are expanding preschool programs to provide these children the early educational interventions they require to be successful in school. A number of districts are also offering parents training in a variety of skills. Staff development programs are also beginning to include sessions on teaching children exposed to drugs and participating on multidisciplinary teams.

To better prepare for and serve children exposed to drugs, forward-looking district administrators are also forming alliances with health departments, hospitals, social services agencies, and child protection agencies. Not only are these collaborations providing the early identification necessary for schools to anticipate the number of substance-exposed children who will enroll, but they are also essential to providing the interventions these children and their families need.

PROGRAMS SERVING CHILDREN EXPOSED TO DRUGS

Although the study of the effects of substance exposure is less than a decade old, teachers and researchers have learned a great deal about meeting the educational needs of children exposed to drugs. The following projects are examples of research projects being conducted by school districts. Projects such as these are contributing much to the study of the effects of exposure to drugs and to the identification of the interventions that best serve children exposed to drugs.

■ Prenatally Exposed to Drugs (PED) Program

The trailblazing educational program for children exposed to drugs is the Prenatally Exposed to Drugs (PED) program. Initiated as a pilot project in 1987 by the Los Angeles Unified School District, the project is identifying the educational strategies that are most effective with children exposed to drugs.

The PED project funds child-care centers serving children with developmental delays, most of whom are drug-exposed, abused or neglected, or born to teenage mothers. Applying research-endorsed practices in child intervention, family systems, and cultural

diversity, staff members learn how to determine what a child's behavior is communicating and how to analyze home and school influences on children. To facilitate the successful transition of children exposed to drugs to a regular education setting or to the least restrictive special education program placement; the program provides structured learning experiences that promote cognitive, communicative, social-emotional, and motor development.

The PED program also focuses on family involvement in the child's educational progress. With a goal of modifying adults' as well as children's behaviors, the program teaches caregivers parenting skills and organizes parent support groups (Cole et al., 1989).

As part of their work, the PED staff has published *Today's Challenge: Teaching Strategies for Working with Young Children At Risk Due to Prenatal Substance Exposure* (*see* Resources *for ordering information*).

Project DAISY

A three-year study at the District of Columbia Public Schools, Project DAISY (Developing Appropriate Intervention Strategies for Young Children) seeks to identify the best teaching strategies and support services for substance-exposed children aged three to five.

In this project, 15 children, 5 of whom are substance-exposed, are assigned to a classroom staffed by a certified early childhood education teacher and an educational assistant. In all, 60 children from 4 schools in the Washington, D.C., area participate in the project. A multidisciplinary consultation team, comprised of a speech-language pathologist, a clinical social worker, and a clinical psychologist, provides special assistance. Support services range from home-based interventions to Tumble Tots, a gymnastics organization, which has been contracted to help develop children's motor skills.

The program uses the following instructional approaches:

- multi-age groupings to encourage children to support each other and serve as models of prosocial behavior and language skills
- a child-centered curriculum and developmentally appropriate instructional approaches conforming to the National Association of Educators of Young Children's (NAEYC) guidelines for young children
- an emphasis on play designed to encourage children to take charge of their learning environment, make their own decisions, and establish their own rules

- a teacher-as-facilitator approach with the teacher guiding children through the discovery of knowledge

As evidence of the project's success, instead of numerous children being placed in special education as anticipated, only one child was assigned to a special education class at the end of the first year of the program (Powell, 1992).

Parent and Child Intervention Program

The first school district in California to offer an integrated intervention program for children prenatally exposed to drugs, Ravenswood City School District provides short- and long-term services for children while also offering substance-abuse treatment and parent education to their mothers. Children's services include early and extended intervention services designed to help children exposed to drugs succeed in school. Services for their mothers or guardians include a comprehensive substance-abuse recovery program and a parenting program.

Using a modified version of the activity-centered High Scope curriculum, the teaching staff act as facilitators of learning and coach parents as they work in the classroom with their children. Parents can also participate in parent support groups in addition to their treatment groups (Jackson, in press).

STAFF DEVELOPMENT

Because most of the techniques that work well with other children work well with substance-exposed and other at-risk children, much of the training for teachers and other staff members who work with drug-exposed children consists primarily of honing skills they already have. For example, techniques such as positive reinforcement and systematic transitions between activities that are especially important with at-risk children are already practiced in the majority of effective classrooms.

Since most children exposed to drugs are mainstreamed into regular classrooms, instruction in meeting the special needs of drug-exposed children should be provided to all school staff who work with children exposed to drugs, including counselors, psychologists, special education teachers, and all classroom teachers. District and school administrators and—as the first contact person in a school—the school secretary should also be trained in how to recognize and respond to the unique problems of substance-involved children and families. Other staff who would benefit from training include paraprofessionals, volunteers, attendance officers,

school bus drivers, and others who regularly interact with children exposed to drugs.

Instruction that addresses issues and techniques related to substance exposure should cover the following subjects:

1. Identifying substance-exposed children and substance-involved families. This instruction should cover the following topics:

   - characteristics of children who were prenatally exposed to alcohol or other drugs
   - characteristics of children currently living with a family member who abuses drugs
   - characteristics of families affected by substance abuse
   - commonly abused substances and their effects
   - using the child and family needs assessment process to ascertain possible abuse of alcohol or other drugs

2. Interacting with drug-involved families, including

   - procedures to follow when a child appears to be suffering the harmful effects of prenatal exposure to alcohol or other drugs
   - techniques for working with children exposed to alcohol or other drugs
   - techniques for working with children and other family members living in a family where alcohol or other drugs are being abused
   - strategies for working with family members who abuse alcohol or other drugs
   - responding to a child's or family member's request for help regarding a substance abuse issue
   - procedures to follow if child abuse or neglect is suspected

3. Establishing a school environment appropriate for children exposed to drugs.

4. Collaborating with other agencies to meet the needs of children exposed to drugs. Instruction should address the following resources:

   - community-based programs that provide substance abuse treatment and other services
   - health and social services agencies serving the same children
   - people and agencies that can help with specific problems

"Basically we're telling teachers that they already know what they need to know to teach children who have been exposed to drugs."

Harold Smith, Director
Services for Exceptional Children
Fulton County Schools
Atlanta, Georgia

Staff development for teachers should also cover

- the impact of neurological impairment on learning
- structured classroom environments
- behavioral interventions for children exposed to drugs
- effective instructional strategies
- bonding and attachment issues
- effective participation on a multidisciplinary team

Collins and Anderson (1991) further recommend that faculty and staff have the opportunity during staff development sessions to examine their beliefs and values about substance abuse. The goal of these discussions should be healthy and constructive responses to the issue.

Excellent materials and programs are now becoming available to teachers and others who work with substance-exposed children.

Excellent materials and programs are now becoming available to teachers and others who work with substance-exposed children.

A number of publications addressing staff development are emerging from the early findings of research on children exposed to drugs, and several journals have devoted special editions to the topic of substance exposure. *(See Resources for publications, training programs, and other sources of training and materials.)*

Model training programs are also being developed for teachers of children exposed to drugs. The following are good examples of programs available in the Southeast:

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

This inservice program is designed for regular classroom teachers of substance-exposed young children. First introduced in Hillsborough County, Florida, in 1990, this train-the-trainer model is now being used nationally to prepare trainers to work with teachers in their own school districts.

The course consists of six weekly three-hour sessions covering the following topics:

- 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
- Social Skills, Organization, and Self-Esteem
- Teaching Language Through Motor Skills

The program is based on developmentally appropriate approaches to early childhood education endorsed by the National Association for the Education of Young Children (NAEYC). While no specific student curriculum is recommended, curricula such as High Scope, ERIN, and Montessori are used to illustrate the application of strategies to the classroom. The program also stresses a multisensory approach to teaching and introduces techniques involving visual cues and environmental prompts. Participants receive a notebook containing course materials, newspaper and journal articles, and make-and-take materials (Jackson, in press).

For more information, contact Linda Delapenha, Project Director, or Judith Hyde, Project Coordinator, Drug-Exposed and At-Risk Project, Hillsborough County Public Schools, 1202 East Palm Avenue, Tampa, FL 33605, (813)273-7137/7500, FAX (813)273-7302.

Children Vulnerable for School Failure Because of Exposure to Drugs and Alcohol

This 50-hour staff development course covers a wide range of topics related to the effects of prenatal drug exposure on children's development. Designed for Fulton County, Georgia, teachers by the Services for Exceptional Children office, the course is available to public school districts throughout the Southeast.

Instruction addresses the following topics:

- Addiction and the Family
- Effects of Prenatal Drug and Alcohol Exposure
- Social and Emotional Development of High-Risk Children
- Working with High-Need Families
- Instructional Strategies: Paradigm for Planning for Instruction and Attention Deficit Disorders
- Instructional Strategies: Behavior Management
- Instructional Strategies: Learning Disabilities
- HIV/AIDS: Impact on Children

For more information, contact Harold Smith, Executive Director, Services for Exceptional Children, Fulton County Schools, 580 College Street, Hapeville, GA 30354, (404)763-5680.

Dynamite Idea

Substance-Exposed Children Project

The Substance-Exposed Children Project was established in 1992 as a research-and-development project to design a model training program for teachers of children exposed to drugs. Administered by Florida A & M University, the three-year project is a collaborative effort involving the U.S. Department of Education, the Florida Department of Education, and the Gadsden County and Orange County (Florida) school districts. The goal of the project is to address the academic and social-emotional problems of substance-exposed children through individualized programs and facilitative classroom environments.

Each participating school establishes an intervention team, consisting of an administrator; teachers; a guidance counselor; and either a psychologist, social worker, or nurse. The team assesses students needing specialized services, develops an individualized intervention plan for each child, and monitors the progress of the students and their families. A behavioral specialist is assigned to each district to coordinate the work of the intervention team and provide on-site technical assistance and training.

Teachers are instructed in techniques that are effective in improving substance-exposed children's motivation, self-esteem, social skills, language development, ability to organize, readiness for learning, fine and gross motor skills, and academic achievement.

continued on page 51 . . .

A Systemic Approach to Dealing with Fetal Alcohol and Other Drug-Affected Children in Educational Settings

This five-day training program teaches educators how to identify and address the problems of children affected by exposure to alcohol and other drugs. Training materials include readings, videotapes, case studies, and worksheets.

The course includes, among others, the following units of study:

- Effects of Drug Use on the Fetus
- Effective Instructional Strategies for the Classroom
- Successful Classroom Environments
- Strategies for School Administrators

For more information, contact 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 97203, (503)275-9500.

PARENT TRAINING

Many aspects of effective parenting involve teachable skills. Consequently, many schools are taking advantage of their resources to offer parents of at-risk children the training they need to provide their children happier, more stable homes.

In some areas where schools have become major service delivery centers, parents come to the school to take classes. In Connecticut, for example, Family Resource Centers provide school-based child development and family support services to all children and families residing in the surrounding community (Palanki et al., 1992). Other schools provide training through aggressive outreach efforts, such as informal meetings held in neighborhood homes to talk about the "ups and downs" of parenting or buses sent to pick up parents who have no transportation.

Parent training generally addresses three areas: the parent as parent, the parent as teacher, and the parent as learner.

> **Parent-As-Parent** training typically includes instruction in child development, parenting skills, and strategies for accessing community services and resources. For the parents of children exposed to drugs, instruction might cover developmentally appropriate games, strategies for handling behavior problems, or decision-making skills.

Parent-As-Teacher training teaches parents how to help their children learn at home. For example, parents may be taught how select books to read to their children, how to model sharing and taking turns, or how to "talk" a child through the steps of a task.

Parent-As-Learner training ranges from adult education and job training classes to instruction in English as a second language.

Parent Support Groups

In some districts the parents, guardians, and teachers of children exposed to drugs have formed support groups that meet regularly to discuss issues and share information. These groups can focus on specific problems, such as raising a disabled child, or address broader issues, such as children's behavior, study habits, etc. In some communities, support groups provide training in English as a second language and referrals for such services as after school care and transportation. These groups can also be very useful in helping parents access social services and other resources.

Dynamite Idea

. . . *continued from p. 50*

In 1993, the project co-produced "A Nation's Challenge: Educating Substance-Exposed Children," a teleconference featuring practitioners and policymakers across the country. The project will also develop the following programs and services:

Model Classroom Program—Each participating school will be established as a regional demonstration site at which educators from all states will be able to observe effective practices and receive materials and technical assistance on replicating the program.

Model Training Program—Ongoing training will culminate in a model program of research-endorsed practices for teachers, principals, counselors, school nurses, psychologists, district administrators, and others working with students who were prenatally exposed to drugs. The training package will contain print and audio-visual materials. A preservice teacher-training course for higher education will also be developed.

Consultant Bureau—A consultant bureau of experts will be established to provide technical assistance in specific fields to educators and others who serve children exposed to drugs.

Source: Nancy Fontaine, Director, Early Intervention Office.

Chapter 5 SCHOOL PROGRAMS

Ideally suited to linking families with educational, health, social, and other services, public schools are becoming the primary service delivery centers in many communities (Kadel, 1992). In this capacity they are helping ensure that at-risk children and their families receive the comprehensive services they need for healthy, productive lives. As expressed by Weston et al. (1989), schools that provide both child-centered and family-centered interventions are meeting the challenge of "learning how to help drug-exposed [children] reach out to the world and how to support their families in creating a world worth reaching for" (p. 7).

Schools are also in the forefront of drug-abuse prevention. All schools provide students with education on drug prevention, and many offer such services as drug-prevention programs, drug-free activities, and support groups. For a list of schools in the Southeast that have been honored by the U.S. Department of Education's Drug-Free Schools Recognition Program, see Appendix A.

IDENTIFICATION OF CHILDREN EXPOSED TO DRUGS

Researchers universally agree that early identification and intervention can significantly help remedy the learning and behavioral problems associated with prenatal substance exposure. Unfortunately, many—some researchers say most—of the drug-affected children are not identified. Schools already contain significant numbers of children who were prenatally exposed to alcohol or other drugs, but because most of these children are of normal intelligence, the subtle deficits affecting their academic performance are often undetected or misdiagnosed.

Common Characteristics of Children Exposed to Drugs

As discussed in Chapter 1, the effects of exposure to drugs vary greatly; therefore, children who have been exposed to drugs can be vastly different from each other. The symptoms of drug exposure can vary along a continuum from minimal developmental delays to severe impairment in all areas of the child's development. Substance-exposed children's behaviors can also range from passivity to hyperactivity, apathy to aggression, and indiscriminate trust to intense fear and suspicion.

While the effects of prenatal drug exposure vary greatly, children exposed to drugs tend to have the following characteristics, many of which they have in common with other at-risk children:

Noncompliance—aggressiveness, failure to comply with teacher directives, or loss of control
Self-Regulation Difficulties—inability to attend to and process information, to calm oneself, or to adapt to the needs of a situation, often resulting in emotional or physical withdrawal or loss of control
Impulsiveness—tendency to act impetuously, often the result of the child's difficulty delaying gratification
Difficulties with Social Relationships—problems forming social relationships because of emotional detachment, poor communication skills, and inability to regulate behavior
Language and Communication Difficulties—difficulty processing information, following sequential commands, etc.
Poor Judgment and Poor Decision-Making Skills—difficulty understanding cause-effect relationships or in predicting the consequences of their behavior
Unreliable Memory—inability to retrieve information or to remember how to perform a previously mastered skill (Stevens & Price, 1992; Waller, 1993)

Dangers of Labels

The identification of children for early intervention services presents educators with a dilemma. How can they identify children for services without categorizing them with potentially damaging labels? With studies clearly showing that labels influence teachers' and others' perceptions of children's abilities, many educators are concerned about the harm that terms such as "crack kid" can cause. Consequently, most professionals are against labeling children with terms such as "cocaine-affected," "drug baby," or even "substance-exposed."

How can educators and social workers identify children for services without categorizing them with potentially damaging labels?

One reason educators who work with children who are substance-exposed oppose labeling is because terms such as "drug-exposed" often stereotype children who have very diverse problems—and abilities. Since children exposed to drugs (especially cocaine) have been branded brain-injured and unmanageable, children who are labeled "crack babies" may be perceived as unteachable despite their potential.

Another reason many educators do not favor labeling is that very little documentation exists on the effect of drugs on children; therefore, labeling drug-exposed children as unteachable is both prema-

ture and irresponsible. Furthermore, by attributing a child's problems solely to his or her mother's use of drugs, terms like "crack baby" imply that such factors as poverty, poor maternal nutrition, teenage pregnancy, etc., play no role in the child's problems. As Stephen R. Kandall, M.D., points out:

> If it eventually proves true that cocaine directly damages the brains of our young children, this indeed would be an American tragedy of immense proportions. But it would be no worse than the tragedies of poverty and homelessness that already affect thousands of mothers and children. (*Don't Call Them Crack Babies*, 1991, p. 3)

A very practical reason for not labeling children is that labels that describe medical conditions, such as "prenatally exposed to drugs," are of little help to teachers and inappropriate for determining a placement or intervention, particularly since the effects of exposure to drugs vary so much among children. Far more useful are labels that identify each child's academic, behavioral, and emotional needs—in educational terms. For example, diagnostic labels that describe specific problems, such as attention deficit disorder, or learning problems, such as difficulty with visual organization, are much more helpful to teachers. Not only do they identify characteristics relevant to the student's performance in school, but they also point the way to interventions that can help (Stevens & Price, 1992; Villarreal, McKinney, & Quackenbush, 1992).

Children exposed to drugs have difficulty coping with the stress, demands, and unpredictability of the typical school day.

PROTECTIVE ENVIRONMENTS

A predictable, secure, and stable environment is important for all children. For children exposed to drugs, it is essential. Early research with preschoolers exposed to drugs shows that they are often unable to function effectively in a traditional school setting. Because some children exposed to drugs are easily agitated, they have difficulty coping with the stress, demands, and unpredictability of the typical school day (Rist, 1990).

These children can, however, function very well in protective school environments characterized by structure, consistency, and security. Intervention programs for children exposed to drugs must, therefore, establish stable school and classroom environments. Ideally, these protective environments have the following attributes:

Adult-Child Ratio—The number of children per adult is low enough to promote attachment, predictability, nurturing, and ongoing assistance in learning appropriate coping styles.

Continuity—To provide children exposed to drugs with the stability they need, schools reduce the fragmentation that characterizes the typical school day and limit classroom interruptions from visitors, intercom announcements, etc. Disruptive noise is also controlled.

Routines and Rituals—The predictability of routines, rituals, and scheduling over time strengthens a child's sense of self-control and mastery over the environment. Therefore, professionals such as speech and language therapists, psychologists, and social workers who visit the classroom develop a routine for reintroducing themselves and predicting for the children when they will appear again.

Stability—Children exposed to drugs are assigned to a teacher for more than one year, and early childhood classes stay together for two or more years in elementary school.

Program Coordination—To ensure that all professionals concerned with a child and family are able to coordinate their efforts, time is allotted for teachers to meet and plan with social workers, psychologists, speech and language therapists, and other professionals (Cole et al., 1989; Waller, 1993).

Fostering Resiliency

Research on resilient children—those who have flourished despite childhood adversities—has found that these children typically have the following attributes:

1. **Social Competence**—responsiveness, flexibility, empathy, good communication skills, a sense of humor, and other prosocial behaviors
2. **Problem-Solving Skills**—ability to think abstractly, reflectively, and flexibly; ability to attempt alternative solutions for cognitive and social problems
3. **Autonomy**—a sense of identity and an ability to act independently and exert some control over their environment
4. **Sense of Purpose and Future**—healthy expectations, goal/success orientation, motivation, and hopefulness (Benard, 1991)

Forced to struggle with adversity from birth, children exposed to drugs are exceptionally resilient. Having prevailed through prenatal exposure to drugs or life with a drug-abusing, often violent family, they have survival skills that most adults have not developed—or have ever needed. Unfortunately, children exposed to drugs often manifest their resiliency in self-defeating or inappropriate behaviors. Schools must, therefore, determine the best way to tap into drug-exposed children's innate strengths and channel their resilience into constructive behaviors.

"Practically any school can enable at-risk children to stay with the same class for more than one year. This is such a simple thing to do but one that provides these children the stability they desperately need."

Faye Deloach, Principal
Walsingham Elementary School
Largo, Florida

A good way to accomplish this goal is to help substance-exposed children develop the four traits of resilient children described above. Studies of factors that foster resiliency as well as research on effective schools indicate that the following school qualities can help promote resiliency in children.

- **Caring and Support**—According to Benard (1991), the amount of caring and support that children receive in school is a "powerful predictor of positive outcome for youth." Studies consistently show hat the most positive role model for many at-risk children is a favorite teacher or coach.
- **High Expectations**—Schools that establish high goals for all children and help them achieve those goals have remarkably high rates of academic success.
- **Participation and Involvement**—In schools where youth are given high levels of responsibility and encouraged to participate in a variety of activities, the level of achievement is very high, while the number of discipline problems is very low (Benard, 1991).

How Administrators Can Help Classroom Teachers Meet the Needs of Children Exposed to Drugs

Principals and directors of kindergartens, pre-kindergartens, and child-care centers can help classroom teachers meet the needs of children exposed to drugs by

- being knowledgeable about the symptoms of exposure to drugs
- being aware of assessment techniques and instructional strategies that are appropriate for children exposed to drugs
- referring children exposed to drugs for diagnostic screening when necessary
- acknowledging the special needs of children exposed to drugs
- recognizing that children exposed to drugs require special curricular and instructional approaches
- responding to the affective as well as academic needs of drug-involved children
- ensuring that children exposed to drugs receive the specialized guidance and counseling they often require
- selecting staff who can meet the needs of children exposed to drugs
- arranging training for staff who work with children exposed to drugs
- providing support and guidance for teachers and other staff members who work with children exposed to drugs

"Children exposed to drugs are tremendously resilient, in some ways, much stronger than other children. These children develop the survival skills to adapt to an environment lacking in nurturing, learning, or any other positive characteristic."

Nancy Fontaine, Director
Early Intervention Office
Florida A & M
University

- using innovative approaches to involve parents or guardians in their children's development
- arranging for outside assistance that is important to the child's overall development
- following through on a child's referral to an outside source to ensure continuity of care
- tapping community resources that can provide information and services (Harpring, 1990)

HOME-SCHOOL PARTNERSHIPS

Home-school partnerships are becoming an integral part of programs serving at-risk children in many communities. Schools are discovering that these partnerships have many benefits beyond improving a child's academic performance.

Parent involvement through home-school partnerships improves parent-child interactions and increases parents' competence and confidence. As a result, the child's chances for healthy development are greatly increased. In many cases, the partnerships also stimulate parents to complete their education, hone their job skills, or otherwise improve their lives.

Outreach Strategies

Some parents have negative attitudes toward schools. Many of them go into their children's school only when there is a problem. For others, schools conjure up memories of being unsuccessful and unhappy as children. Many parents of children exposed to substances also find school staff members intimidating because the parents are self-conscious about their lack of education, limited proficiency with English, drug addiction, or other limitations. For these and other reasons, it is up to the school to take the initiative in establishing home-school partnerships.

The most successful outreach strategy for at-risk families is often word of mouth. Therefore, any parent involvement effort should involve asking current participants to recruit other parents in the neighborhood. Davies (1987) and Liontos (1992) recommend that schools also try the following outreach strategies:

1. **Send well-prepared, sensitive school representatives into homes to meet with families.**
   Outreach staff should be prepared for a variety of cultures, languages, and lifestyles.

2. **Broaden views of what constitutes a "family."**
   Faculty and staff should recognize that children exposed to drugs rarely come from traditional two-parent families.

Dynamite Idea

Parent Center

The Parent Center at Sudduth Elementary School serves high-risk children in Starkville, Mississippi. The center receives extensive support from community volunteers and donations that enable it to offer such services as social service referrals, evening workshops for parents (and child care for their children), a book/videotape/toy resource center, mental health counseling, and a 24-hour parent help line.

Examples of the range of support the center receives from the community include the following services and activities:

- the local newspaper's weekly "Partners in Learning" column on parenting skills and educational issues
- donations of unencumbered air time by the local television station for public service announcements in which parents, children, and school personnel demonstrate effective parenting skills and constructive home activities
- a "Coats for Kids" project
- fingerprinting of children by the police department as a safety measure

As a result of community support, only two salaried paraprofessionals are necessary to coordinate the program.

For more information, contact Joan Butler, Principal, Sudduth Elementary School, Greenfield Drive, Starkville, MS 39759, (601)324-4150.

Sources: "Home-School Coordination," 1992; Kadel, 1992.

Dynamite Idea

Natchez-Adams Chapter I Parent Center

The purpose of the Natchez-Adams Chapter I Parent Center, which serves seven public and private schools in Natchez, Mississippi, is to make education a more important part of parents' lives and to help parents work more effectively with their children.

Through the program, teachers complete referral forms that outline the skills children need to practice. The parents can then bring the forms to the center, where they are trained to use instructional materials to help their children master those skills. Parents can also check out materials and equipment, including personal computers, to use at home.

The center also provides parenting skills training and adult education.

For more information, contact Millicent Mayo, Natchez-Adams School System, Post Office Box 1188, Natchez, MS 39121, (601)445-2897.

Sources: Kadel, 1992; D'Angelo & Adler, 1991.

3. **Be nonjudgmental toward substance-abusing parents.** While the temptation to blame parents for what they have done—and may still be doing—to their children is understandable, school personnel must remember that drug addiction is a disease and that the child has a much better chance of progressing if the parents and school work together.

4. **Reach out to parents in informal settings.** Some parents are more approachable in "unofficial" places such as grocery stores, civic centers, etc.

5. **Schedule some meetings away from school grounds.** Many schools have had success holding meetings in neighborhood centers, churches, homes, and other places that are less intimidating and more accessible to parents.

6. **Establish a parent center at the school.** Parent centers offer parents a place to interact informally with teachers and other school personnel. They can also be used to provide parents information, resources, training, and referrals to community services.

7. **Keep libraries open after school hours.** Libraries can support family literacy programs, provide resources on child care, and serve as a forum for school-family communication.

8. **Eliminate logistical barriers to parent involvement.** Schedule conferences and meetings at times that are convenient to parents, let parents know when teachers can be reached by telephone, and ask for a neighbor's telephone number if the family does not have a telephone. Many schools that serve low-income families have succeeded in increasing parent participation by providing child care, transportation, and meals.

9. **Foster communication.** Develop materials in other languages for parents who are not proficient speakers of English. Contact parents when there is good news, not only when there is bad news; and establish two-way communication with families by

   - adopting a two-way portfolio assessment system in which teachers send home selections of a student's work and invite families to send examples of the child's home activities to school. The home portfolio can contain pictures the student has drawn, favorite stories, photographs, etc.

   - designing authentic learning tasks. The most successful early intervention programs for at-risk children recognize

that the home is an essential part of the curriculum. By developing tasks around family and community contexts, teachers can make learning more relevant and reinforcing.

10. **Help parents and other caregivers establish goals for their children and help the children meet those goals.**
Facilitating parental/caregiver goals can help establish a close working relationship between home and school.

11. **Use an innovative, flexible approach.**
Successful outreach programs try new ideas and change course when activities fail.

STRATEGIES FOR TEACHERS OF CHILDREN EXPOSED TO DRUGS

Chapter 6: Classroom Management

- Facilitative Classrooms
- Social-Emotional Support
- Behavior Management

Chapter 7: Instructional Approaches

- Learning Styles
- Teaching Strategies

Chapter 6 CLASSROOM MANAGEMENT

While some substance-exposed children with severe symptoms are placed in special education programs, the vast majority of children exposed to drugs will be assigned to regular classrooms either because they are capable of functioning well in an average classroom, their learning deficits have not been detected, or because programs to meet their needs are not available. Every classroom teacher should, therefore, be prepared to teach children exposed to drugs.

To do so effectively, each teacher must be able to recognize and respond to the special needs of children exposed to drugs and help them develop the social skills that many drug-exposed children lack. While this can be a difficult—often frustrating—task, Waller (1993) reminds us that

> . . . children affected by crack want to be like other children. They want to have friends. They want to "be good." They want to feel the same things other children do, and do the things they do. They want to be able to think and "get" jokes and understand subtle things. They want to play and to enjoy things. They want to succeed in school. They want to succeed socially. They want to understand themselves and the world around them. (p. 74)

For children exposed to drugs, the classroom can become an oasis in their otherwise chaotic lives, and the teacher can become one of the few people the children can count on for attention and caring.

FACILITATIVE CLASSROOMS

Because children exposed to drugs often come from very unstable environments, a safe, orderly, and secure school setting is crucial to their emotional and cognitive well-being. Accordingly, they are happiest and most productive in classrooms with familiar, soothing surroundings; predictable routines; and consistently enforced limits and rules (Cole, Jones, & Sadofsdy, 1990).

A rating scale for assessing the appropriateness of a classroom, materials, daily routines, and teacher-student interactions for children exposed to drugs is provided in Appendix C.

Creating Suitable Environments

Children exposed to drugs perform best in orderly environments. Their classrooms should be well-organized with clearly defined learning centers and group meeting areas. To avoid distracting or over-stimulating children exposed to drugs, the number of objects

and furnishings in the classroom is limited, and lighting, colors, and textures are subdued. Ideally, equipment and materials can be removed to reduce stimuli or added to enrich an activity.

Because children exposed to drugs have difficulty learning in the typical classroom environment, Waller (1993) suggests that they spend two years in a classroom specially designed to avoid "overloading their circuits" with too much sensory stimulation (p. 61). This "intervention classroom" stands in stark contrast—literally—to what is generally regarded as the ideal setting for young children (Waller, 1993, p. 61).

Instead of being brightly lit, the intervention classroom has low lighting. Instead of containing bright and interesting pictures, the walls are almost bare. Instead of numerous bulletin boards displaying a variety of illustrations and themes, one bulletin board exhibits only a few items that the children have made. Instead of being colorful and inviting with toys and books, the ideal classroom for children exposed to drugs contains few colors and plain patterns; toys are stored out of sight and curtains cover books in bookcases. Placement in such an environment, says Waller, enables children exposed to drugs to mature in a more appropriate setting before encountering the challenges of the typical classroom.

Establishing Routines

One of the most significant impairments resulting from exposure to drugs is the inability to structure one's own life. Accordingly, establishing and following routines is very important in classrooms with children exposed to drugs. Because at-risk children have difficulty adapting to change, classroom routines should be as predictable as possible. Activities should be structured, and schedules should be consistent so that children can anticipate and easily adapt to daily tasks.

Because most children exposed to drugs have difficulty ending activities, transitions between classroom activities are an excellent opportunity to teach them how to prepare for and cope with change. Therefore, teachers should carefully prepare for transition time, ensuring that transitions between activities are extremely systematic.

Transitions between activities should have three major stages:

1. **Ending**—a formal end of the current activity, such as a discussion of the activity to help the children understand its significance and reach closure, or a period when children put away the materials they have been using

Teaching Tip

Establishing Routines

The following tips on establishing classroom routines are from experienced teachers of children exposed to drugs:

- ✔ Use the same rubric to begin each day, e.g., "Good morning, class."
- ✔ Introduce new information or new lessons in the same way, e.g., "Let's get ready to learn something new."
- ✔ Write down the introduction you use for every activity on the first day of school to help you remember the exact wording for introductions to activities thereafter.

Source: Waller, 1993.

Teaching Tip

Making Systematic Transitions

Shirley Jackson of the U.S. Department of Education offers teachers the following advice for making successful transitions with substance-exposed and other at-risk children:

- ✔ Have as few transitions in the daily routine as possible.
- ✔ Alternate active times with quieter times.
- ✔ Warn children well in advance of a change in activities (for example, at ten minutes, then five minutes, then one minute before the end of the current activity).
- ✔ Preview for the children what will happen during the transition.
- ✔ Use the same type of signal (bell, light, music, etc.) for all transitions.
- ✔ Practice new or complex transitions by having the students do "dry-runs" or by asking one child to model the stages of the transition.
- ✔ Start the next activity promptly to encourage dawdlers to join in.
- ✔ Give the children positive reinforcement throughout the transition process

Source: Jackson, in press.

2. **Middle**—a link between the current activity and the next activity, such as an explanation of how successive activities relate to each other
3. **Beginning**—an introduction to the next activity, including advance organizers, motivation, etc., that prepare the children for and stimulate interest in the next activity

Establishing Rules

Rules for children exposed to drugs should be explicit and few. They should be carefully explained, prominently posted, and consistently applied. Because verbal expression is critical to the development of a substance-exposed child's ability to control his or her behavior, children should be encouraged to talk about their feelings in an atmosphere of acceptance.

Recognizing that having the freedom to choose and to assume the responsibility for choices promotes a child's physical, social-emotional, and intellectual growth, teachers should also encourage children exposed to drugs to make decisions for themselves.

SOCIAL-EMOTIONAL SUPPORT

Drug-exposed infants who have not formed attachments with their caregivers or who have received inadequate care are likely to become distrustful, suspicious, or fearful children. Overwhelmed by social interactions, they often cope by engaging in exaggerated behavior patterns. As a result, intervention strategies for children exposed to drugs must attempt to counteract prenatal risk factors as well as stressful life events.

The teacher of a child exposed to drugs must realize that he or she may become a very important person in that child's life. This possibility is especially likely with children who are living with drug-abusing families or being passed around from foster home to foster home. For these unfortunate children, the classroom can become an oasis in their otherwise chaotic lives, and the teacher can become one of the few people the children can count on for attention and caring. Consequently, a teacher's first priority should be establishing a strong attachment with children exposed to drugs (Cole et al., 1989).

Teaching Tip

Putting Safety First

The teacher's first priority is safeguarding all of the children in the classroom. Since children exposed to drugs are unpredictable and sometimes violent, the teacher should take the following precautions to ensure the safety of the children:

- ✔ Remove objects that could become weapons in the hands of an out-of-control child.
- ✔ Arrange the classroom so that you can see all areas of the classroom at all times and so that you are able to move to every area quickly.
- ✔ Train aides and volunteers in safety techniques.
- ✔ Assign children exposed to drugs to the quietest, calmest work groups.
- ✔ Constantly monitor the behavior of children exposed to drugs.
- ✔ Arrange with teachers in adjacent classrooms to cover your class in an emergency.
- ✔ If children are too stimulated to cope with noisy playgrounds or cafeterias, stay with them in the classroom during recess and lunch.
- ✔ Be prepared for sudden mood swings and unprovoked temper tantrums.
- ✔ Be alert to physical signs of hyperactivity, such as a child suddenly running around the classroom, throwing something, or yelling.
- ✔ Learn (from teachers of emotionally disturbed children) how to safely restrain a child by wrapping your arms and the child's arms around him or her. Hold a child as long as it takes until he or she is calm.
- ✔ Use a time-out area or room with older children.

Teachers of children exposed to drugs should remember that restraints and time-outs are not punishments but techniques for controlling children when they are unable to control themselves.

Source: Waller, 1993.

Individuals who have succeeded in spite of adverse environmental conditions . . . have often done so because of the presence of support in the form of one family member, one teacher, one school, one community person that encouraged their success and welcomed their participation.

Bonnie Bernard
Fostering Resiliency in Kids, 1991

Promoting Social-Emotional Growth in Children Exposed to Drugs

Fostering children's self-esteem, self-control, and problem-solving mastery is best achieved when teachers combine nurturing with facilitative teaching. These protective and facilitative approaches are similar to those of any good program for young children, but because children prenatally exposed to drugs are more vulnerable, these techniques are essential to their development.

In addition to having the sensitivity, warmth, and other nurturing attributes that all effective teachers have, teachers of substance-exposed children contribute to the social-emotional growth of substance-exposed children. For example, the teacher is likely to become an important role model for the children. The teacher must, therefore, be careful to exhibit the behaviors the children should imitate—because they will.

The teacher must also learn to be direct with children exposed to drugs. While other children understand the meaning of the teacher's pointed look or stern tone of voice, many of the children exposed to drugs do not. They must be told precisely to stop whispering or put the marbles away.

To help children exposed to drugs learn how to respond to verbal cues, the teacher should teach them the meaning of common facial expressions and body language. A good way to do this is to model nonverbal cues, explain situations in which they are used, help the child find examples of the expressions in magazines, and have the child look in a mirror while he or she practices the expressions.

Before a child can attempt new learning he or she must be made to feel emotionally safe. It is, therefore, crucial that the teacher establish a responsive, nurturing environment, one that is conducive to active learning as well as the development of a healthy self-concept (Cole et al., 1989). The following chart, adapted from the work of the Los Angeles Prenatally Exposed to Drugs (PED) program, identifies strategies for fostering social-emotional development in children exposed to drugs.

Characteristics that May Inhibit Social-Emotional Development	Teaching Strategies that Foster Social-Emotional Development
Does not seek out adults for comfort, play approval, or assistance Is indiscriminate in his or her attachments to all adults; goes from one adult to another showing no preference for a particular adult	Seize every opportunity to develop close teacher-child relations. Respond to the child's needs in predictable ways.
Clings to the teacher and other adults; becomes extremely agitated when separated from primary caregiver	Provide the child with opportunities for physical contact and mutual touch. Recognize that preschoolers may need to sit next to an adult or in an adult's lap. Communicate with caregiver to keep abreast of relevant home events, such as variations in routines, family emergencies, or changes in the child's sleeping patterns.
Lacks self-awareness as an individual	Center activities around each child as an individual. Give the child toys, materials, and areas in the classroom that are the child's alone and do not have to be shared (e.g., favorite toys from home, picturebooks, cubbies with the children's names). Provide daily opportunities for the child to practice independent feeding, dressing, bathing, toileting, and play skills (while remaining tolerant of messiness and dawdling).
Exhibits a restricted range of emotions; rarely smiles, laughs, or shows joy; and does not express fear, grief, or worry	Model appropriate expressions of the full range of emotions for the child. Explain expressions of emotions to help the child learn to identify emotions. Encourage, identify, and react to the child's expressions of emotion.
Is unable to learn social skills by observing others	Teach specific social skills such as sharing, taking turns, etc.

Characteristics that May Inhibit Social-Emotional Development	Taching Strategies that Foster Social-Emotional Development
Is unable to learn social skills by observing others	Practice common interactions (and appropriate nonverbal expressions) such as greeting the principal or a grandmother, asking for directions, or having a conversation about an event; ask the child's parent/caregiver to practice specific social interactions at home.
Initiates interaction with other children inappropriately by hitting, pushing, biting, swearing, or making negative remarks	Acknowledge attempts by the child to interact cooperatively with peers. Intercede with extra support for a child who has attempted to resolve conflict without success.
Has difficulty delaying gratification	Delay rewards and other gratification for gradually longer periods of time. Teach the child the concept of time.
Withdraws and becomes unresponsive when under-stimulated by a bland environment or inadequate social interactions.	Create a classroom environment with appropriate stimulation by slowly introducing moderated noise levels, additional colors and textures, nad other sensory stimuli.
Is listless, passive, or socially inattentive	Encourage the child to interact with (rather than withdraw from) others.
Lacks inner control (giggles become screams)	Use stories, puppets, and rold-plays to help the chld gain control. Offer verbal reassurance, establish eye contact, sit next to the child, or provide physical comfort. Remove the chld from the source of the problem and help the child calm down.
Source: Cole et al., 1989; Waller, 1993.	

Promoting Peer Relationships

Good peer relationships have a very positive effect on the social-emotional well-being of drug-exposed children. Teachers should, therefore, encourage drug-exposed children's classmates to be understanding and accepting of drug-exposed children. Because bonding with even one peer can have a very positive effect on a child exposed to drugs, teachers should also nurture friendships between substance-exposed children and their classmates.

An effective way to foster peer relationships as well as appropriate classroom behavior is to team a substance-exposed child with a classmate. The teacher should select as "peer partner" a child with an easy-going manner and soft voice (Waller, 1993, p. 64). The child should also be capable of understanding, verbalizing, and following classroom rules and of modeling such behaviors as staying on task.

Once the peer partnership has been established, the teacher can put the substance-exposed child and the peer partner in a small group of children who have the same characteristics as the peer partner (calm, well-behaved, and diligent). To ensure that the child exposed to drugs is not over-stimulated during the group activity, the teacher should place the group in a classroom area with limited stimuli. Ideally, this area would be next to the teacher's desk, and the drug-exposed child would be facing a bare wall or chalk board. With this arrangement, the substance-exposed child would not be surrounded by other children or distracted from the group by other stimuli (Waller, 1993).

BEHAVIOR MANAGEMENT

Although the behavior of children exposed to drugs can be more extreme and less predictable than the behavior of emotionally disturbed children (Waller, 1993), children exposed to drugs respond to many of the same techniques that work with other children, the major difference being one of degree. All children do their best when boundaries are firmly established, consequences are clearly communicated, and rules are consistently enforced.

Most children exposed to drugs have normal intelligence, which their teachers can put to use with many interventions for behavior as well as learning problems. For example, rather than appealing to their emotions (*why* children should follow rules), Waller (1993) suggests that the process of establishing and reinforcing classroom rules should be approached as an intellectual task (*what* are the rules):

1. Compile a written list of classroom rules.
2. Make sure the children understand the rules and that they can either recite or read the list.
3. Give examples of each rule and make sure each child can recite or give examples as well.
4. Post the list in a prominent place in the classroom.
5. Put a copy of the rules on the desk of children exposed to drugs.
6. Review the list with the children several times a day.
7. Emphasize that the rules are the same for different activities, subjects, etc.
8. Instruct children exposed to drugs who attend other classes to take their copy of the rules with them.

Dynamite Idea

Preschool Stress Relief Curriculum

The Preschool Stress Relief Curriculum helps preschoolers, in particular children of substance abusers, learn how to reduce the stress in their lives, enhance their self-concepts, and control aggressive behavior. Designed for Head Start programs in the metropolitan Atlanta area, the program has been supported by the Atlanta chapter of the National Council of Negro Women and the U.S. Department of Health and Human Services' Office of Substance Abuse Prevention.

At a two-day workshop teachers learn about the causes and consequences of stress in young children, stress reduction and coping skills for young children, and techniques for creating a stress-free classroom environment. Parents attend two workshops to learn how to deal more effectively with their own and their children's stress.

The complete curriculum contains a manual, posters, puppets, puppet videotapes, coloring/story books, song cassettes, and stickers.

For more information, contact Jennie C. Trotter or Gloria Humphrey, Wholistic Stress Control, Inc., Post Office Box 42481, Atlanta, GA 30311, (404)344-2021.

Source: Collins & Anderson, 1991.

Corkery (1992) recommends that teachers use the following specific techniques with problem behaviors commonly exhibited by children exposed to drugs:

Behavior Management Strategies		
Problem	**Strategy**	**Example**
Lack of Self-Control	Establish clear and consistent limits to help children recognize boundaries and develop greater self-control, then help them monitor their own actions. Orchestrate situations to avoid aggravating drug-exposed children's lack of self-control. Teach children how to engage in socially acceptable behavior.	Tell the children to keep a record of how many times in one day they put away their materials at the conclusion of activities. If a child throws a tantrum when he or she is unable to choose a learning center activity because other children have chosen it first, arrange the selection of activities to ensure that the child gets his orher first choice. Eventually wean his or her away from the activity. Demonstrate how to enter a classroom, then "talk the child through" the steps of entering a classroom and have him or her practice entering a classroom.
Difficulty Calming Self	Help children think of things that are soothing, then use verbal clues to remind them of the soothing thoughts or encourage them to use visual imagery to calm themselves.	Have a child select cues that he or she can use during upsetting situations, such as a picture of a peaceful scene, a soothing melody, or word or phrase the child can repeat to calm himself or herself. Play soft music, such as a flute solo.
Impulsive Actions and Reactions	Teach children to use verbal reminders and cues to slow down their actions and reactions, and because impulsive children also tend to have a low tolerance for frustration, help them avoid or cope with stressful situations that can cause them to become either withdrawn or aggressive.	Tell an impulsive child to remind himself or herself to "Stop" or to "Slow Down" and think about what he or she wants to do before acting. Teach an impulsive child to stop or slow down by counting to a designated number before acting.

continued . . .

Problem	Strategy	Example
Aggressive Behavior	Set clear limits and consequences for aggressive behavior for all children in the group and help aggressive children learn how to interact effectively with peers. Help aggressive children develop communication and negotiation skills.	Intervene when an aggressive child has conflicts with peers, then have the child participate in a group discussion about the conflict.
Inability to Express Feelings Except in Actions	Since being able to talk about feelings often obviates the need for aggressive and impulsive behavior, help children label their feelings, then encourage them to express the feelings verbally or symbolically.	Ask a child what he or she is feeling at the time the behavior is occurring (or just afterward if necessary), encourage the child to identify the feelings verbally or nonverbally (e.g., with a picture), and discuss the feelings with the child.
Tendency to be Over-Stimulated or Distracted	Limit the number of activities. Neutralize the source of the stimulation.	Teach four subjects rather than eight in one week; teach the remaining four the following week. Use only one or two activities to reinforce a concept. Limit the number of transitions in a lesson. Protect the child from intrusive people, noisy environments, and unnecessary classroom interruptions. Limit the number of objects in the classroom.
Failure to Comply with Routine, Simple Commands	Set explicit, consistent limits of behavior for the child and explain the consequences of his or her actions. Provide attention and time to children who are behaving appropriately. Recognize that the child's negative behavior is a signal of unmet needs and acknowledge the child's needs, wants, and fears.	If the child ignores limit setting, address him or her by name, elicit eye contact, and/or touch him before giving oral commands. If the child fails to comprehend the teacher's nonverbal cue/look, move closer to the child, look at him or her, and repeat the cue/look; or explain to the child what the teacher's look, body language, or gesture mean. Compliment children who comply with commands, are on task, etc. Investigate the roots of a child's behavior by asking questions about his or her needs, wants, or fears.

Source: Corkery, 1992

Dynamite Idea

ARK (At-Risk Kids) Project

Like most school systems, the Pinellas County Public School system lacks the resources to provide the intensive behavioral therapies, small class size, and other costly interventions often endorsed for substance-exposed and other at-risk children. Consequently, school personnel have been developing strategies that enable schools to meet at-risk children's needs in regular classrooms. One result of this effort has been the development of the At-Risk Kids (ARK) behavior management program by kindergarten teacher Shirley Johnson at Walsingham Elementary School.

Instruction in the ARK program focuses on four areas considered critical for children exposed to drugs but important to the other children in the classroom as well:

Linear Time—to teach students to understand the flow of events as well as consequences of behaviors, delayed gratification, etc.
Self-Monitoring—to encourage children to evaluate and modify their own behavior (*see Appendix B for examples of behavior modification charts*)
Positive Reinforcement—to promote good behavior by decreasing punitive responses and increasing praise and other forms of positive reinforcement
Bonding—to encourage students to develop emotional attachments to their peers

According to principal Faye Deloach, the bonding process has been so successful that part of Walsingham's restructuring process has involved changing procedures so that kindergarten students can move up with their classmates to the same first-grade class. Other indicators of ARK's success are the reductions in the number of behavior problems and in the number of anticipated special education enrollments.

Family involvement is accomplished through such approaches as providing bus service to remote areas, sponsoring block parties, and identifying leaders among parents to host neighborhood meetings in their homes. The program has also organized covered-dish suppers with foods from different countries and cultures. Another key component of the ARK program is the release time that teachers receive for training, observing each other's classroom practices, and sharing their techniques.

Since being piloted in 1991, the ARK project has been replicated by 20 other schools.

For more information, contact Faye Deloach, Principal; George Sherman, Behavior Specialist; or Shirley Johnson, Teacher; Walsingham Elementary School, 9099 Walsingham Road, Largo, FL 34643, (813)588-3519; Linda Jones or Alice Roberts, Drug Free Schools Program, Post Office Box 2942, Largo, FL 34640-2942, (813)588-6130.

Source: Sherman, Jones, & Roberts, 1992.

Like other children, these exposed to drugs learn best when they are taught in a manner that takes advantage of their strengths and talents, thereby increasing their chances for success. They also progress when their areas of weakness are given necessary remediation accompanied by emotional support and encouragement. Like other children, drug-affected children often require one-to-one interactions with teachers and respond well to praise (Corkery, 1992). They also perform best for teachers who genuinely care about them and their progress.

The vast majority of children exposed to drugs have normal intelligence—some are even gifted. Unfortunately, most have characteristics, such as an inability to make decisions, organize objects and information, or participate in free play, that inhibit their ability to learn. Because substance-exposed children's unique instructional needs require extra attention and innovative approaches, their teachers must have a wide range of instructional strategies at their disposal.

They should also be able to conduct ongoing educational assessments, monitoring children's progress during lessons, play, transition times, and other activities to determine how the children experience stress, relieve tension, cope with obstacles, and react to change. Play activities should also be observed for indications of how the children use peers and adults to meet their needs and solve problems.

Teachers of children exposed to drugs should also be able to stay abreast of research developments to ensure that they have up-to-date knowledge about teaching children exposed to drugs. Because substance exposure has only recently become a field of scientific study, research is still in the process of identifying the most effective teaching strategies and other interventions for children exposed to drugs (Cole et al., 1989; Howze & Howze, 1989; Waller, 1993).

Children exposed to drugs often have difficulty learning in the linear style required in traditional school lessons.

LEARNING STYLES

Children exposed to drugs often have difficulty learning in the linear style required in traditional school lessons. While effective teachers already present material in different ways to accommodate the different learning styles of students in a typical classroom, they should be especially vigilant in ensuring that lessons are appropriate for drug-exposed children's learning styles.

Teaching Tip

Getting A Child's Attention

Children cannot learn unless they give a task their attention; therefore, teachers must ensure that they have a child's attention before attempting to teach something.

Since children exposed to drugs have difficulty focusing attention, the teacher must often do so for them.

For example, the teacher might gently guide the child's head down toward a book, or he or she might move the child's hand over a page. In the process, the teacher should use as few stimuli as possible. If the teacher touches the child's hand, he or she should not look directly at or talk to the child.

Source: Waller, 1993.

The following are examples of instructional approaches that are appropriate for the most common types of learning styles.

For **visual learners**, who learn best by seeing or reading:

Use visually oriented materials (illustrated books, pictures, films, etc.).

Emphasize information with colors.

Encourage children to visualize tasks.

For **auditory learners**, who need to hear what they learn:

Use cassette tapes of stories, films/videotapes with sound, music, oral feedback, etc.

Reinforce written directions with oral directions.

For **kinesthetic learners**, who learn by touching:

Provide hands-on activities (building, coloring, painting, etc.).

Use kinesthetic materials (cloth with textures and a computer with a joystick or a mouse).

Keep children physically active with activities such as dancing and role-playing.

For **global learners**, who prefer to ponder the whole—the "big picture"—before contemplating the parts:

Tell children what the goals of tasks are. ("We are separating jellybeans by colors so we can use them to decorate a gingerbread house.")

Explain how activities fit in with units. ("This film on pandas will begin our unit on animals from other countries.")

For **analytic learners**, who use a "part-to-whole" approach to learning:

Give children clues until they guess the identify of a character in a story.

Demonstrate the steps in a laboratory experiment (Villarreal et al., 1992).

TEACHING STRATEGIES

Based on her interviews with experienced teachers of children exposed to drugs, Waller (1993) offers the following advice on adapting teaching style.

1. **Forget stimulating teaching.** Varied teaching styles or animated lessons may confuse or over-stimulate substance-exposed children. Teachers of these children should, therefore, avoid such strategies as teaching modalities,

exciting students with high-interest learning activities, and allowing students to move around the classroom.

2. **Teach one thing at a time.** The teacher of children exposed to drugs should teach one thing at a time, teach it the same way every time, and teach it time after time. He or she should be able to break each instructional task into a series of subtasks or determine the simplest way to present an idea or select one manipulative that best illustrates a concept and always teach children in the same way. Since children exposed to drugs have difficulty retrieving information, they may demonstrate knowledge of a fact or skill one day but not know it the following day. Their teachers should, therefore be prepared to repeat the same lesson several times.
3. **Use one teaching style when providing individualized instruction.** If taught the same fact in five different ways, children exposed to drugs may think that they are being taught five different things. Therefore, the teacher should ascertain the learning style that works best for a student and stick to that approach during one-to-one instruction.
4. **Keep groups very small.** Since children exposed to drugs can be over-stimulated by large groups of people, limit groups to two or three children.
5. **Limit the number of choices offered to children exposed to drugs.** Children exposed to drugs have difficulty distinguishing important from unimportant stimuli and understanding the consequences of alternatives. They are usually confused—and sometimes disoriented or angered—by choices. Furthermore, their impulsivity causes them to make bad choices.
6. **Appeal to the intellect.** With other children, teachers appeal to emotions (with motivation, praise, etc.) to reach the intellect. Because children exposed to drugs have normal intelligence but impaired emotions, teachers can more successfully appeal to their intellects and educate their emotions. Language is key to this process; therefore, children exposed to drugs must be taught language directly since they do not learn to communicate by imitating others (Waller, 1993).

Adapted from *Today's Challenge: Teaching Strategies for Working with Young Children At Risk Due to Prenatal Substance Exposure* as well as the work of Corkery (1992) and Waller (1993), the following charts identify behaviors of children exposed to drugs that may inhibit their success in school and match these characteristics with appropriate teaching strategies and interventions.

Forget timetables. . . . Concentrate on milestones of student learning.

Mary Bellis Waller
Crack Affected Children: A Teacher's Guide, 1993

Learning

Children exposed to drugs learn best when they participate in hands-on activities, are provided one-to-one instruction, and are given opportunities to practice decision-making and problem-solving skills. They also progress well in student-centered classrooms with teachers who use a facilitative approach to instruction. Such a foundation promotes competence, self-esteem, and motivation for new learning (Cole et al., 1989).

Characteristics that May Inhibit Learning	Teaching Strategies that Foster Learning
Uses few problem-solving strategies; rarely engages in trial and error Rarely completes tasks Needs a long time to complete tasks Demonstrates sporadic/intermittent mastery of skills over prolonged period of time and is sometimes unable to perform tasks that have been previously mastered	Ask the child to verbalize the steps of a task; provide oral cues (talk the child through the task) if the child is unable to verbally give steps of task. Use physical, concrete, and verbal cues to direct or redirect child in task or activity.
Is frustrated by situations requiring problem-solving skills, becomes irritable, and gives up easily	Appeal to the child's intellect rather than emotions. Recognize and consistently praise the child's attempts and accomplishments.
Has difficulty paying attention Is unable to remain focused on an activity	Adjust the activity or task to better suit the child's interests or learning style. Set aside an austere part of the room containing few distractions and stimuli to provide one-to-one instruction. Encourage the children to verbally remind themselves with cues or words such as "Think!" to continue working when they notice their attention straying.
Has difficulty making decisions	Give the child opportunities daily to make decisions about play and other activities. Simplify the decision-making process by narrowing the range of alternatives to two or three choices.

Sources: Cole et al., 1989; Corkery, 1992; Waller, 1993.

Communication Development

The development of a child's language depends on his or her ability to receive, understand, integrate, and express meaningful information. Children exposed to drugs, especially those who live in drug-abusing environments, have difficulty developing communication skills because of their inability to process information, to interact well with others, and to actively explore their environments. As a result, many substance-exposed children experience significant delays in the development of communication skills. In fact, many three- and four-year-olds enter pre-school unable to speak, and some lack the ability to understand language.

Because most children exposed to drugs are unlikely to learn language the way other children do (indirectly—by listening to others), their teachers must teach them language directly (Cole et al., 1989; Waller, 1993).

Characteristics that May Inhibit Communication Development	Teaching Strategies that Foster Communication Development
Is unable to follow directions that are appropriate for his or her developmental level	Give simple one-step directions and gradually increase the number of steps in directions.
Has delayed receptive and expressive language	Use "hands-on" activities to reinforce the child's language.
Speaks with prolonged infantile articulation	Respond immediately to beginning attempts at verbal communication.
Instead of verbalizing his or her needs, wants, and fears, expresses them with behavior such as banging, stomping, and shouting	Create a stable environment where children feel safe to express their feelings, wants, and needs. Teach the child strategies that enable him or her to appropriately express needs, wants, or fears.
Does not signal desires with eye contact, gesturing, or speech	Learn to recognize and respond to muted signals from the child.
Does not respond to verbal praise from adults	Use close proximity, gestures, and smiles to convey messages.
Observes rather than engages with peers in play	Provide the child with the appropriate language to use in conversation with other children, including the names of people, pets, food items, body parts, objects, feelings, events, etc.

Source: Cole et al., 1989.

Motor/Spatial Development

Prenatal exposure to alcohol or other drugs can cause neurological damage, resulting in fine and gross motor impairment. As a consequence, children exposed to drugs may experience motor/ spatial problems affecting their ability to function normally in their physical environment.

Characteristics that Indicate Abnormal Motor Spatial Development	Teaching Strategies that Foster Motor Spatial Development
Has difficulty with gross motor skills (e.g. swinging,, climbing, throwing, catching, jumping, running, and balancing)	Guide the child through motor activities that emphasize the skills of rhythm, balance, and coordination. Use songs, games, and play to teach the child how to control his or her body.
Walks into stationary and moving objects Moves too close to or too far away from another object Trips or stumbles without apparent cause	Remind the child of obstacles in his or her path. Provide the child opportunities to experience spatial relationships through motor mazes and play.
Has immature grasping skills Has difficulty manipulating (e.g., stacking, cutting, drawing) objects Exhibits tremors when stacking, stringing, or drawing	Give the child a variety of tactile and small motor activities that use water and sand, pegboards, puzzles, blocks, etc. Observe the child's tremors, noting their frequency and duration and the ways the child compensates for them.
Source: Cole et al., 1989.	

Play

During play, children learn to understand themselves and their relationships to others and the world around them. Unfortunately, children who have been exposed to drugs lack the self-organization, initiative, follow-through, and imagination that is required for play. Not knowing what to do when given the opportunity to engage in free play, they scatter and bat toys or randomly pick up toys up, then put them down (Cole et al., 1990).

Characteristics that May Inhibit Play	Teaching Strategies that Foster Play
Rarely participates in spontaneous play, wanders aimlessly	Follow the child's lead in play. Give the child support and encouragement during play.
Appears perplexed and confused and cannot select or focus on materials	Find out what is available for the child to play with at home.
Is unable to organize own play	Model toy choices for the child and demonstrate how to play with the toys.
Is easily over-stimulated by too much noise	Limit noise levels with sound-deadening devices such as acoustic ceiling tile and rugs on floors and walls and activity and noise levels.
Is easily over-stimulated by movement and excitement	Limit activity.
Does not initiate dramatic play	Model, explain, and initiate dramatic play with the child.
Engages in representation play characterized by delays, discontinuity, and disorder	Play with the child when he or she initiates dramatic play.
Does not have regular play and rest cycles or pattern	Plan a schedule of play and rest activities to help the child develop regular patterns.
Has difficulty joining others in play	Provide opportunities for the child to play interactively with an adult. Provide the child with opportunities to take turns with peers and adults.
Does not initiate appropriate interactive play	Model interactive play.

Source: Cole et al., 1989; Waller, 1993.

Section IV

RESOURCES

- Helplines
- Organizations and Projects
- Regional Contacts
- Training Programs, Consultants, and Technical Assistance
- Publications
- For Further Reading

HELPLINES

Cocaine Baby Helpline.....(312)908-0867

Information on the effects of cocaine on children and on sources of help for pregnant women.

Cocaine Information Line ..(800)COCAINE

24-hour toll-free information and referral service.

Federal Alcohol and Drug Clearinghouses .....(800)788-2800

Information and resources from the following federal services:

- National Clearinghouse for Alcohol and Drug Information
- Drug Abuse Information and Referral Hotline
- Drug Information Strategy Clearinghouse
- Drug-Free Workplace Helpline
- Drugs and Crime Data Center
- National Criminal Justice Reference Service
- National AIDS Clearinghouse

National Council on Alcoholism.....(800)NCA-CALL

Referrals and information on state and local affiliates' activities.

National Council on Alcoholism and Drug Dependence Helpline .....(800)622-2255

Information and referrals.

National Drug Abuse Information Line .....(800)662-HELP

Information on drug abuse and telephone numbers of treatment centers.

ORGANIZATIONS AND PROJECTS

America Belongs to Our Children—Provides information on drug use during pregnancy and advocates for expanded prevention, intervention, and treatment services for substance-exposed children; publishes the *Messenger* newsletter, which contains articles on issues and legislation affecting substance-exposed children, training programs and resources, and educational interventions for substance-exposed children. For more information, contact Sheryl A. Valentiner, Project Director, America Belongs to Our Children, Scott Newman Center, 6255 Sunset Boulevard, Suite 1906, Los Angeles, CA 90028, (213)469-2029, (800)783-6396, Fax (213) 469-5716.

Born Free Project—As part of the Dept. of Public Health's high-risk infant program, provides pregnant women and mothers substance-abuse treatment as well as parenting training, assistance with life skills (nutrition, budgeting, etc.), and other interventions. For more information, contact Fran Bakers, Social Worker Consultant, Born Free Project, Mississippi State Dept. of Public Health, Post Office Box 1700, Jackson MS 39215-1700, (601)960 -7426, Fax (601)960-7922.

Children's Home Society of Florida—Provides evaluative, developmental, and intervention services to babies who were in neonatal intensive care; interventions include home-based services. For more information, contact John Haynes, Executive Director, Children's Home Society of Florida, 370 Office Plaza, Tallahassee, FL 32301, (904)877-5176.

Clearinghouse for Drug-Exposed Children—Disseminates information on research, public policy, and medical, psychological, and educational advances related to services for drug-exposed children. For more information, contact Lora-Ellen McKinney, 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.

Developing Resources for Education in America (DREAM)—Nonprofit national organization whose objective is increased public awareness about issues contributing to children's unhealthy lifestyles; provides consulting, training, and other services as well as access to a resource library of books, periodicals, and videotapes. For more information, contact Neal Clement, DREAM, 1935 Lakeland Drive, Suite B, Jackson, MS 39216, (800)233-7326, (601)364-2986.

Educational Development Center—Produces materials for early childhood educators on how to effectively meet the educational needs of children who have been prenatally exposed to alcohol and other drugs. For more information, contact Joanne Brady, Co-Director of Project Potential, Educational Development Center, 55 Chapel Street, Newton, MA 02160, (617)969-7100, ext. 312, Fax (617)244-3436.

Florida Department of Education—Produces materials of interest to educators and others who work with children who have been exposed to drugs, including *Florida's Challenge: A Guide to Educating Substance-Exposed Children* [training package], *A Nation's Challenge: Educating Substance-Exposed Children* [videotape of 1993 teleconference], and a resource directory of products, services, and consultants available to educators and others who work with children exposed to drugs. For more information, contact Skip Forsythe, Drug-Free Schools Coordinator, Prevention Center, Florida Dept. of Education, 414 Florida Education Center, Tallahassee, FL 32399, (904)488-7835, Fax (904)488-6319.

Head Start Bureau, Administration for Children, Youth, and Families—Administers programs established by Head Start in 1990 to address the unique needs of substance-involved families. For more information, contact Rossie Kelly, Head Start Bureau, Administration for Children, Youth, and Families, Department of Health and Human Services, Post Office Box 1182, Washington, DC 20013, (202)205-8560.

The Home and School Institute, Inc.—Offers publications and help on getting parents involved in their children's education. For more information, contact Dorothy Rich, President, Special Projects Office, Suite 228, 1201 16th Street, NW, Washington, DC 20036, (202)466-3633.

Juvenile Welfare Board of Pinellas County—Special taxing district that contracts with nearly 50 agencies to provide children and family services, including substance abuse treatment and maternal and child health. For more information, contact Kate Howze, Community Relations Director, Juvenile Welfare Board of Pinellas County, 4140 49th Street, North, St. Petersburg, FL 33709-5797, (813)521-1853, Fax (813)528-0803.

***Los Pasos* ("The Steps")**—Through a local consortium, Los Pasos staff provide training and consultation to Head Start staff and public school special education teachers; program also coordinates social services, ongoing developmental assessments, home-based pediatric care, family counseling, and other services for substance-affected children and families. For more information, contact Bebeann Bouchard, Los Pasos Program Manager, University of New Mexico, School of Medicine, Dept. of Pediatrics, Albuquerque, NM 87131-5311, (505)272-6843.

March of Dimes Birth Defects Foundation—Produces a variety of educational materials as part of its mission to improve the health of babies, prevent birth defects, and reduce infant mortality. For more information, contact Ann M. McGovern, Information Specialist, March of Dimes Birth Defects Foundation, Community Services Dept., 1275 Mamaroneck Avenue, White Plains, NY 10605, (914)428-7100, Fax (914)428-8203.

National Association for Prenatal Addiction Research and Education (NAPARE)—Not-for-profit organization that studies the long-term effects of prenatal drug exposure, publishes a quarterly newsletter, and coordinates an annual training

forum. For more information, contact NAPARE, 200 North Michigan Avenue, Chicago, IL 60601, (312)541-1272, Fax (312)541-1271.

National Association of State Alcohol and Drug Abuse Directors, Inc.—Provides information on alcohol and drug abuse prevention and contact information on state Alcohol and Drug Abuse Association directors. For more information, contact National Association of State Alcohol and Drug Abuse Directors, Inc., 444 North Capitol Street, NW, Suite 642, Washington, DC 20001, (202)783-6868, Fax (202)783-2704.

National Clearinghouse for Alcohol and Drug Information (NCADI)—Offers the most comprehensive information on alcohol and other drugs in the world. For more information, contact National Clearinghouse for Alcohol and Drug Information, Post Office Box 2345, Rockville, MD 20852, (301)443-6500, (800)729-6686.

National Institute on Drug Abuse (NIDA)—Conducts research, develops programs, and disseminates information on drug-abuse prevention and treatment. For more information, contact National Institute on Drug Abuse, Dept. of Health and Human Services, Room 10-03, 5600 Fishers Lane, Rockville, MD 20857, (301)443-4577.

National Perinatal Association (NPA)—Promotes perinatal health through a multidisciplinary approach to health care and research; provides information, leadership training, and publications. For more information, contact National Perinatal Association, Suite 525, University Professional Center, 3500 East Fletcher Avenue, Tampa, FL 33613, (813)971-1008.

National Resource Center for the Prevention of Perinatal Abuse of Alcohol and Other Drugs—Disseminates information on trends and issues related to the prevention of perinatal drug abuse; 800 number provides access to the center's on-line information system, PREMIS (Perinatal Research and Education Management Information System). For more information, contact National Resource Center for the Prevention of Perinatal Abuse of Alcohol and Other Drugs, 7300 Lee Highway, Fairfax, VA 22031, (703)218-5600, (800)354-8824.

Office of Substance Abuse Prevention's National Clearinghouse for Alcohol and Drug Information (ONCADI)—Provides research abstracts, videotapes, public service announcements, print materials, prevention curricula, and other materials; publishes the *Prevention Pipeline* and a quarterly catalog of publications. For more information, contact Information Specialist, Office of Substance Abuse Prevention's National Clearinghouse for Alcohol and Drug Information, Post Office Box 2345, Rockville, MD 20847-2345, (800)729-6686, (301)468-2600, Fax (301)468-6433.

Operation PAR (Parental Awareness and Responsibility), Inc.—Provides comprehensive services for substance-exposed children, including therapeutic day care designed to promote the development of cognitive, motor, language, and social skills; offers such services for families as parenting classes, case management, and residential and outpatient treatment for substance-abusing pregnant and postpartum mothers. For more information, contact Administrative Offices, Operation PAR, Inc., 10901-C Roosevelt Boulevard, Suite 1000, St. Petersburg, FL 33716, (813) 570-5080, Fax (813)570-5083.

Prenatally Exposed to Drugs (PED) Program, Los Angeles Unified School District—First preschool program designed for substance-exposed children; research findings have guided programs for at-risk children across the country; provides training to subsidized preschool programs so that their staffs can work with prenatally exposed and other at-risk children in their own settings. For more information, contact Carol Cole, Director, Early Childhood Grant, Los Angeles Unified Schools District, Post Office Box 3307, Los Angeles, CA 90051, (213)625-69091.

Project DAISY—A longitudinal study designed to identify the most effective early interventions and teaching strategies for substance-exposed

children; has reported promising preliminary results. For more information, contact Diane E. Powell, Project Director, Early Childhood Programs, District of Columbia Public Schools, Rudolph Elementary Annex, 2nd and Hamilton, SW, Washington, DC 20011, (202)576-6938.

Project Prevent—Helps drug-addicted women obtain prenatal services as well as drug treatment; ensures that high-risk infants receive medical and developmental services and that their families receive ongoing support. For more information, contact Donna P. Carson, Project Prevent, Grady Memorial Hospital, 100 Edgewood Avenue, Suite 810, Atlanta, GA 30303, (404)616-7732.

Resources in Special Education (RISE)—Specializes in information and resources related to the education of children with exceptional needs; publishes *The Special EDge*, a bimonthly newsletter containing articles on innovative programs, technology, conferences, instructional materials, and other topics of interest to teachers and other practitioners. For more information, contact Resources in Special Education, 650 Howe Avenue, Suite 300, Sacramento, CA 95825, (916)641-5925, Fax (916)641-5871.

Snowbabies, Inc.—Educates middle and high school students about the dangers of maternal drug use; works with incarcerated pregnant women and mothers of young children. For more information, contact Tammy Herman, Executive Director, Snowbabies, Inc., 2515 East Pine Street, Orlando, FL 32803, (407)895-9770.

Southeast Regional Center for Drug-Free Schools—Provides training, consultation, information, and technical support to schools, communities, and states to support the prevention of alcohol and other drug use among youth. For more information, contact Nancy J. Cunningham, Director, Southeast Regional Center for Drug-Free Schools, Spencerian Office Plaza, University of Louisville, Louisville, KY 40292, (502)588-0052, Toll Free (800)621-7372, Fax (502)588-1782.

REGIONAL CONTACTS

ALABAMA

Alabama Dept. of Public Health
Saundra Ivey, Perinatal Coordinator
East Patton Avenue
Montgomery, AL 36105
(205)242-5095

Special Education Services
Alabama State Dept. of Education
James Waid, Education Specialist
50 North Ripley Street
Montgomery, AL 36130
(204)242-8114

Division of Student Instructional Services
Alabama State Dept. of Education
Joe Lightsey, Drug-Free Schools Coordinator
50 N. Ripley Street, 3rd Floor
Montgomery, AL 36130
(205)242-8083
Fax (205)242-8024

Substance Abuse Services Division
Dept. of Mental Health and Mental Retardation
James V. Laney, Director
200 Interstate Park Drive
Post Office Box 3710
Montgomery, AL 36193
(205)270-4650
Fax (205)240-3195

FLORIDA

Alcohol and Drug Abuse Program Office
Florida Dept. of Health & Rehabilitative Services
Pamela Peterson, Deputy Assistant Secretary
1317 Winewood Boulevard
Building 6, Room 182
Tallahassee, FL 32301
(904)922-4270
Fax (904)487-2239

Early Intervention Center
Florida A & M University
Nancy Fontaine, Director
Substance-Exposed Children Project
812 St. Michael Street
Tallahassee, FL 32301

Florida Alcohol and Drug Abuse Association
John Daigle, Director
Cindy Colvin, Resource Center Coordinator
1030 East Lafayette Street, Suite 100
Tallahassee, FL 32301-4547
(904)878-2196
Fax (904)878-6584

Prevention Center
Florida Dept. of Education
Skip Forsyth, Drug-Free Schools Coordinator
414 Florida Education Center
Tallahassee, FL 32399-0444
(904)488-6304
Fax (904)488-6319

GEORGIA

Georgia Alcohol and Drug Services Section
Patricia A. Redmond, Director
878 Peachtree Street, NE, Suite 318
Atlanta, GA 30309
(404)894-4200
Fax (404)853-0778

Health and Physical Education
Georgia Dept. of Education
Rendel Stalvey, Drug-Free Schools Coordinator
1952 Twin Towers East
Atlanta, GA 30334
(404)656-2414
Fax (404) 651-9416

MISSISSIPPI

Division of Alcohol and Drug Abuse
Mississippi Dept. of Mental Health
Anne D. Robertson, Director
Robert E. Lee State Office Building, 11th Floor
Jackson, MS 39201
(601)359-1288
Fax (601)359-6147

Health-Related Services
Mississippi State Dept. of Education
Paulette White, Director
Post Office Box 771
Jackson, MS 39205-0771
(601)0359-3779

NORTH CAROLINA

Alcohol and Drug Defense
North Carolina Dept. of Public Instruction
Steve Hicks, Division Director
210 North Dawson Street
Raleigh, NC 27603-1712
(919)733-6615
Fax (919)733-1130

Alcohol and Drug Abuse Section
North Carolina Division of Mental Health and Mental Retardation Services
William Caroll, Director
325 North Salisbury Street
Raleigh, NC 27611
(919)733-4670
Fax (919)733-9455

SOUTH CAROLINA

Drug Abuse Prevention
South Carolina Dept. of Education
Jerry Corley, Chief Supervisor
1429 Senate Street
Columbia, SC 29201
(803)734-8097
Fax (803)734-8624

South Carolina Commission on Alcohol and Drug Abuse
Dennis Nalty, Deputy Director
3700 Forest Drive
Columbia, SC 29204
(803)734-9527
Fax (803)734-9663

TRAINING PROGRAMS, CONSULTANTS, AND TECHNICAL ASSISTANCE

Drug-Exposed Children in Educational Settings: A Technical Assistance Package, U.S. Dept. of Health and Human Services. Includes a policy manual for administrators, a videotape (with user's guide) for school personnel, and a monograph reviewing research relevant to the needs of children who have been drug-exposed; features two versions of the written and audiovisual materials, one for Head Start and other preschool programs and one for elementary schools. For more information, contact Laura Feig, Office of the Secretary/ASPE, U.S. Dept. of Health and Human Services, 200 Independence Avenue, SW, Room 404E, Washington, DC 20201, (202)245-1805 **or** Charlotte Gillespie, U.S. Dept. 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.

Project Healthy Choices, Bank Street College of Education. A training program for teachers working with children exposed to drugs. For further information, contact Robin Ruhf, Safe Spaces, Project Healthy Choices, Bank Street College of Education, 610 West 112th Street, New York, NY 10025, (212)875-4510.

Substance-Exposed Children Project, Florida A & M University. A research-and-development project designed to develop a model training program for teachers of substance-exposed children. For further information, contact Nancy Fontaine, Director, Early Intervention Office, Florida A & M University, 812 St. Michael Street, Tallahassee, FL 32301, (904)561-2565.

A Systemic Approach to Dealing with Fetal Alcohol and Other Drug-Affected Children in Educational Settings, Northwest Regional Educational Laboratory. Teaches educators how to identify and address the problems of children affected by prenatal exposure to alcohol and other drugs. For further information, contact, 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 97203, (503)275-9500.

Teaching Strategies for Young Children: Drug-Exposed and At-Risk Project, Hillsborough County (Florida) Public Schools. A training model designed to prepare trainers to work with teachers of children who are substance-exposed; stresses practical classroom strategies. For further information, contact Linda Delapenha, Project Director, Judith Hyde, Project Coordinator, Drug-Exposed and At-Risk Project, Hillsborough County Public Schools, 1202 East Palm Avenue, Tampa, FL 33605, (813)273-7137/7500, Fax (813)273-7302.

Children Vulnerable for School Failure Because of Exposure to Misuse of Drugs and Alcohol, Fulton County (Georgia) Schools. A teacher-training course covering current research on the effects of prenatal drug exposure, the social and emotional needs of at-risk children, interventions for substance-abusing families, and a wide range of other topics. For further information, contact Harold Smith, Executive Director, Services for Exceptional Children, Fulton County Schools, 580 College Street, Hapeville, GA 30354, (404)763-5680.

PUBLICATIONS

Alcohol, Tobacco, and Other Drugs May Harm the Unborn by Paddy S. Cook, Robert C. Petersen, and Dorothy T. Moore, 1990. Summarizes the effects of exposure to drugs on the fetus, infant, and child and includes an extensive list of sources of information on maternal drug abuse. Available from the U.S. Dept. of Health and Human Services, Office of Substance Abuse Prevention, Rockwall II, 5600 Fishers Lane, Rockville, MD 20857, (301)443-0365.

Appreciating Differences: Teaching and Learning in a Culturally Diverse Classroom by Evelyn Ploumis-Devick, 1991. Helps educators become more sensitive to multicultural issues and provides strategies for enriching curricula with multicultural perspectives; includes many sample lesson plans and activities ($7.00). Available from SouthEastern Regional Vision for Education (SERVE), 345 South Magnolia Drive, Suite D-23, Tallahassee, FL 32301-2950, (800)352-6001, Fax (904)922-2286.

The ARK (At-Risk Kids) Project: Year End Report, 1991-92 by George Sherman, Linda Jones, and Alice Roberts, 1992. Describes the adoption by ten Pinellas County, Florida, elementary schools of a behavior management program for at-risk children, including those affected by prenatal substance abuse; details implementation processes and includes sample behavior data records in an appendix. Available from Linda Jones, Supervisor, Drug-Free Schools Project, Pinellas County Schools, Post Office Box 2942, Largo, FL 34640-2942, (813)588-6130.

At-Risk Families and Schools: Becoming Partners, Lynn B. Liontos, 1992. Contains extensive information on parent-involvement strategies for at-risk children and families; addresses such issues as cultural considerations, hard-to-reach parents, and rural populations. Available from ERIC Clearinghouse on Educational Management, College of Education, University of Oregon, 1787 Agate Street, Eugene, OR 97403, (503)346-5043.

The Challenge to Care: Children Affected by Substance Abuse, Angela S. Rave, 1991. Designed as a training manual for foster parents; contains good advice on promoting the healthy development of substance-exposed children. Available from Angela S. Rave, Project Training Coordinator, Social Services Administration, 311 West Saratoga Street, Baltimore, MD 21201, (410)461-0282.

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Cocaine Babies: Florida's Substance-Exposed Youth, Jayme Harpring, 1990. Discusses the effects of prenatal and environmental drug abuse and identifies educational strategies and resources for teachers and other professionals who work with substance-exposed children. Available from Prevention Center, Florida Dept. of Education, 414 Florida Education Center, Tallahassee, FL 32399-0400, (904)488-7835.

Cocaine's Children [Videotape], March of Dimes, 1987. Features the work of Dr. Ira Chasnoff, who directs research on cocaine-exposed babies at Northwestern Memorial Hospital in Chicago; discusses the risks to the fetus of cocaine exposure and the importance of proper care and nurturing of infants; shows how a mother who stopped taking drugs has had a positive impact on the development of her child (10 minutes, $40.00). Available from March of Dimes, Birth Defects Foundation, 1275 Mamaroneck Avenue, White Plains, NY 10605, (914)428-7100.

Communities that Care, J. David Hawkins, Richard F. Catalano, Jr., and Associates, 1992. Recommends a community-wide approach to preventing substance abuse; emphasizing protective factors, such as bonds to family, school, and community; and reducing risk factors. Available from Jossey-Bass, Inc., Publishers, 350 Sansome Street, San Franciso, CA 94194.

Crack Affected Children: A Teacher's Guide, Mary B. Waller, 1993. Explains how schools can respond to the crisis of children affected by drugs; includes perceptive recommendations for programs, teacher training, and classrooms. Available from Corwin Press, Inc., Post Office Box 2526, Newbury Park, CA 91319-8526, (800)499-0871.

Crack Kids in School: What to do, How to do it, Danni Odom-Winn and Dianne E. Dunagan, 1991. Recommends applying techniques used with pervasively developmentally delayed children when teaching substance-exposed children; contains a variety of activities designed to improve behavior and communication. Available from Educational Activities, Inc., Post Office Box 392, Freeport, NY 11520, (516)223-4666.

"Drug Exposed Infants," ***The Future of Children***, Spring 1991, vol. 1, no. 1. Contains articles by researchers in the field of substance-exposed children and recommendations for policies addressing the problems of drug-exposed children. Available from Center for the Future of Children, 300 Second Street, Suite 102, Los Altos, CA 94022, (415)948-3696.

Educating Young Children Prenatally Exposed to Drugs and At Risk, Shirley A. Jackson, (in press; expected publication date 1993). Designed for teachers of drug-exposed children; addresses children's learning deficits, describes successful programs, and offers several recommendations for teachers and schools. Available from Shirley A. Jackson, Director, Office of Comprehensive School Health, U.S. Dept. of Education, OERI, 555 New Jersey Avenue, NW, Room 3009, Washington, DC 20208, (202)219-1496.

A Generation of Hope [Videotape], Southeast Regional Vision for Education, 1992. Identifies the key characteristics of drug-free schools and features examples of effective drug-free programs in the Southeast. Available from SouthEastern Regional Vision for Education (SERVE), 345 South Magnolia Drive, Suite D-23, Tallahassee, FL 32301-2950, (800)352-6001, Fax (904)922-2286.

Mini-Library—Exceptional Children At Risk, ERIC Clearinghouse on Handicapped and Gifted Children, Council for Exceptional Children
A collection of 11 publications on at-risk children:

- *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's *ERIC Digest* contains one-page summaries of the publications. Available from Kathleen McLane, ERIC Clearinghouse on Handicapped and Gifted Education, Council for Exceptional Children, 1920 Association Drive, Reston, VA 22091-1589, (703)264-9474.

Fetal Effects of Maternal/Paternal Alcohol and Other Drug Use: Abstracts of Selected Articles, Kathy Laws, Karen Fieland, and Jane Croskey, 1991. Contains abstracts of 45 articles on the effects of prenatal substance exposure, prevention and intervention programs, and teaching strategies appropriate for drug-exposed children. Available from Northwest Regional Educational Laboratory, 101 S.W. Main Street, Suite 500, Portland, OR 97204-3297, (503)275-9500, Fax (503)275-9489.

Florida's Challenge: A Guide to Educating Substance-Exposed Children [Training Manual & Videotape], Florida Dept. of Education and Florida A & M Substance-Exposed Children Project, 1992. Provides training for teachers of substance-exposed children in four areas: medical impact, home and community environment, school and classroom environment, and behaviors and interventions.

Available from Prevention Center, Florida Dept. of Education, 414 Florida Education Center, Tallahassee, FL 32399, (904)488-7835, Fax (904)488-6319.

The Growing Child with Fetal Alcohol Syndrome, 1985. Describes some of the social, physical, and intellectual consequences of fetal alcohol syndrome; includes a case study of a six-year old with FAS and a comprehensive list of clinical features of FAS. Available from Thomas W. Perrin, Inc., One Madison Street, East Rutherford, NJ 07073, (201)777-2277.

Handle with Care: Helping Children Prenatally Exposed to Drugs and Alcohol, Sylvia F. Villarreal, Lora-Ellen McKinney, and Marcia Quackenbush, 1992. A guidebook for teachers, health care providers, and others who work with substance-exposed children; addresses learning styles of children with substance-exposure, teaching strategies, and multicultural issues ($20.64). Available from Education, Training, and Research Associates, Post Office Box 1830, Santa Cruz, CA 95061-1830, (800)321-4407, Fax (408)438-4284.

Head Start Substance Abuse Guide: A Resource Handbook for Head Start Grantees and Other Collaborating Community Programs, Raymond C. Collins and Penny R. Anderson, 1991. Overview of the problem of substance abuse and staff roles in addressing the needs of substance-exposed children and their families; contains an annotated list of resources for preschools. Available from Administration for Children, Youth, and Families, Dept. of Health and Human Services, 330 C Street, SW, Washington, DC 20013, (202)245-0436.

Home Care for Kids. Quarterly newsletter for practitioners and caretakers of children who are drug-exposed or HIV-infected. Available from Home Care for Kids, c/o Susan Weigel, SSA Room 554, 311 W. Saratoga Street, Baltimore, MD 21201, (410)333-0263, Fax (410)234-2868.

Identifying the Needs of Drug-Affected Children: Public Policy Issues, 1992. Monograph containing several articles on the effects of prenatal exposure to drugs and on policies affecting substance-exposed children. Available from Office of Substance Abuse Prevention, National Clearinghouse for Alcohol and Drug Information, Rockville, MD 20847-2345, (800)SAY-NO-TO-(DRUGS).

Interagency Collaboration: Improving the Delivery of Services to Children and Families, Stephanie Kadel, 1992. Provides guidelines for establishing collaborations among schools, social service agencies, health care providers, and other organizations; includes descriptions of successful programs that provide integrated services to at-risk children and families ($7.00). Available from SouthEastern Regional Vision for Education (SERVE), 345 South Magnolia Drive, Suite D-23, Tallahassee, FL 32301-2950, (800)352-6001, Fax (904)922-2286.

A Nation's Challenge: Educating Substance-Exposed Children [Videotape of Teleconference], Florida Dept. of Education, Florida A & M University, & U.S. Dept. of Education, 1993. Videotape of teleconference on children exposed to drugs, featuring practitioners and policymakers from across the country; resource directory identifies products, services, and consultants available to educators and others who work with children exposed to drugs. Available from Skip Forsythe, Drug-Free Schools Coordinator, Prevention Center, Florida Dept. of Education, 414 Florida Education Center, Tallahassee, FL 32399, (904)488-7835, Fax (904)488-6319.

Our Voices: Drug-Exposed Babies [Videotape], BET Network, March 26, 1990. Segment from the BET Network program *Our Voices* focusing on the effects of prenatal exposure to cocaine; discusses care for pregnant drug users, depicts a mother who used cocaine during pregnancy, and contains interviews with doctors who treat drug exposure (60 minutes, $49.95). Available from BET Productions, Tape Requests, 1899 Ninth Street, NE, Washington, DC 20018, (202)636-2400.

Phi Delta Kappan [Special Section on Children At Risk], vol. 74, no. 1, pp. 15-40, 56-80. Contains several articles on educating substance-exposed and other at-risk children.

Prenatal Cocaine Exposure: The South Looks for Answers, Elizabeth Shores, 1991. Report by the Southern Early Childhood Association (formerly the Association of Children Under Six) on programs and interventions for children in the South who have been prenatally exposed to drugs. Available from Southern Early Childhood Association, Post Office Box 5403, Little Rock, AR 72215-5403, (501)663-0353.

Sharing Success in the Southeast: Promising Programs in Preschool-To-School Transition, Caroline Follman, 1992. Describes model transition programs designed to assist young children as they move from preschool to kindergarten. Available from SouthEastern Regional Vision for Education (SERVE), 345 South Magnolia Drive, Suite D-23, Tallahassee, FL 32301-2950, (800)352-6001, Fax (904)922-2286.

Sharing Your Success: Summaries of Successful Programs and Strategies Supporting Drug-Free Schools and Communities, Vicki Ertle and Roy M. Gabriel, 1991. Contains descriptions of well over 100 drug prevention and intervention initiatives, including student, parent, community, and state programs. Available from Northwest Regional Educational Laboratory, 101 S.W. Main Street, Suite 500, Portland, OR 97204-3297, (503)275-9500, Fax (503)275-9489.

Thinking Collaboratively: Ten Questions and Answers to Help Policy Makers Improve Children's Services, Charles Bruner, 1991. A concise, informative overview of the advantages of interagency collaboration and strategies for establishing successful collaborations. Available from Education and Human Services Consortium, Institute for Educational Leadership, 1001 Connecticut Avenue, NW, Suite 310, Washington, DC 20036-5541 (202)822-8405.

Today's Challenge: Teaching Strategies for Working with Young Children At Risk Due to Prenatal Substance Exposure, Carol K. Cole, Vicky Ferrara, Deborah J. Johnson, Mary W. Jones, Marci B. Schoenbaum, Rachelle Tyler, and Valerie R. Wallace, with Marie K. Poulsen, 1989. Provides guidelines for teaching substance-exposed children; includes strategies in the areas of learning, play, social-emotional issues, communication, motor development, and home-school partnerships. Available from Midwest Regional Center for Drug-Free Schools and Communities, 1900 Spring Road, Suite 300, Oak Brook, IL 60521 (708)571-4710.

FOR FURTHER READING

The following bibliography lists publications addressing specific issues, including learning and behavior problems, related to children at risk due to substance exposure. It was compiled for educators and other practitioners serving children exposed to drugs and other at-risk children by Nancy Fontaine, Director, Substance-Exposed Children Project, Florida A & M University, Tallahassee.

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APPENDICES

A. Sharing Success: Drug-Free Schools Recognition Program

B. Sample Behavior Modification Charts for Children At Risk

C. Classroom Rating Scale for Teachers of Children Exposed to Drugs

Appendix A

SHARING SUCCESS: DRUG-FREE SCHOOLS RECOGNITION PROGRAM

Each year the U.S. Dept. of Education recognizes public and private schools that develop effective approaches to helping students resist or overcome the use of drugs. Nominations are solicited from state departments of education, the National Federation of Parents for Drug-Free Youth, and the Council for American Private Education. Reviewers evaluate nominated schools according to criteria established by the Drug-Free Schools Recognition Program. Schools that meet the criteria are visited by a two-member site team, who validate the drug-free program's effectiveness and recommend exemplary schools for national recognition.

The SouthEastern Regional Vision for Education (SERVE), in conjunction with the U.S. Department of Education's Drug-Free Schools Recognition Program, the Southeast Center for Drug-Free Schools and Communities, and the Southwest Center for Drug-Free Schools and Communities, has identified the southeast schools that were either nominated, qualified for a site visit, or received national recognition as a successful drug-free program between 1988-1991.

SERVE has produced a videotape, entitled *A Generation of Hope*, that features some of the most effective drug-free programs in the region (*see "Resources" for ordering information).* It focuse on s six key characteristics of drug-free, violence-free, and achievement-oriented school environments:

1. Recognizing and assessing the problen
2. Promoting peer counseling
3. Providing professional counseling
4. Selecting and providing alternative and positive activities
5. Setting and enforcing policy
6. Encouraging community and parental involvement

A list of the southeastern schools that have been selected by the Drug-Free Schools Recognition Program, along with the characteristics for which they were recognized, follows.

Successful Drug-Free Schools of the Southeast 1988-1991

1. Delivery of the Message
2. Peer Counseling
3. Professional Counseling
4. Positive Activities
5. Policy Setting and Enforcement
6. Community & Parent Involvement

PARTICIPANT	ADDRESS	PRINCIPAL	YR	Recognized For 1	2	3	4	5	6
Bayou View ES Grades K-6	Washington Ave. Gulfport, MS 39507	Nolena Stephens (601)865-4625	1990-1991	X	X	X	X	X	X
Carver Heights ES Grades 2-3	411 Bunche Drive Goldsboro, NC 27530	Veda McNair (919)731-5910	1989-1990	X	X	X	X	X	X
Central ES Grades 4-6	Calhoun & Moore Sts. Dublin, GA 31021	Catherine Wooddy (912)272-0502	1989-1990	X		X	X	X	X
Columbia HS Grades 8-12	2106 Columbia Drive Decatur, GA 30032	Stanley Pritchett (404)284-8720	1991-1992	X	X	X	X	X	X
Coral Springs HS Grades 9-12	7201 W. Sample Road Coral Springs, FL 33065	Bruce Wager (305)344-3400	1991-1992	X					X
Corpus Christi School Grades K-8	6300 McKenna Drive Mobile, AL 36608	Brenda Evans (205)342-5474	1989-1990				X		X
E. E. Smith MS Grades 6-8	P.O. Box 368 Kenansville, NC 28349	Pat Matthis (919)296-0309	1989-1990				X		X
Ecambia County HS Grades 9-12	1215 S. Presley Street Atmore, AL 36502-3299	Thomas Plash (205)368-9181	1989-1990	X	X	X	X	X	X
Brigham ES Grades pre K-5	6th Street & Ave. C SE Winter Haven, FL 33880	Lela Keith (813)291-5300	1991-1992	X	X	X	X	X	X
Frostproof Jr & Sr HS Grades 7-12	1000 North Palm Ave. Frostproof, FL 33843	Wannis Bowen (813)635-2221	1990-1991	X	X	X	X	X	X
Garden Grove ES Grades K-6	4599 Cypress Grdns Rd Winter Haven, FL 33884	Richard Dobler (813)291-5396	1991-1992	X			X	X	X
G.W. Carver MS Grades 6-7	900 44 Avenue Meridian, MS 39304	Robert Markham (601)483-9381	1988-1989	X	X	X	X	X	X
Grove Park ES Grades K-6	1643 Miller Street Orange Park, FL 32073	Dale Eichorn (904)278-2010	1991-1992				X		X
Gwin Oaks ES Grades K-5	400 Gwin Oaks Drive Lawrenceville, GA 30223	Lyn Burdette-Evans (404)972-3110	1989-1990				X		X
Haines City HS Grades 9-12	2800 Hornet Drive Haines City, FL 33844	James Partain (813)422-6415	1990-1991	X	X	X	X	X	X
Hendrix Drive ES Grades K-5	4475 Hendrix Drive Forest Park, GA 30050	Robert Soper (404)362-3835	1991-1992	X	X	X	X	X	X
Inwood ES Grades K-6	220 Avenue G NW Winter Haven, FL 33880	Sue Buckner (813)291-5369	1991-1992	X	X		X		
Jackson Road ES Grades K-5	1233 Jackson Road Griffin, GA 30223	Donna Parks (404)229-3717	1989-1990	X		X	X	X	X
Hunt Jr HS Grades 9-12	Rt. 2 Wilson, NC 27893	Philip Deadmon (919)291-9450	1989-1990		X			X	X
Lawrenceville MS Grades 6-8	723 Hi Hope Road Lawenceville, GA 30243	Joan Akin (404)963-6144	1990-1991	X	X		X		X
Meridan HS Grades 10-12	2320 32nd Street Meridan, MS 39305	Robert Turnage (601)482-3191	1988-1989		X				X
Monrovia School Grades K-8	1030 Jeff Road Huntsville, AL 35806	Derrell Brown (205)837-3628	1991-1992	X		X	X	X	X
Myrtle Beach ES Grades 3-5	3101 Oak Street Myrtle Beach, SC 29577	Dr. John Sprawls (803)448-1774	1991-1992	X	X	X	X	X	X
Myrtle Beach MS Grades 6-8	3001 Oak Street Myrtle Beach, SC 29577	Eddie Bolton (803)448-3932	1991-1992	X	X		X	X	X
Ocoee MS Grades 6-8	300 Bluford Avenue Ocoee, FL 34761	Jennifer Reeves (407)877-5035	1991-1992	X	X	X	X	X	X

Successful Drug-Free Schools of the Southeast 1988-1991

1. Delivery of the Message
2. Peer Counseling
3. Professional Counseling
4. Positive Activities
5. Policy Setting and Enforcement
6. Community & Parent Involvement

PARTICIPANT	ADDRESS	PRINCIPAL	YR	Recognized For 1	2	3	4	5	6
Orange Grove ES Grades 4-6	11391 Old Highway 49 Gulfport, MS 39503	Cassandra Conner (601)832-2322	1990-1991	X	X	X	X	X	X
Parkview HS Grades 9-12	998 Cole Road Lilburn, GA 30243	Don Spence (404)921-2874	1989-1990	X	X	X	X	X	X
Polk City ES Grades pre K-6	125 Bougainvella Ave Polk City, FL 33868	Jose Perez (813)984-1332	1991-1992	X	X			X	X
Watkins HS Grades 10-12	1100 West 12th Street Laurel, MS 39440	Don Grubbs (601)649-4145	1988-1989	X	X	X	X	X	X
Roosevelt VS Grades 7-12	115 E. Street Lake Wales, FL 33853	Harold Maready (813)678-4252	1989-1990	X	X	X	X	X	X
Southlake ES Grades K-6	3755 Garden Street Titusville, FL 32796	Robert Jones (407)269-1022	1991-1992	X	X	X	X	X	X
Spook Hill ES K-5	321 East North Avenue Lake Wales, FL 33853	James Beaver (813)676-8568	1990-1991	X	X		X	X	X
Terry Mill ES Grades K-7	797 Fayetteville Road Atlanta, GA 30316	Dr. Shirley Reams (404)373-3463	1991-1992	X	X	X	X	X	X
Vanderlyn ES Grades K-6	1877 Vanderlyn Drive Dunwoody, GA 30338	Sam Harman (404)394-2624	1991-1992	X	X	X	X	X	X
West Iredell School Grades 9-12	Route 6 Box 13 Statesville, NC 28677	Miriam Evans (704)873-2181	1989-1990	X		X	X	X	X
Westwood Jr HS Grades 8-9	3520 Avenue J NW Winter Haven, FL 33881	Carolyn Baldwin (813)965-5484	1991-1992	X	X		X		X
Riverdale MS Grades 6-8	400 Roberts Drive Riverdale, GA 30274	Robert Shepard, Jr. (404)994-4045	1988-1989				X		X

Further information about the U.S. Dept. of Education's Drug-Free Recognition Program can be obtained from the following agencies and individuals:

U.S. Dept. of Education, Drug-Free Schools Recognition Program, Room 510, 555 New Jersey Avenue, NW, Washington, DC 20208-5645, (202)219-2148

State Drug-Free Schools Coordinators:

Alabama	Florida	Georgia	Mississippi
Joe Lightsey	Skip Forsythe	Rendel Stalvey	Paulette White
(205)242-8083	(904)488-6304	(404)656-2414	(601)359-3778

North Carolina	South Carolina
Steve Hicks	Jerry Corley
(919)733-6615	(803)734-8097

Regional Drug-Free Centers:

Southeast Regional Center for Drug-Free Schools and Communities (Alabama, Florida, Georgia, North Carolina, South Carolina)
Spencerian Office Plaza, University of Louisville, Louisville, KY 40292, (800)621-SERC

Southwest Regional Center for Drug-Free Schools and Communities (Mississippi)
555 Constitution, Suite 138, Norman, OK 73037-0005, (800)234-SWRC

Appendix B

SAMPLE BEHAVIOR MODIFICATION CHARTS FOR CHILDREN AT RISK

The following behavior modification charts were developed by classroom teachers participating in the ARK (At-Risk Kid) Project in Pinellas County, Florida (*see Chapter 5*). The charts, which enable a teacher to systematically record and reinforce improvements in children's behavior, are effective with substance-exposed and other children with behavior problems.

Because SERVE does not validate products and services, we are not endorsing this behavior management approach but presenting it as an example of techniques that can be effective with children who are substance-exposed.

For further information about the ARK Project, contact

Faye Deloach, Principal
George Sherman, Behavior Specialist
Walsingham Elementary School
9099 Walsingham Road
Largo, FL 34643
(813)588-3519

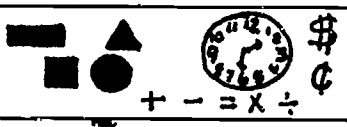
or

Linda Jones/Alice Roberts
Drug-Free Schools Project
Pinellas County Schools
Post Office Box 2942
Largo, FL 34640-2942
(813)588-6130

DAILY LOG

Student: Paul Smith

Date:

	Paul's Grade	Teacher's Grade
Mrs. Weeks' class 		
Writing (M, W, F), Language (T, Th) *abcdefghij*		
P.E. 		
Reading Wh th Sh Ch  ŏ ă ŭ ĕ ght nk eə kn ng		
Mrs. Deufel 		
Math 47 +23 91 -35  + − = x ÷ $ ¢		
Lunch 		
Sccial Studies 		
Science/ Health 		
Chapter 1 his coloring – (darkening)		

Comment:

Paul became frustrated after the 2nd period. He would not grade himself after lunch because he was angry. He said he would not grade himself Tuesday and that he was going to be bad all day.

Source: *ARK Project Report 1991-92 School Year.* (Adapted with permission.)

ON-TASK BEHAVIOR
DAILY CHECK SHEET

A.M.	Mon.				Tot.		Tues.				Tot.		Wed.				Tot.		Thurs.				Tot.		Fri.				Tot.
Check Points	1	2	3	4	☆		1	2	3	4	☆		1	2	3	4	☆		1	2	3	4	☆		1	2	3	4	☆
Lisa																													
Trischelle																													
Shara																													
Matthew																													
Leonard																													
Deon																													
Justin																													
Shana																													
Antonell																													
P.M.																													
Check Points	1	2	3	4	☆		1	2	3	4	☆		1	2	3	4	☆		1	2	3	4	☆		1	2	3	4	☆
Edward																													
David																													
Jermaine																													
Windel																													
Atensia																													
Ricky																													
Casey																													
Feron																													
Joey																													

Source: *ARK Project Report 1991-92 School Year.* (Adapted with permission.)

Appendix C

CLASSROOM RATING SCALE FOR TEACHERS OF CHILDREN EXPOSED TO DRUGS

The Classroom Rating Scale was designed by Nancy Fontaine, Director of the Substance-Exposed Children Project, Florida A & M University. Its purpose is to help classroom teachers assess their classrooms, instruction, and interactions with children. It is presented here as a first step in designing environments and activities that are most appropriate for children exposed to drugs. The Classroom Rating Scale is adapted with permission.

CLASSROOM RATING SCALE

School _____

Teacher _____

I. PHYSICAL ENVIRONMENT

1. Safe and orderly room and materials

(1)	(2)	(3)	(4)	(5)
Obvious safety hazards exist, and the room is cluttered and disorganized.		No hazards exist, but the room and materials are disorganized.		The room is safe and adequately supervised, and materials are in good order and condition.

2. Adequate individual and small- and large-group work space

(1)	(2)	(3)	(4)	(5)
Work space for individual and group work is limited and cramped.		Adequate space is available for some individual and group activities.		Students have adequate space for individual and group work.

3. Variety of materials available for individual, small-group, and large-group activities

(1)	(2)	(3)	(4)	(5)
Inadequate materials are available for individual and group activities.		Limited materials are available for individual and group activities.		A variety of materials are available for individual and group activities.

4. Accessible materials and equipment for developing fine and gross motor skills

(1)	(2)	(3)	(4)	(5)
Students have access to inadequate materials and equipment for motor development.		Students have access to limited materials and equipment for motor development.		Students have access to a variety of materials and equipment that foster motor development.

5. Instructional materials that help children develop language, representational, classification, and social-emotional skills

(1)	(2)	(3)	(4)	(5)
Materials help children develop skills in a few areas.		Materials help children develop skills in most areas.		Materials help children develop skills in all areas.

II. ROUTINE AND TRANSITIONS

6. Adequate time for planning, working, and review

(1)	(2)	(3)	(4)	(5)
Learning is inhibited because inadequate time is scheduled for planning, working, and reviewing.		A moderate amount of time is scheduled for planning, working, and reviewing.		Learning is enhanced because ample time is scheduled for planning, working, and reviewing.

7. Consistent daily schedule

(1)	(2)	(3)	(4)	(5)
A regular daily schedule has not been established.		The daily schedule is frequently changed, and interruptions occur throughout the day.		A consistent schedule enables children to prepare for the day's activities; changes and interruptions are few.

8. Varied group activities

(1)	(2)	(3)	(4)	(5)
The size of groups and the types of activities groups engage in rarely change.		There is some variety in the size of groups and the types of group activities that children engage in.		Children participate in a variety of groups and group activities.

9. Consistent enforcement of established rules for classroom behavior

(1)	(2)	(3)	(4)	(5)
Rules have not been established, or they are rarely enforced.		Rules are posted and usually enforced.		Rules (stated in positive terms) are posted and enforced consistently.

10. Formal transitions between lessons, classes, and special programs

(1)	(2)	(3)	(4)	(5)
Formal transitions between activities are rare.		Transitions are often used between activities.		Transitions foster learning by helping children conclude and prepare for activities.

III. ADULT-CHILD INTERACTION

11. Balance between adult-initiated and child-initiated interactions and activities

(1)	(2)	(3)	(4)	(5)
Adults direct all activities, and children's efforts to initiate interactions are often ignored or discouraged.		Adults generally respond favorably to children's efforts to initiate interactions and activities.		Children are encouraged to initiate activities, and formal and informal interactions with adults are ongoing.

12. Interactive communication enhanced with observation, open-ended questions, repetition, and extension

(1)	(2)	(3)	(4)	(5)
Communication between adults and children is rarely interactive.		Interactive communication sometimes occurs between an adult and child, but conversations are usually brief and pragmatic.		A variety of methods are used to enhance interactive communication with each child.

13. Active adult participation in children's activities

(1)	(2)	(3)	(4)	(5)
Adults observe or supervise children's activities.		Adults are recipients of and respond to children's attention.		Adults actively participate in children's activities.

IV. CURRICULUM

14. Integrated curriculum reflecting children's interests

(1)	(2)	(3)	(4)	(5)
Subjects are taught separately with traditional, teacher-directed methods.		Some integration of subject matter occurs, and innovative instructional strategies are often used.		Instruction fully integrates subject matter, and lessons originate with children's ideas.

15. Curriculum and instruction responsive to individual differences in learning styles and abilities

(1)	(2)	(3)	(4)	(5)
All children are taught with the same method and are expected to achieve skills at the same time.		After required skills are mastered, children are sometimes allowed to select activities appropriate for their own style of learning and progress at their own pace.		Curriculum and instruction are designed for different developmental levels and learning styles.

16. Opportunities for children to work creatively and cooperatively in learning centers and on self- or group-selected projects

(1)	(2)	(3)	(4)	(5)
Most instructional time is devoted to teacher-directed activities and seat work.		When required assignments are completed, children can choose activities.		The teacher and children select activities for learning centers, individual projects, and cooperative groups.

17. Instructional goals achieved through exploration, discovery, and problem solving

(1)	(2)	(3)	(4)	(5)
Subjects are taught separately as children achieve required skills within a set time schedule.		Time for special projects or creative activities is scheduled each day.		Exploration, discovery, and problem solving are integrated within the curriculum.

18. Development of social-emotional skills

(1)	(2)	(3)	(4)	(5)
Little time is devoted to practicing social skills or developing healthy self-concepts and positive attitudes.		Social-emotional development is "taught" almost as a separate subject.		The development of social-emotional skills is considered a priority and integrated within daily activities.

19. Appropriate behavior management and discipline techniques

(1)	(2)	(3)	(4)	(5)
Punitive discipline is used to control the children.		Positive and negative reinforcers are used for behavior management.		Appropriate behavior is viewed as a skill, so children are encouraged to develop self-control and responsibility.

V. PARENT-TEACHER RELATIONS

20. Active parental participation in their children's education

(1)	(2)	(3)	(4)	(5)
Parents are either viewed negatively or ignored. The role of parents is to carry out the school's agenda.		Parents are contacted when their children have problems. Parents occassionally attend PTA/PTO meetings.		Parents help establish and achieve educational goals. In addition to reinforcing learning at home, family members participate in in-class activities.

Source: Nancy Fontaine, Intervention Office, Florida A & M University. Adapted with permission.

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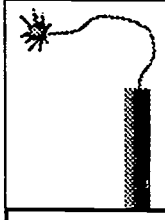

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