

GAO

Report to the Honorable Daniel Patrick
Moynihan and the Honorable James M.
Jeffords, U.S. Senate

July 1998

EMERGING DRUG PROBLEMS

Despite Changes in
Detection and
Response Capability,
Concerns Remain



**Health, Education, and
Human Services Division**

B-277159

July 20, 1998

The Honorable Daniel Patrick Moynihan
The Honorable James M. Jeffords
United States Senate

In the mid-1980s, crack cocaine use in the United States was reported to have reached epidemic proportions. While the prevalence of illicit drug use in the past year has declined overall since the 1980s, drug use remains a serious national public health problem. In 1996, an estimated 13 million Americans aged 12 and older had used an illicit drug in the past month. In addition, national survey data indicate that the recent downward trend in illicit drug use among youth has reversed. From 1992 to 1995, for example, past-month prevalence of marijuana use by 12- to 17-year-olds more than doubled. The costs of drug abuse to society—which include costs for health care related to drug use, drug addiction prevention and treatment services, and fighting drug-related crime, as well as the cost of lost earnings due to premature death—were estimated at about \$110 billion in 1995.

Each year since the mid-1980s, the Congress has appropriated billions of dollars for federal agencies to reduce the supply of and demand for illicit drugs. In general, federal law enforcement agencies focus on reducing the supply of illicit drugs through activities such as interdiction and enforcement, while public health service agencies focus on reducing the demand for drugs by funding drug abuse prevention and education programs, treatment and rehabilitation, and research on drug use.

Given the continuing concerns about the demand for drugs and emerging drug use problems, you asked us to review the efforts of the federal public health agencies to detect the spread of drug use in this country and their ability to respond to potential drug crises. Specifically, you asked us to (1) describe how the public health service agencies have detected and responded to the crack cocaine epidemic,¹ (2) identify any changes made to improve our nation's drug detection and response capability, and (3) identify any remaining issues that could compromise our nation's ability to detect and respond to emerging drug problems.

To conduct our work, we obtained written responses to survey questions from the Office of National Drug Control Policy (ONDCP), the National

¹The term "epidemic" has been used to describe a rapid rise in the use of a new drug or a sharp increase in the use of a known drug in a given area over a specified period of time. However, no single definition has been consistently used by the various drug control agencies.

Institute on Drug Abuse (NIDA), and the Substance Abuse and Mental Health Services Administration (SAMHSA) and interviewed government officials from these agencies as well as from the Centers for Disease Control and Prevention (CDC). We also reviewed documents related to these agencies' operations and programs and legislation that describes these agencies' roles and responsibilities. In addition, we interviewed government officials and experts in the drug abuse field in three states—California, Maryland, and New York—and three cities in these states—San Francisco, Baltimore, and New York City. These sites were selected on the basis of their high drug use rates, location, and importance as transport points in the U.S. drug trade. Finally, we convened a panel of seven experts to obtain their views on the objectives of our review. (See app. I for more information about our expert panel.)

While this report discusses some limitations in and changes to drug use detection mechanisms—methods for identifying and measuring illicit drug use—we did not assess the overall effectiveness of drug detection mechanisms available to and used by the public health service agencies. This report also discusses the agencies' response to the crack cocaine problem and changes made to address illicit drug use in the United States;² however, we did not assess the effectiveness of these actions. Our work was performed between March 1997 and May 1998 in accordance with generally accepted government auditing standards.

Results in Brief

Despite certain limitations in its sources of information, NIDA was able to track the use of a number of illicit drugs, including cocaine, during the late 1970s and early 1980s. Two drug detection mechanisms NIDA used as part of that effort helped detect the emergence of crack—a smokable form of cocaine. NIDA had become aware of the rapid spread of crack in 17 metropolitan areas by 1986, but the prevalence of crack use in the national household population was not known until the late 1980s. Federal public health agencies primarily directed their response efforts to the problem of cocaine and drug abuse in general, rather than to crack specifically. The response, orchestrated largely by NIDA, focused primarily on drug abuse research and education. The Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA)—the umbrella agency of which NIDA was a part—provided funding to state and local entities for substance abuse prevention and treatment services through the federal block grant program during the 1980s.

²The Congressional Research Service is preparing a report at your request that provides a chronology of events surrounding the emergence of the crack cocaine problem in the United States.

Following the height of the crack epidemic around 1985, concerns were raised in the Congress about efforts to detect and respond to the problem—in particular about the timeliness and accuracy of drug use data, lack of data on certain populations and geographic areas, limited availability of certain treatment programs, limited monitoring of the block grant program, and lack of a coordinated national drug control strategy. In response, the responsible federal agencies made changes to improve drug detection capability—changes that included adding new detection mechanisms. Also, to help strengthen the federal response to drug problems, the Congress legislated changes in the organization of the Department of Health and Human Services' (HHS) major drug control agencies: SAMHSA was created as a separate agency to focus on prevention and treatment services, and, to emphasize its research focus, NIDA was moved to the National Institutes of Health (NIH). In addition, the Congress created ONDCP to develop a national drug control strategy and coordinate the national drug control effort.

Despite these changes, concerns remain about the nation's ability to detect and respond to emerging drug problems. ONDCP established a group to study the use of drug data that has recommended ways to improve the nation's drug data collection system. In addition, experts agree on the need for an overall strategy among key drug control agencies for managing emerging drug problems—one that addresses when and how best to respond to a potential drug crisis or epidemic.

Background

The rapid and widespread increase in the use of crack—a smokable form of cocaine—in the 1980s has frequently been referred to as a drug epidemic. To identify emerging drug use problems, researchers and government agencies look for changing patterns in drug use, some of which may signal the onset of an epidemic. Primary among these patterns are the use of a new illicit drug; a change in how a drug is taken, such as smoking rather than inhaling—or “snorting”—cocaine; a change in the level of use of an existing drug among populations that routinely abuse drugs; and the use of a drug by a new population group or in a different geographic area. Some experts argue that national drug epidemics are rare, and many agree that local areas more frequently experience emerging drug crises or epidemics before they spread.

Many federal agencies fund activities and programs that implement the nation's drug control strategy (see app. II). According to ONDCP, about 25 percent of federal drug control resources are for grants-in-aid or other

forms of assistance provided to state and local governments and private entities, which commingle such funds with resources from other sources. In fiscal year 1997, federal funding for drug control efforts was over \$15 billion, and the fiscal year 1998 request was for \$16 billion. The President has requested about \$17 billion in funding for fiscal year 1999. About two-thirds of federal drug control funds are channeled into efforts to reduce the supply of illicit drugs; the remaining one-third supports efforts to reduce drug demand. The Department of Justice obtains the largest proportion—about 45 percent—and HHS gets about 16 percent.

Within HHS, NIDA and SAMHSA currently have primary responsibility for health-related drug control problems. The Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255) created NIDA (effective in 1974) and gave it broad responsibilities over most aspects of drug research, prevention, and treatment activities. Essentially, NIDA was responsible for planning and administering drug abuse prevention, treatment, and rehabilitation programs and for developing and conducting comprehensive research and research training (teaching professionals about conducting substance abuse research). The act also gave NIDA responsibility for creating a national community-based treatment system to respond to the drug abuse problem.

In 1974, the same year NIDA was established, ADAMHA was created as an umbrella agency to oversee the functions and operations of NIDA and two other research institutes.³ In 1981, ADAMHA was given additional responsibility for (1) administering demonstration programs related to the prevention and treatment of alcohol and drug abuse and mental health disorders and (2) providing assistance and information about such disorders to other federal agencies, states, health care providers, and public and private organizations. The Alcohol, Drug Abuse, and Mental Health Services (ADMS) block grant program was also created in 1981 to provide funds to states for planning, establishing, and evaluating programs for the development of more effective prevention, treatment, and rehabilitation services.

In 1992, the ADAMHA Reorganization Act (P.L. 102-321) created a new agency, SAMHSA, to replace ADAMHA and transferred NIDA and the two other research institutes to NIH. NIDA retained primary responsibility for

³The Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act Amendments of 1974 (P.L. 93-282) gave ADAMHA responsibility for ensuring that programs carried out through NIDA, the National Institute of Mental Health (NIMH), and the National Institute on Alcohol Abuse and Alcoholism received appropriate and equitable support and that these agencies cooperated in the implementation of their programs.

substance abuse research activities, while SAMHSA assumed primary responsibility for the service programs and some drug use detection functions. SAMHSA also assumed responsibility for overseeing state administration of the block grant programs.

NIDA-Sponsored Mechanisms Were Useful in Detecting and Monitoring Smokable Cocaine Use, Despite Certain Limitations

In the 1970s, NIDA sponsored several surveys and convened a work group of epidemiologists from cities around the country to help identify and monitor changes in drug use patterns. Through these mechanisms, NIDA was able to detect that cocaine was being smoked as well as snorted—the more common method of cocaine use up to that time. This change was later associated with the emergence of the crack epidemic. NIDA was not able to collect information on the national prevalence of crack use in the general household population until the late 1980s because the survey NIDA used to collect these data was not conducted annually and did not allow for timely reporting of crack use. There also were other limitations in the drug detection mechanisms NIDA used.

NIDA Sponsored Four Key Drug Detection Mechanisms to Identify and Monitor Illicit Drug Use

In the 1970s and 1980s, NIDA sponsored four major ongoing drug detection mechanisms: the National Household Survey on Drug Abuse (NHSDA), Monitoring the Future (MTF), the Drug Abuse Warning Network (DAWN), and the Community Epidemiology Work Group (CEWG). (For other drug use detection mechanisms sponsored by public health and law enforcement agencies before the mid-1980s, see app. III.)

While the drug detection mechanisms were designed to collect information on the use of a variety of drugs, including cocaine, they generally targeted different populations and covered different geographic locations and time periods. A description of the drug detection mechanisms NIDA sponsored follows.

- NHSDA, a nationally representative household survey established in 1972, was used to estimate drug use in the general population on the basis of a sample of permanent household members aged 12 and older. The survey was administered periodically, generally every 2 to 3 years, and covered past-month, past-year, and lifetime use of more than 10 drug types.
- MTF, a nationally representative survey established in 1975 and administered annually to 12th-grade students, measured drug use, attitudes toward drugs, and perceptions about their availability and ability to harm. Like NHSDA, it covered past-month, past-year, and lifetime use of more than 10 drug types.

- DAWN, established in 1972 by the Drug Enforcement Agency (DEA) and transferred to NIDA in 1980, initially comprised a random sample of hospital emergency departments within selected metropolitan areas and medical examiners in metropolitan areas who volunteered to participate. Emergency department information captured types of drugs used, motives for use, and whether the patient was treated. Medical examiner data also captured drug type, as well as the form in which the drug was used and whether the use was accidental or intentional.
- CEWG, established in 1976, was originally composed of epidemiologists from 18 major metropolitan areas. Three other metropolitan areas were later added.⁴ The group was established to provide ongoing community-level surveillance of drug use through the collection and analysis of epidemiologic and ethnographic (culture-related) data. Changes in drug use patterns are often captured by CEWG through its use of law-enforcement surveillance data, street surveillance, and other local public health drug detection sources.

Two NIDA-Sponsored Mechanisms Detected Early Warning Signs of the Emergence of Crack Cocaine

Between the 1970s and early 1980s, NIDA tracked the change in cocaine use through information reported by DAWN and CEWG. This change in drug use pattern (from only snorting to also smoking cocaine) would later be recognized as an early warning sign of the emergence of crack cocaine. From DAWN data, NIDA found that, between 1976 and 1982, cocaine smoking accounted for about 2 percent of cocaine-related emergency department episodes; however, by 1985, cocaine smoking accounted for 8 percent of such episodes. It was not until the late 1980s, however, that adjustments were made to DAWN data that differentiated between freebasing—another form of cocaine smoking—and crack cocaine smoking.⁵ Moreover, CEWG began reporting increased use of smokable cocaine in three major cities as early as 1981. In 1985—when crack first became generally recognized as a specific form of smokable cocaine—crack use was reported to have spread to at least seven of the CEWG coverage areas. Just 1 year later, CEWG reported that crack use had spread to 17 of the metropolitan areas covered.

⁴The metropolitan areas now represented are Atlanta; Baltimore; Boston; Chicago; Dallas; Denver; Detroit; Honolulu; Los Angeles; Miami; Minneapolis; Newark; New Orleans; New York City; Philadelphia; Phoenix; San Francisco; St. Louis; San Diego; Seattle; and Washington, D.C.

⁵Freebasing involves removing hydrochloride salt from street cocaine; the “freed” cocaine is then mixed with a solvent such as ether and heated, resulting in purified crystals, which are crushed and smoked. Crack is inexpensively produced by cutting cocaine, mixing it with baking soda, and heating the mixture to prepare the crystals.

The National Prevalence of Crack Use in the General Population Was Not Known Until the Late 1980s

Although NIDA was aware of the rapid spread of crack use from CEWG reports starting in the mid-1980s, the national prevalence of crack use in the general household population was not measured until the late 1980s. (Prevalence of use data are utilized, in part, by decisionmakers to establish drug control policy.) The 1985 NHSDA did not include questions specific to crack use. Because the survey is conducted generally every 2 to 3 years, questions about crack were not included until the 1988 survey. As a result, survey data on the national prevalence of crack use were not available until 1989—3 years after reports of the spread of crack to 17 major metropolitan areas. Results from NHSDA showed that about 1 percent of household populations had used crack in the past year.⁶

Limitations in Data Sources Raised Concerns About the Adequacy of Information on the Crack Cocaine Crisis

In two congressional hearings held in July 1986,⁷ a number of concerns were raised about the data that had been collected through the NIDA-sponsored drug detection mechanisms. Specifically, NHSDA data showed a leveling off of cocaine use nationally, while other sources were indicating that local areas were experiencing epidemic use of the drug. There was also a lack of data on crack use in the general population. In addition, the latest NHSDA data being reported had been collected 4 years earlier, in 1982.

These and other concerns about the adequacy of drug use data reflected key limitations in each of the NIDA-sponsored mechanisms used to measure drug use. Specifically, there were gaps in populations surveyed that affected NIDA's prevalence of drug use estimates. For example, NHSDA excluded institutionalized and homeless populations. Similarly, high school dropouts—another high-risk population—were excluded from MTF, thereby potentially lowering national drug use estimates. NHSDA and MTF also relied on self-reported drug use data, which were not validated.

There were also potential limitations in DAWN—one of the mechanisms used to identify early warning signs of emerging drugs. For example, since DAWN relied on hospital emergency personnel to record patient mentions of substance abuse, there was concern about the accuracy of the data, given the typically fast pace in hospital emergency departments. In addition, there were concerns that, by the mid-1980s, DAWN no longer

⁶In 1986, NIDA added questions to MTF to specifically measure crack use among high school seniors and found that about 4 percent of high school seniors had used crack in the past year.

⁷"Crack" Cocaine, Permanent Subcommittee on Investigations, Committee on Governmental Affairs, U.S. Senate (July 15, 1986), and The Crack Cocaine Crisis, Select Committee on Narcotics Abuse and Control and the Select Committee on Children, Youth, and Families; House of Representatives (July 15, 1986).

provided a representative sample of emergency departments, since many of the hospitals that had participated in DAWN had either merged, closed down, or dropped out of the study. Moreover, while CEWG was instrumental in reporting early warning signs of crack use in the metropolitan areas it covered, it did not collect and report information on rural areas or cities with smaller population bases.

Federal Public Health Response to Crack Focused on Cocaine Research and Education, Funding, and Reestablishing a Service Focus

The federal public health response to crack in the 1980s primarily focused on cocaine in general instead of on crack specifically. NIDA's research was aimed at developing "best practice" prevention and treatment approaches. The agency also launched several education and outreach efforts specific to cocaine. Up to the late 1980s, there was no significant change in block grant funding for state drug prevention and service delivery activities. Federal involvement in service delivery was through ADAMHA's oversight of state administration of the ADMS block grant until congressional actions changed the organization within ADAMHA to focus more on administering prevention and treatment programs.

NIDA's Initial Research Activities Focused on Cocaine

NIDA's research activities related to prevention and treatment practices did not make clear distinctions between powdered cocaine and its crystallized form, crack. According to NIDA officials, the agency did not see a need to differentiate treatment practices for powder cocaine and crack or to develop separate prevention approaches for each of these drugs. NIDA officials stated that results from later research on efficacy of treatment for cocaine and crack cocaine showed that similar treatments were effective for both forms of cocaine. NIDA's research activities included testing medications for reducing cocaine craving and withdrawal symptoms. The agency also investigated approaches for treating cocaine abuse, such as family therapy, group psychotherapy, and therapeutic communities.

NIDA's Education and Outreach Efforts Focused on Cocaine

As with its research efforts, NIDA did not initially target its education and outreach efforts to address the use of crack. In the 1980s, as concerns about cocaine use increased, NIDA developed several public education campaigns against drug use in general and cocaine use in particular. The Drug Abuse Prevention Media Campaign, launched in 1983, was targeted to people aged 18 to 35 and was intended to motivate parents to learn about drugs, talk to their children about problems associated with drug use, and join with other parents to fight drug abuse in their communities. The initiative also sought to help young people resist peer pressure and to

just say “no” to drugs, which became the theme of the campaign. In 1985, NIDA introduced a second phase of this campaign that targeted inner-city youth aged 10 to 14 and their families. In 1986, NIDA launched “Cocaine: The Big Lie,” a public education campaign that focused on the dangers of cocaine and specifically targeted young adults, aged 18 to 35, in college and the workplace. The following year, the campaign targeted crack as well as cocaine, sponsoring discussions of the effects of crack on the brain and respiratory and cardiovascular systems, as well as available treatments.

NIDA also established a national cocaine treatment hot line in 1985 to provide a toll-free referral service for people addicted to cocaine and their families who sought treatment or counseling as well as educational information about illicit drugs. Within the first year of operation, more than 50,000 calls were received.

In addition, NIDA sponsored two national conferences, one in 1986 and one in 1987, that collectively included sessions on drug abuse prevention, research, and treatment. The purpose of these conferences was to share information with drug epidemiologists, health care providers, and the broader research community on the use of illicit drugs.

Block Grant Funding for Substance Abuse Was Fairly Stable Until the Late 1980s

In 1981, before crack cocaine use was considered an epidemic, the Congress consolidated its categorical and formula grant programs into a substance abuse and mental health block grant to give states greater flexibility in their use of funds for prevention and treatment activities. This ADMS block grant program in effect limited the federal role in service delivery to overseeing the administration of the program and providing less direct assistance to states. The 1982 initial appropriation for the ADMS block grant was \$428 million—a decrease of about 26 percent from the prior year’s appropriation for the categorical programs.

Total funding of the ADMS block grant program varied by less than 10 percent from fiscal years 1982 through 1988. However, starting in fiscal year 1989, a greater proportion of block grant funding began to shift to substance abuse. From fiscal year 1988 to fiscal year 1992, the allocation of ADMS block grant funds for substance abuse increased from 51 percent of the total ADMS funding to 80 percent, as the proportion for mental health decreased. Over this period, funding for substance abuse increased from \$249 million to more than \$1 billion.

ADAMHA's Structure and Functions Were Changed to Improve the Federal Service Response

Some of the concerns raised at the July 1986 congressional hearings on crack cocaine focused on the adequacy of federal responsiveness to drug use problems. With the creation of the ADMS block grant program, NIDA no longer had a leadership role in deciding with the states what prevention and treatment activities to fund. While many in the research community welcomed this change, others felt it left a gap in federal leadership for prevention and treatment services. Under the previous categorical and formula grant programs, the federal government directly funded specific demonstration programs related to prevention and treatment services. With the creation of the ADMS block grant, however, states were given the flexibility to design and fund programs specific to the needs of their local communities. However, this change resulted in a smaller federal role in deciding which drug abuse services to fund in a given geographic area. Despite this shift, service-related constituency groups continued to look to ADAMHA, which had been given responsibility for overseeing state administration of the block grant, for national leadership on substance abuse policy issues.

To focus more on service programs at the federal level, the Congress authorized additional demonstration and service programs for special populations to be administered by ADAMHA. ADAMHA's Office of Substance Abuse Prevention (OSAP)—which was established by the Anti-Drug Abuse Act of 1986 to strengthen the federal role in effective drug abuse prevention—began awarding demonstration grants to community agencies to provide prevention services to youth at high risk of substance abuse. The Anti-Drug Abuse Act of 1988 (P.L. 100-690) raised OSAP to a status equal to ADAMHA's institutes and authorized demonstrations that would support, among other efforts, a major prevention services program for substance-abusing pregnant women and improved treatment for substance abusers. The act also authorized, for the first time, a federal set-aside from the ADMS block grant program to be used by ADAMHA to conduct service demonstrations and health services research and to collect data and provide technical assistance to states. The 1988 legislation also resulted in the creation of the Office for Treatment Improvement (OTI) to administer many of these new programs as well as the ADMS block grant program.

Subsequent Actions Were Taken to Strengthen Federal Drug Abuse Detection and Response

To better identify and monitor changes in drug use activity, including potential crises such as the crack cocaine epidemic experienced in the 1980s, NIDA modified its drug detection mechanisms, and new federal mechanisms were created. The modifications and additions aimed at addressing some of the coverage, timeliness, and methodological concerns raised by the Congress and others.

The creation of ONDCP and organizational changes to HHS' drug abuse agencies since the late 1980s were intended to strengthen the federal response to drug abuse problems. The Anti-Drug Abuse Act created ONDCP and charged it with, among other things, developing and coordinating a national drug control strategy. SAMHSA was created 4 years later and charged with establishing and implementing a comprehensive program to improve the provision of prevention- and treatment-related services for substance abuse. At the same time, NIDA was transferred to NIH to allow NIDA to concentrate on research, research training, and public health information dissemination related to the prevention and treatment of drug abuse. Recognizing the need to improve research on the infrastructure that delivers treatment, the Congress mandated in 1992 that NIDA obligate at least 15 percent of its budget to fund research that studies the impact of the organization, financing, and management of health services on issues such as access and quality of services.

While these changes were intended to strengthen the federal ability to detect and respond to changing drug use patterns, the effectiveness of these changes will depend largely on how well the agencies carry out their roles and responsibilities. Under the Government Performance and Results Act of 1993 (the Results Act) federal agencies are required to set goals, measure performance, and report on the degree to which the goals are met. The legislation was enacted to increase program effectiveness and public accountability by having federal agencies focus on results and service quality.

Changes to Drug Detection Mechanisms Were Intended to Provide Broader Coverage, More Timely Data, and Better Prevalence Estimates

During the crack crisis of the 1980s, limitations in the drug detection system hampered the identification and monitoring of drug use activity in many geographic areas and for some high-risk populations. Timely analysis and dissemination of drug use prevalence data were also problems. Since the mid-1980s, a number of changes have been made to the drug use detection mechanisms to address some surveillance and monitoring limitations. New information sources have also been added.

(For many of the drug detection mechanisms now available to the federal public health service agencies and others, see app. III.)

The changes to the NIDA-sponsored drug use detection mechanisms were intended to improve geographic and population coverage and timeliness of drug use data.⁸ To obtain and help ensure a representative sample of hospital emergency departments in DAWN, a new representative sample was drawn and provisions were made for including new hospitals in the sampling frame each year. Adjustments for nonresponse patterns were also made. MTF was expanded to include a representative sample of 8th- and 10th-grade students in addition to the 12th-graders and young adults already being surveyed. NHSDA was expanded to include civilians living on military bases and people living in noninstitutional quarters, such as college dormitories, rooming houses, and shelters. NHSDA was also expanded to include Alaska and Hawaii. To provide more timely national data, since 1990 NHSDA has been conducted every year, instead of every 2 to 3 years. There are also plans, promoted by ONDCP, to expand NHSDA to collect state-level drug use prevalence data. This expansion is expected to provide annual estimates for each state's household population and, specifically, for the population aged 12 to 17 and 18 to 25.

Steps were also taken toward improving the reliability of data by correcting some of the problems with drug use prevalence estimates. Drug use prevalence estimates had been dramatically affected by an estimation technique known as "logical imputation" and by weighting the estimates for certain drugs. Logical imputation calls for revising a survey participant's initially negative drug use response if one or more subsequent responses related to the same drug are positive. For example, in the 1990 NHSDA, 40 percent, or 53 of 131 past-month positive cocaine use responses, were imputed—changed from an initial response indicating no cocaine use. The initial "no drug use" response was changed because of an apparently conflicting response to another question in the survey. Although the problem with logical imputation is still a concern, the probability of a logical imputation error in estimating drug use has been lowered somewhat by reducing the number of questions being asked about the same drug on the survey, according to SAMHSA officials. Weighted estimates of the national prevalence of drug use have also been questioned in the past, given the limited number of surveyed cocaine and heroin users from which to make projections. For example, in a study in which the 1991 NHSDA age variable was weighted to account for subject sampling probabilities and nonresponse rates, it was discovered that, when

⁸As part of the reorganization, DAWN and NHSDA were shifted from NIDA to SAMHSA.

projected to the nation, one 79-year-old woman accounted for an estimated 142,000 heroin users, or about 20 percent of all people who used heroin in the past year. SAMHSA officials said that they have taken steps to try to limit such effects of weighted estimates by assessing each outlier on a case-by-case basis and using their judgment to decide when to truncate or reduce the weights.

In addition to changes in DAWN, MTF, and NHSDA, several new drug use detection mechanisms have been developed. SAMHSA has cited the particular importance of two of these mechanisms: the Arrestee Drug Abuse Monitoring (ADAM) program⁹ and the Treatment Episode Data Set (TEDS). ADAM, formerly the Drug Use Forecasting program, comprises an ongoing quarterly study of the drug use patterns of new arrestees at booking facilities in approximately 20 cities across the country. TEDS is a database of substance abuse client admissions to those publicly funded substance abuse treatment programs that receive some of their funding through a state alcohol and drug agency. In commenting on this report, SAMHSA officials stated that their Violence Data Exchange Teams (VDET) are in the process of creating a local-level system to track trends and changes in substance abuse-related violence. When fully operational, VDETS will assist local communities in the detection of drug abuse patterns as they are manifested through violence-related data. SAMHSA officials believe that such data can be used to serve as an early warning system.

In 1992, ONDCP initiated "Pulse Check," a telephone survey (as well as a report of the survey results), to provide a quick and current snapshot of drug use and drug markets across the country. According to ONDCP officials, "Pulse Check," which was initially published quarterly but was changed to a biannual report, typically includes information on the availability of drugs, their purity, and their street prices; user demographics; methods of use; and user primary drug of choice. These data are obtained from different sources, including telephone interviews with drug ethnographers and epidemiologists, law enforcement agents, drug treatment providers across the nation, and CEWG reports. ONDCP officials said that surveillance data from "Pulse Check" and other sources have increased ONDCP's capability to perform quick analyses and special studies of changing drug use patterns as well as to identify problems in certain population groups and geographic areas.

⁹The National Institute of Justice sponsors the ADAM program. ONDCP provided the funding for the establishment of the first 10 ADAM sites, with planned expansion to 75 cities.

ONDCP Was Charged With Developing and Coordinating a National Drug Control Strategy

Before the Anti-Drug Abuse Act of 1988, which created ONDCP, each federal agency involved with drug control had its own set of goals, objectives, targets, and measures, as well as congressional mandates. To coordinate the federal drug control effort, ONDCP was charged with developing an annual national drug control strategy.¹⁰ ONDCP's 1997 strategy provided a common set of goals and objectives for drug control agencies to use in addressing drug use problems and included a 10-year federal commitment to reduce illicit drug use, which was supported by 5-year budgets of the participating agencies. ONDCP officials have pointed out that achieving the goals will depend not only on federal agencies but also on state, local, and foreign governments; private entities; and individuals.

To assess the effectiveness of its national drug control strategy in limiting drug use, drug availability, and the consequences of drug use, ONDCP has established, in consultation with federal drug control agencies, a national performance measurement system to assess results.¹¹ According to ONDCP officials, their approach to developing goals, objectives, and performance measures for the national drug control strategy is similar to the approach required by the Results Act for individual federal agencies. ONDCP has established a new program evaluation office to oversee the design and implementation of its performance measurement system over the next several years.

Consistent with the Results Act, ONDCP's fiscal year 1997 to 2002 strategic plan lists five long-range goals and objectives. Goals 1 and 3 are in part designed to reduce the demand for illegal drugs by educating and enabling youth to reject illegal drugs and to reduce the health and social costs of illegal drug use, respectively. While the objectives of goal 1 generally focus on prevention activities, a goal 3 objective is to support and promote effective, efficient, and accessible drug treatment to ensure the development of a system that is responsive to emerging trends in drug use. ONDCP's performance targets and measures for these goals and objectives are discussed in Performance Measures of Effectiveness.

¹⁰ONDCP was also given responsibility for establishing and overseeing the implementation of policies, objectives, and priorities for agencies that take part in its National Drug Control Program; recommending to the president changes in the organization, management, and budgets of agencies (including decertifying budgets); and consulting with and assisting state and local governments in their relations with National Drug Control Program agencies. The Violent Crime Control and Law Enforcement Act of 1994 (P.L. 103-322) gave ONDCP the responsibility for evaluating the effectiveness of federal agencies' drug control activities.

¹¹ONDCP, Performance Measures of Effectiveness: A System for Assessing the Performance of the National Drug Control Strategy 1998-2007 (Washington, D.C.: ONDCP, 1998).

Two of ONDCP's programs focus on addressing the trend in drug use primarily among youth: a national media campaign and the Drug-Free Communities Support Program.¹² Moreover, ONDCP has taken the initiative to help focus attention on some recent changes in drug use trends that have emerged as potentially problematic. For example, ONDCP responded to changes in methamphetamine use in certain geographic areas by publishing a special issue of "Pulse Check" on these trends and cosponsoring a methamphetamine conference. In addition, ONDCP is now developing a national methamphetamine strategy. ONDCP officials admit, however, that they have no systematic approach or strategy for specifically addressing emerging drug use problems.

SAMHSA Was Created to Strengthen Drug Prevention and Treatment Services

SAMHSA was created to address concerns related to the availability and quality of drug prevention and treatment services.¹³ Specifically, SAMHSA was to develop national goals and model programs; coordinate federal policy related to providing prevention and treatment services; and evaluate the process, outcomes, and community impact of prevention and treatment services. In addition, SAMHSA was to ensure, through coordination with NIDA, the dissemination of relevant research findings to service providers to improve the delivery and effectiveness of prevention and treatment services. To carry out these responsibilities, SAMHSA initially established demonstration grant programs that supported individual grants, cooperative agreements, and contracts. SAMHSA also assumed responsibility for administering the separate Substance Abuse Prevention and Treatment (SAPT) block grant program.¹⁴

In 1995, SAMHSA developed the Knowledge Development and Application (KD&A) program, consolidating SAMHSA's individual demonstration grant programs. According to SAMHSA officials, the program offers improved ways of generating and disseminating knowledge on the prevention and

¹²ONDCP has requested \$175 million for fiscal year 1998 to fund the national media campaign. The Congress authorized approximately \$144 million over 5 years, starting in fiscal year 1998, for the Drug-Free Communities Support Program.

¹³Several components within SAMHSA are responsible for drug abuse issues: The Center for Substance Abuse Prevention (CSAP) is responsible for administering many of the prevention programs of its predecessor organization, OSAP, and for fostering the development of comprehensive, effective, and culturally appropriate prevention strategies, policies, and systems that are based on scientifically defensible principles. The Center for Substance Abuse Treatment (CSAT), which replaced OTI, is responsible for improving treatment service delivery, including the administration of treatment demonstration programs. The Office of Applied Studies is responsible for leading the data collection and evaluation effort.

¹⁴In 1992, the Congress divided the ADMS block grant program into two separate programs—the SAPT block grant and the Community Mental Health Services block grant.

treatment of problems related to drug use and how to apply that knowledge to delivering services. In fiscal year 1997, 17.4 percent of SAMHSA's budget was devoted to KD&A program activities.

Since fiscal year 1992 when the SAPT block grant was established, funding for substance abuse has continued to increase. SAPT block grant funds to states gradually increased from about \$1.04 billion in fiscal year 1993 to more than \$1.15 billion in fiscal year 1996. In fiscal year 1997, the funding increased by \$126 million.

According to SAMHSA officials, the agency is not yet adequately positioned to deter emerging drug use that might result in future epidemics. They told us that the SAPT block grant, which currently comprises 60 percent of SAMHSA's funding, is not designed to provide a rapid response to emerging drug problems. They also stated that it is difficult to determine when an increase in a certain type of drug use warrants attention and the type of response needed. SAMHSA officials said, however, that they have planned several initiatives to address emerging drug use trends. For example, CSAP plans to continue its support of the HHS Secretary's Youth Substance Abuse Prevention Initiative—including budgeting \$5.0 million for two new State Incentive Grant (SIG) programs.¹⁵ SIGs are competitive grants to states to coordinate disparate funding streams and facilitate the development of effective local drug prevention strategies targeted to youth. These programs serve as an incentive for governors to examine and synchronize statewide prevention strategies with private and community-based organizations.

Additionally, CSAT plans to test the feasibility of implementing new approaches in treatment settings. For example, more individuals—particularly on the West Coast and in the Southwest—are seeking treatment for methamphetamine dependence; but, according to CSAT, there are no well-established treatment approaches for this drug. CSAT's Replicating Effective Treatment for Methamphetamine Dependence study is designed to develop knowledge of psychosocial treatment for methamphetamine dependence as well as to provide an opportunity to determine the problems involved in transferring this knowledge.

¹⁵SIGs have a key role in helping achieve the outcome targets associated with this initiative for the year 2002, which are to (1) reverse the upward trend in the use of, and reduce past-month use of, marijuana among 12- to 17-year-olds by 25 percent; (2) reduce past-month use of all illicit drugs among 12- to 17-year-olds by 35 percent; and (3) reduce past-month use of alcohol among 12- to 17-year-olds by 20 percent.

To help states put the infrastructure in place to respond to emerging drug use trends, CSAT plans to further strengthen its partnerships with state and local governments as well as with community-based treatment providers and the private sector to solve common problems. For example, the Targeted Treatment Capacity Expansion Program is designed to award grants to states, cities, and other government entities to create and expand comprehensive substance abuse treatment services and promote accountability. CSAT plans to support states, cities, and other partners in their efforts to identify gaps in the delivery system and, where current capacity within a treatment modality is insufficient, provide for expanded access to treatment.

In an effort to disseminate information to service providers and others, SAMHSA operates the National Clearinghouse for Alcohol and Drug Information. SAMHSA, NIDA, and other public health agencies provide posters, brochures, reports, booklets, audiotapes, and videotapes to aid in drug abuse prevention and awareness efforts.

Under the Results Act, HHS is required to show that the use of federal funds is yielding results by measuring how well HHS' programs and efforts are working. In HHS' fiscal year 1999 Results Act performance plan, however, SAMHSA does not provide sufficient information about how it plans to meet some of its performance goals. For example, under the general goal of providing funding to states in support of the public sector substance abuse treatment system, one performance measure is to increase to 80 percent the proportion of block grant applications that include needs assessment data. However, SAMHSA provides no information about the strategies it will use to increase the proportion of states that will include needs assessment data or how the validity of the data will be assessed. Further, SAMHSA's performance plan does not mention how it will address emerging drug use problems.

NIDA Was Transferred to NIH to Strengthen Drug Abuse Research

With its transfer to NIH, NIDA was relieved of most of its direct service delivery functions with the intent of having it focus on conducting research on drug abuse and addiction. However, according to NIDA officials, the nature of research and the research grant approval process (which is often lengthy) limits the agency's immediate response to emerging drug problems. That is, it takes time to generate grants in a new priority area, conduct the research, publicize the research findings, and move these findings from the "lab" into practice. NIDA has a key role to play both in generating research-based prevention and treatment approaches

and in training research scientists who potentially can be useful to the public health community in addressing drug control problems. The move to NIH also gave NIDA the opportunity to focus more on developing initiatives in public education and research training.

According to ONDCP's National Drug Control Strategy, 1977, NIDA's ongoing research portfolio supports more than 85 percent of the world's research on the health aspects of drug abuse and addiction. Most of the NIDA-funded research is conducted through extramural research programs. However, a portion of NIDA's resources is dedicated to its intramural program—that is, research conducted by NIDA researchers. Currently, NIDA's research activities are organized into four extramural research divisions and an intramural research program, each of which plays a role in addressing issues relevant to emerging drug problems.¹⁶ For example, both the intramural research program and the Division of Clinical and Services Research are investigating the relationship of brain functions (through neuroimaging techniques) to drug craving. Results of such research may be useful in helping drug users reduce the craving or need for specific illicit drugs. NIDA's Division of Medications Development has been investigating the utility of cocaine medications for the treatment of users of methamphetamine as well as examining the clinical utility of buprenorphine to reduce the spread of heroin use among youth and newly addicted individuals. The Division of Epidemiology and Prevention Research continues to sponsor both MTF and CEWG and funds promising treatment research in prevention. NIDA's basic research division explores those behavioral and biomedical mechanisms associated with drug abuse and addiction.

NIDA officials have indicated, however, that quickly focusing research on newly emerging drug problems is difficult, in part, because of the time it takes to generate grant applications and award grants in a new priority area. The extramural research grant application approval process has multiple stages and can take several months to complete. In some cases,

¹⁶The four extramural research divisions are (1) the Division of Clinical and Services Research, which supports a program of medical, etiological, neurobiological, treatment, and services research on drugs; (2) the Division of Epidemiology and Prevention Research, which focuses its research on the prevention of drug use and abuse, associated conditions, and early interventions and services research; (3) the Division of Basic Research, which consists of a biomedical, behavioral, and neuroscience research program aimed at acquiring new knowledge concerning the neurological sites and mechanisms underlying drug abuse; and (4) the Medications Development Division, which administers a national program to develop innovative biological and pharmacological treatment approaches and supports training related to the pharmacotherapeutic treatment of drug abuse. The intramural research program plans, develops, and conducts intramural preclinical and clinical research on the causes, hazards, treatment, and prevention of drug abuse and addiction; the nature of the addiction process; and the addiction liability of new drugs.

NIDA can reduce the time consumed with the grant award process by administratively awarding supplements to existing grants. These supplements must not exceed 25 percent or \$100,000 of a grantee's base award, unless an exception is approved by the National Advisory Council on Drug Abuse. This approach was recently used to encourage research related to the rise in marijuana use among adolescents. In addition, NIH has made available a 1-percent set-aside for special research initiatives. Using this set-aside, NIDA applied for and obtained an extra \$2 million in funding to support additional methamphetamine activities directed at averting a crisis.

NIDA also supports research training activities to help build a resource knowledge base for research on illicit drug use. Between 1986 and 1997, NIDA's research training budget grew sharply, from a total of \$1.43 million in 1986 to \$11.7 million in 1997. However, NIDA's research training budget, as a percentage of total extramural research funds, has consistently been lower than those of both NIMH and NIH throughout the 12-year period. In 1997, NIDA dedicated 2.6 percent of its extramural research budget to research training, as compared with NIMH's 6.1 percent and NIH's 4.1 percent.

NIDA also conducts a number of public education activities to inform the general public, providers, and researchers about ongoing efforts to prevent and treat drug abuse. Moreover, NIDA provides research updates through various publications—such as the research monograph series, "NIDA Notes," and information booklets on the various drugs. Recently, NIDA distributed more than 150,000 copies of a research-based guide on preventing drug use among children and adolescents to help control the rise in drug use among youth. NIDA has also presented its findings at national drug conferences, CEWG meetings, congressional hearings, and town meetings, as well as on the Internet. The agency recently released Assessing Drug Abuse Within and Across Communities, a science-based guide to helping communities detect, quantify, and categorize local drug abuse problems. In addition, as part of NIDA's Treatment Initiative program, the agency intends to hold workshops with researchers, the treatment community, and the general public to exchange information about the treatment of drug abuse. The agency also plans to distribute research-based treatment manuals to community-based treatment providers.

NIDA has the opportunity to evaluate the effectiveness of its activities under the Results Act. Because many of NIDA's efforts to address changes

in drug use patterns are research-oriented, however, the results of the agency's performance could take a long time to materialize. Similarly, the impact that NIDA's research efforts would have on an immediate response to newly emerging drug problems is questionable. On the basis of our work on implementing the Results Act in science agencies, we concluded that measuring the performance of science-related projects can be difficult because many factors determine whether research will result in benefits.¹⁷ Nevertheless, the Results Act provides a vehicle for NIDA to measure its performance and improve its effectiveness.

Despite Changes, Concerns Remain About Our Nation's Ability to Detect and Respond to Emerging Drug Crises

Despite changes to federal drug detection mechanisms and congressional efforts to better position federal public health agencies to respond to emerging drug crises, concerns remain. While federal entities now have an array of tools to detect drug use, there is concern about the overall efficiency and effectiveness of these efforts. In addition, questions remain about when and how to best respond to emerging drug use trends. This is also an issue for state and local substance abuse authorities, who are challenged with allocating resources to address both current and emerging drug use problems. Given competing demands on federal, state, and local resources, it is important that the most appropriate drug prevention and treatment strategies are developed and effectively implemented.

Evaluations of Federal Drug Use Detection Efforts Suggest the Need for Further Changes and a More Systematic Data Collection Approach

While a number of drug use detection mechanisms are now available, the ONDCP-established Subcommittee on Data, Evaluation, and Interagency Coordination of the Committee on Drug Control Research, Data, and Evaluation; our expert panel; and others have raised questions about the need for and quality of some of the data that are collected. Under the Violent Crime Control and Law Enforcement Act of 1994, ONDCP is required to assess the quality of mechanisms used to measure supply and demand reduction activities and to determine the adequacy of existing mechanisms to measure national drug use by the casual drug user population and populations at risk for drug use. The act also requires ONDCP to describe the actions it will take to correct any deficiencies and limitations identified.

In 1995, ONDCP tasked the Subcommittee, composed of representatives from 19 federal agencies, with evaluating the adequacy and ability of federal drug-related data systems to inform the drug control policy

¹⁷Managing for Results: Key Steps and Challenges in Implementing GPRA in Science Agencies (GAO/T-GGD/RCED-96-214, July 10, 1996).

planning process. In its July 1997 draft report, the Subcommittee concluded that a systematic approach for gathering drug-related data must be developed to ensure that policymakers and analysts have useful information for making public policy decisions. The Subcommittee recommended that duplication of effort in drug-related systems be identified and eliminated and that better use be made of regional-, state-, and local-level data. The Subcommittee saw a need for more accurate and complete information on chronic, hardcore drug users¹⁸ and for increased or enhanced information on illicit drug consumption and the risks and consequences of drug use, including expansion of such indicators beyond those obtained from hospital emergency departments, arrestees, and domestic violence records. The Subcommittee also recommended that data be made more available to researchers to encourage more in-depth analyses of existing data sets and broaden the dissemination of results. Our expert panel raised some of the same issues about the nation's drug detection system that led to the Subcommittee's recommendations. Moreover, officials in the several states and cities we visited raised similar—and additional—issues about the use of drug detection data, including the limited usefulness of federally generated drug detection information in monitoring most local changes in drug use patterns and the poor use of drug detection information generated by state and local substance abuse authorities. In commenting on this report, ONDCP officials stated that they have already begun implementing some of the “principles” in the Subcommittee's draft report.

Other assessments of the nation's drug data collection efforts conducted in the early 1990s similarly concluded that drug-related data systems could be improved. For example, a RAND study found that policymakers have been handicapped by inconsistent and fragmented information. A University of California at Los Angeles Drug Abuse Research Center report concluded that the data systems were limited by inadequate coverage of people at high risk of drug use. In a 1993 report, we also raised concerns about gaps in coverage and methodological limitations of three major federal drug data collection mechanisms.¹⁹ Each of these three studies

¹⁸ONDCP has described hardcore drug use as the use of heroin, powder cocaine, or crack cocaine on 8 or more days during at least 1 of the preceding 2 months. (ONDCP, A Plan for Estimating the Number of “Hardcore” Drug Users in the United States: Preliminary Findings [Washington, D.C.: ONDCP, Fall 1997]).

¹⁹Drug Use Measurement: Strengths, Limitations, and Recommendations for Improvement (GAO/PEMD-93-18, June 25, 1993).

also questioned the validity of self-reported drug use information.²⁰ Moreover, NIDA recently released a monograph that raises questions about the accuracy of some self-reported data on drug use.

A More Defined Strategy for Responding to Emerging Drug Problems Is Still Needed

The usefulness of better and more timely information on emerging drug use problems is, in part, a function of the nation's ability to respond to those problems, which itself is affected by demands on federal, state, and local resources to address ongoing substance abuse concerns. Still, a more defined strategy for responding is needed. While we learned of different approaches the federal government uses to respond to changing drug use patterns, some of which address emerging drugs, we found that no overall defined strategy for specifically addressing emerging drug use problems exists. Also, there is no agreed-upon set of operational definitions for key terms, such as "drug epidemic" or "drug crisis."

The experts we spoke with agree that determining an appropriate response to emerging drug use problems involves considering

- the timing of a response to a detected change in drug use patterns;
- the nature of the response—that is, the most effective prevention and treatment approaches to address a drug use problem at different stages; and
- the magnitude of the response, taking into account resource limitations and uncertainties about the potential scale of the problem.

Determining the timing of a response is complicated by uncertainty about what point above the normative pattern of use warrants a response, either in a specific geographic area or nationwide. According to our expert panel, several factors—including availability of information, public opinion, and political sensitivity—play a role in determining the timing of a response to a detected change in drug use patterns. In addition, the most accurate and useful data are not always available for immediate decisions on when to respond to a particular change.

Determining the nature of the response requires a better understanding of the extent to which various prevention and treatment approaches are effective in controlling specific drug use problems. A rise in marijuana use among youth and a shift in heroin use from injecting to smoking may require different approaches because of the drug, the population, or both.

²⁰In [GAO/PEMD-93-18](#), June 25, 1993, for example, we noted that there are different approaches to determining the validity of self-reported drug use data, including biological measures such as hair analysis and urinalysis, each of which also has limitations.

In a 1997 report, we highlighted the varying prevention approaches and limitations in our knowledge about the effectiveness of these strategies.²¹ Similarly, as we reported earlier this year, knowledge about the types of treatment interventions that are most effective for specific drugs and populations varies.²² Even with limited knowledge, decisions about the nature of a response must be made.

Determining the magnitude of a response is complicated by the risk of misallocating scarce federal, state, and local resources to combat a problem that may not warrant the investment. There is also the risk of inadvertently promoting the use of a drug to risk-takers by creating too much publicity addressing its dangers. Consideration must also be given to the capacity of the system to treat those who currently seek or will seek treatment. Our expert panel told us that states and local communities barely have sufficient resources to meet the present demand for drug treatment and thus might devote less focused attention to addressing emerging drug use problems or potential future epidemics. Moreover, we heard from SAMHSA and officials in some of the cities we visited that there is a large demand for substance abuse treatment. In two of the three cities we visited, officials are trying to implement a treatment-on-demand program to provide services for drug users when they need them most and are most receptive to treatment; however, there is uncertainty about how many drug users will seek help and the cost of providing them treatment.

Strengthening Ties Between Federal Agencies and States and Localities Could Help Improve Detection and Response Approaches

Some researchers believe that to improve the chances of deterring the spread of emerging drug problems or epidemics, greater attention must be given to changes in drug use patterns at the local level, where such problems typically originate. Although SAMHSA has relationships with states through the block grant program, experts in the drug field describe less than adequate linkages between state and local communities and the three major federal agencies involved in drug abuse demand reduction efforts. ONDCP, SAMHSA, and NIDA do not currently have a well-established network with the many local entities associated with reducing drug use, and their relationships with states and local communities might not facilitate a response to an emerging drug problem at the local level. A defined strategy for addressing emerging drug problems would benefit from better linkages with state and local entities to capitalize on their experiences with local drug crises or epidemics.

²¹Drug Control: Observations on Elements of the Federal Drug Control Strategy (GAO/GGD-97-42, Mar. 14, 1997).

²²Drug Abuse: Research Shows Treatment Is Effective, but Benefits May Be Overstated (GAO/HEHS-98-72, Mar. 27, 1998).

Although addressing drug use problems is not necessarily the same as addressing infectious diseases, the networks and linkages with state and local entities that have been established by CDC may be worth considering for detecting and responding to emerging drug use problems. CDC is responsible for detecting and responding to potential health crises, such as outbreaks of infectious and chronic diseases. The agency has established relationships with states and local entities through a number of efforts, some of which follow:

- CDC's Epidemic Intelligence Service enables the agency to maximize its investigative capabilities. According to CDC officials, each year the Service trains approximately 75 epidemiological investigators and requires that they engage in at least one investigation at the state level and at headquarters during a 2-year follow-up period. At any given time, CDC has up to 150 epidemiologists to call on to assess a potential public health epidemic or crisis. Through direct on-site public health surveillance, CDC can gain rapid and in-depth understanding of the initiation and spread of a public health problem. These investigations enable CDC to target specific individuals and groups affected and likely to be affected, identify the circumstances under which infections take place and spread, track the movement of the problem across geographic areas, and establish the time parameters governing the infection of each subsequent target group.
- Through collaboration with the Council of State and Territorial Epidemiologists, CDC is able to ensure broad geographic coverage, since the group includes representatives from all 50 states and the U.S. territories.
- CDC has established procedures with states for quick responses to perceived health crises. If a state public health agency is experiencing a problem in either identifying or managing a public health problem, CDC can be called on to provide immediate guidance and support. According to a CDC official, if the problem is not one that can be handled over the telephone, CDC is able to quickly dispatch appropriate staff to the scene to provide on-site public health surveillance and response support.

Conclusions

The public health agencies' approach to addressing drug use problems in the United States has changed since the mid-1980s. Given changes made in the drug use detection mechanisms, organizational changes in HHS' drug control agencies, and the creation of ONDCP, the federal capability to address emerging drug use problems has been enhanced. However, the benefits of these changes depend largely on how drug data are used and how well the agencies carry out their roles and responsibilities. For

example, the complement of drug use detection mechanisms available to public health agencies and others now provides more timely data and broader geographic and population coverage. However, ONDCP's Subcommittee on Data, Evaluation, and Interagency Coordination; our expert panel; and others have pointed out weaknesses that need to be addressed to improve the accuracy of drug data and to increase the efficiency and effectiveness of the nation's drug data collection systems.

ONDCP, NIDA, and SAMHSA officials report that some of their efforts are addressing emerging drug problems. However, these agencies have no overall defined strategy that addresses factors such as how to determine the timing, nature, and magnitude of a response to new patterns of drug use identified through the nation's surveillance systems. In addition, maintaining ongoing mechanisms with the capacity to link surveillance knowledge from local and national sources with knowledge about effective demand reduction approaches should increase our nation's capability to deter future drug crises. We recognize that developing a defined strategy for addressing emerging drug problems will be challenging because of data uncertainties and other factors, such as engaging federal, state, and local entities in collaborative response actions. However, the CDC approach to responding to emerging infectious diseases might offer some insights on establishing linkages with state and local entities and developing response protocols.

Since ONDCP is responsible for developing and coordinating a national drug control strategy, it could take the lead in improving the nation's drug data collection system and coordinating the development of a strategy to address future emerging drug use problems.

Recommendations

To improve the nation's drug use detection and response capability, we recommend that the Director of ONDCP

- implement any additional changes that would improve the completeness, accuracy, and overall usefulness of data generated by the nation's drug data collection mechanisms;
- take action to further improve the federal drug data collection system by determining what data should be collected and developing a systematic approach for gathering, analyzing, and disseminating information; and
- develop a defined strategy for determining the timing, magnitude, and nature of actions needed to appropriately respond to potential drug crises

or epidemics, taking into consideration that emerging drug problems surface as local phenomena.

Agency and Other Comments

We obtained comments on a draft of this report from ONDCP, SAMHSA, NIDA, and CDC, as well as from most of our expert panel members. With the exceptions noted below, the reviewers generally agreed with the findings, conclusions, and recommendations in the report. Some of them provided additional information and clarification and suggested technical changes, which we incorporated where appropriate.

While concurring with the report's recommendations, ONDCP expressed concern about the way the report framed some issues. Specifically, the agency was concerned that the report and two of its recommendations suggested that no action had been taken on the ONDCP Subcommittee's recommendations to improve the nation's drug data collection system. ONDCP commented that it has begun taking some actions to change and evaluate certain drug use detection and monitoring mechanisms even though its Subcommittee's report is still in draft form. We were unaware of specific actions taken on the Subcommittee's recommendations at the time of our review, and we commend these initial steps. We continue to believe, however, that ONDCP should take additional actions as recommended to address the concerns raised about the accuracy and usefulness of the data and the overall effectiveness of the federal drug data collection system. ONDCP agreed with our recommendation that calls for a defined strategy for addressing emerging drug problems and said that its Performance Measures of Effectiveness system will possibly provide a framework for developing such a strategy.

SAMHSA agreed with many of the findings in the report but raised a concern that our recommendation to improve the completeness and accuracy of drug data did not address the importance of maximizing the usefulness of the data. We agree that the overall usefulness of the data is important, and we modified our recommendation accordingly. SAMHSA also wanted to elaborate on its statement to us that the agency was not adequately positioned to deter emerging drug use that might result in future epidemics. We added the information the agency provided in the text of the report. SAMHSA disagreed with our statement that it had not provided sufficient information in HHS' Results Act annual performance plan about how SAMHSA would meet its performance goals. However, the agency did not provide any information to support its contention.

NIDA expressed some concern about issues that were not addressed in this report. For example, NIDA stated that the report did not sufficiently speculate on how the different entities involved in drug control enhance or impede addressing emergent issues or how law enforcement and interdiction agencies affect federal efforts to detect and respond to emerging drug use problems. The agency also stated that the report does not specify what the appropriate role of each level of government should be. Although these issues were beyond the scope of our review, we acknowledge that there are multiple entities involved in detecting and responding to emerging drug problems and that how their roles, responsibilities, and efforts play out in an overall strategy for addressing the problems is unclear. We recommended that ONDCP take the lead in developing a defined strategy for addressing emerging drug problems. This would give the entities involved in drug control activities an opportunity to determine the appropriate roles each should play.

Both NIDA and SAMHSA reacted to our suggestion that CDC's approach to addressing public health issues, which involves state and local entities, might be a useful approach to consider in developing a strategy for addressing emerging drug problems. NIDA thought that the suggestion was reasonable but that developing networks and linkages to deal with drug problems would not be quickly or easily accomplished. SAMHSA felt that the CDC approach would be very expensive to replicate and that there are factors associated with drug abuse that do not fit the CDC model. SAMHSA concluded that adopting the CDC approach would be an unwise expenditure of funds, although it did not provide any cost analysis or other data to support its statements. While we agree that the cost and other implications, such as differences between drug abuse and other disease models, should be taken into account, we continue to believe that the CDC approach serves as a useful example of how linkages among federal, state, and local entities can facilitate the detection of and response to a problem.

We are sending copies of this report to appropriate congressional committees, the Director of ONDCP, the Secretary of HHS, and other interested parties. We will also make copies available to others on request.

Please contact me on (202) 512-7119 or James O. McClyde, Assistant Director, on (202) 512-7152 if you or your staff have any questions. Other major contributors to this report include Thomas J. Laetz, Jared A. Hermalin, Andrea K. Kamargo, and Karen M. Sloan. Erwin W. Bedarf contributed to the design of the project.

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Abbreviations

ADAM	Arrestee Drug Abuse Monitoring
ADAMHA	Alcohol, Drug Abuse, and Mental Health Administration
ADMS	Alcohol, Drug Abuse, and Mental Health Services
BJS	Bureau of Justice Statistics
BLS	Bureau of Labor Statistics
BOP	Bureau of Prisons
CDC	Centers for Disease Control and Prevention
CEWG	Community Epidemiology Work Group
CSAP	Center for Substance Abuse Prevention
CSAT	Center for Substance Abuse Treatment
DAWN	Drug Abuse Warning Network
DEA	Drug Enforcement Agency
DOD	Department of Defense
FBI	Federal Bureau of Investigation
HHS	Department of Health and Human Services
KD&A	Knowledge Development and Application
MTF	Monitoring the Future
NHSDA	National Household Survey on Drug Abuse
NIDA	National Institute on Drug Abuse
NIH	National Institutes of Health
NIMH	National Institute of Mental Health
ONDCP	Office of National Drug Control Policy
OSAP	Office of Substance Abuse Prevention
OTI	Office for Treatment Improvement
SAMHSA	Substance Abuse and Mental Health Services Administration
SAPT	Substance Abuse Prevention and Treatment
SIG	State Incentive Grant
STRIDE	System to Retrieve Information From Drug Evidence
TEDS	Treatment Episode Data Set
UCR	Uniform Crime Reports
VDET	Violence Data Exchange Teams

Expert Panel

An essential component of our research effort was an expert panel that provided advice and offered opinions on the nation's preparedness to address changing drug use patterns. The following experts composed the panel:

M. Douglas Anglin, Ph.D., Director
UCLA Drug Abuse Research Center

John S. Gustafson, Executive Director
National Association of State Alcohol and Drug Abuse Directors

James Hall, Executive Director
Up Front Drug Information Center

Bruce Johnson, Ph.D., Director
Institute for Special Populations Research
National Development and Research Institutes

Henrick Harwood
The Lewin Group

Herbert Kleber, M.D.
Executive Vice President and Medical Director
Center on Addiction and Substance Abuse,
Columbia University, and Professor of Psychiatry,
Columbia University College of Physicians and Surgeons

A. Thomas McLellan, Ph.D., Scientific Director
DeltaMetrics in Association With Treatment Research Institute
University of Pennsylvania

Before convening the panel, we sent each panelist a discussion paper containing a brief description of the current array of detection mechanisms used by the public health service agencies and the Office of National Drug Control Policy (ONDCP); the legislative responsibilities of the National Institute on Drug Abuse (NIDA), the Substance Abuse and Mental Health Services Administration (SAMHSA), and ONDCP to address illicit drug use problems; and information these agencies gave us about how they implement their responsibilities and respond to changes in drug use patterns.

During the session, we asked the panelists to discuss the effectiveness of the current detection mechanisms—that is, whether new or modified mechanisms and data information sources are needed to detect changes in illicit drug use patterns more quickly and accurately. We also asked the panelists to discuss whether NIDA, SAMHSA, and ONDCP were individually, and in conjunction, responding appropriately to detected drug use patterns to prevent, deter, or better manage potential drug epidemics and crises. Next, we asked the panelists to comment on the extent to which past legislative changes had improved or hampered federal response capacity and whether additional legislative or mission statement changes were needed to guide the activities of these agencies. Finally, we asked the panelists to review a synthesis of the comments made during the session and to offer any additional suggestions and recommendations to improve the nation’s drug detection and response system.

Selected Federal Agencies That Fund Drug Control Activities

Corporation of National Service
Department of Agriculture
Department of Defense
Department of Education
Department of Health and Human Services
Department of Housing and Urban Development
Department of the Interior
Department of Justice
Department of Labor
Department of State
Department of Transportation
Department of Treasury
Department of Veterans Affairs
Office of National Drug Control Policy
Social Security Administration

Illicit Drug Use Detection Mechanisms

Table III.1: Illicit Drug Use Detection Mechanisms Available to Federal Public Health Service Agencies Before 1985, One-Time Studies Excluded

Detection mechanism	Sponsoring agency	Target	Frequency	Year begun
Prominent drug detection mechanisms used by NIDA				
Community Epidemiology Work Group (CEWG)	NIDA	Drug use patterns and trends in 18 geographic areas	Semiannually	1976
Drug Abuse Warning Network (DAWN)	NIDA	Emergency room patients and medical examiner cases	Ongoing	1972
Monitoring the Future (MTF)	NIDA	12th-graders and young adults	Annually	1975
National Household Survey on Drug Abuse (NHSDA)	NIDA	Household population aged 12 and older	Every 2 to 3 years before 1990	1972
Other data information sources				
National Youth Survey: Dynamics of Deviant Behavior	National Institute on Mental Health (NIMH) and NIDA	People aged 11 through 17	Annually for the first 5 years	1976
Uniform Crime Reports (UCR)	Federal Bureau of Investigation (FBI)	Drug arrestees	Monthly	1930
Survey of Inmates in Local Jails	Bureau of Justice Statistics (BJS)	Local jail inmates	Approximately every 5 to 6 years	1972
Survey of Inmates in State Correctional Facilities	BJS	State correctional facility inmates	Approximately every 5 to 7 years	1974
Census of Jails	BJS	Jail inmates	Approximately every 5 to 6 years	1972
National Corrections Reporting Program	BJS	Prisoners entering and leaving prison and parolees	Annually	1983
System to Retrieve Information From Drug Evidence (STRIDE)	Drug Enforcement Agency (DEA)	Price, purity, and location of drugs seized or purchased	Ongoing	1971
National Narcotics Intelligence Consumers Committee	Cooperative federal effort chaired by DEA	Estimates of the availability, volume, sources, and distribution of illegal drugs	Annually	1978
Worldwide Survey of Substance Abuse and Health Behaviors Among Military Personnel	Department of Defense (DOD)	Military personnel	Every 2 to 4 years	1980
National Longitudinal Survey of Youth '79	Bureau of Labor Statistics (BLS)	Young men and women, aged 14 to 22	Annually before 1994	1979

**Appendix III
Illicit Drug Use Detection Mechanisms**

Table III.2: Illicit Drug Use Detection Mechanisms Currently Available to Federal Public Health Service Agencies, One-Time Studies Excluded

Detection mechanism	Sponsoring agency	Target	Frequency	Year begun
CEWG	NIDA	Drug use patterns and trends in 21 cities	Semiannually	1976
DAWN	SAMHSA	Emergency room patients and medical examiner cases	Ongoing	1972
MTF	NIDA	8th-, 10th-, and 12th-graders and young adults	Annually	1975
NHSDA	SAMHSA	Household population aged 12 and older, civilians living on military bases, and people in noninstitutional group quarters	Annually as of 1990	1972
Pulse Check	ONDCP	Ethnographers, epidemiologists, treatment providers, and law enforcement agents	Initially quarterly; now biannually	1992
Treatment Episode Data Set (TEDS) (part of the Drug and Alcohol Services Information System)	SAMHSA	Treatment clients	Ongoing	1990
Community Partnership Demonstration Program Surveys	SAMHSA	8th- and 10th-graders and adults	1990-97	1990
Youth Risk Behavior Surveillance System	Centers for Disease Control and Prevention (CDC)	School-aged youth, grades 9 to 12	Every 2 years	1990
National Maternal and Infant Health Survey	National Center for Health Statistics/CDC	Maternal drug use before and during pregnancy	Periodically	1988
Drug Use Forecasting/ Arrestee Drug Abuse Monitoring (ADAM)	National Institute of Justice	Drug arrestees	Quarterly	1986/1997
UCR	FBI	Drug arrests	Monthly	1930
Survey of Inmates in Local Jails	BJS	Local jail inmates	Approximately every 5 to 6 years	1972
National Longitudinal Survey of Youth	BLS	Young men and women, aged 14 to 22	Annually through 1994; biennially after 1994	1979
Quarterly Report on Testing for Alcohol and Other Drugs of Abuse	Department of Labor	Job Corps admissions	Quarterly	1991
Survey of Inmates in State/Federal Correctional Facilities	BJS	Correctional facility inmates	Approximately every 5 to 7 years	1974/1991
Census of Jails	BJS	Aggregate of jail inmates	Every 5 to 6 years	1972
National Corrections Reporting Program	BJS	Prisoners entering and leaving prison and parolees	Annually	1983
Survey of Adults on Probation	BJS	People on probation	Possibly every 5 years	1995

(continued)

Appendix III
Illicit Drug Use Detection Mechanisms

Detection mechanism	Sponsoring agency	Target	Frequency	Year begun
Residential Treatment Eligibility Interview	Bureau of Prisons (BOP)	Inmates requesting admission to BOP treatment programs	Ongoing	1995
STRIDE	DEA	Price, purity, and location of drugs seized or purchased	Ongoing	1971
National Narcotics Intelligence Consumers Committee	Cooperative federal effort chaired by DEA	Estimates of the availability, volume, sources, and distribution of illegal drugs	Annually	1978
Worldwide Survey of Substance Abuse and Health Behaviors Among Military Personnel	DOD	Military personnel	Every 2 to 4 years	1980

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