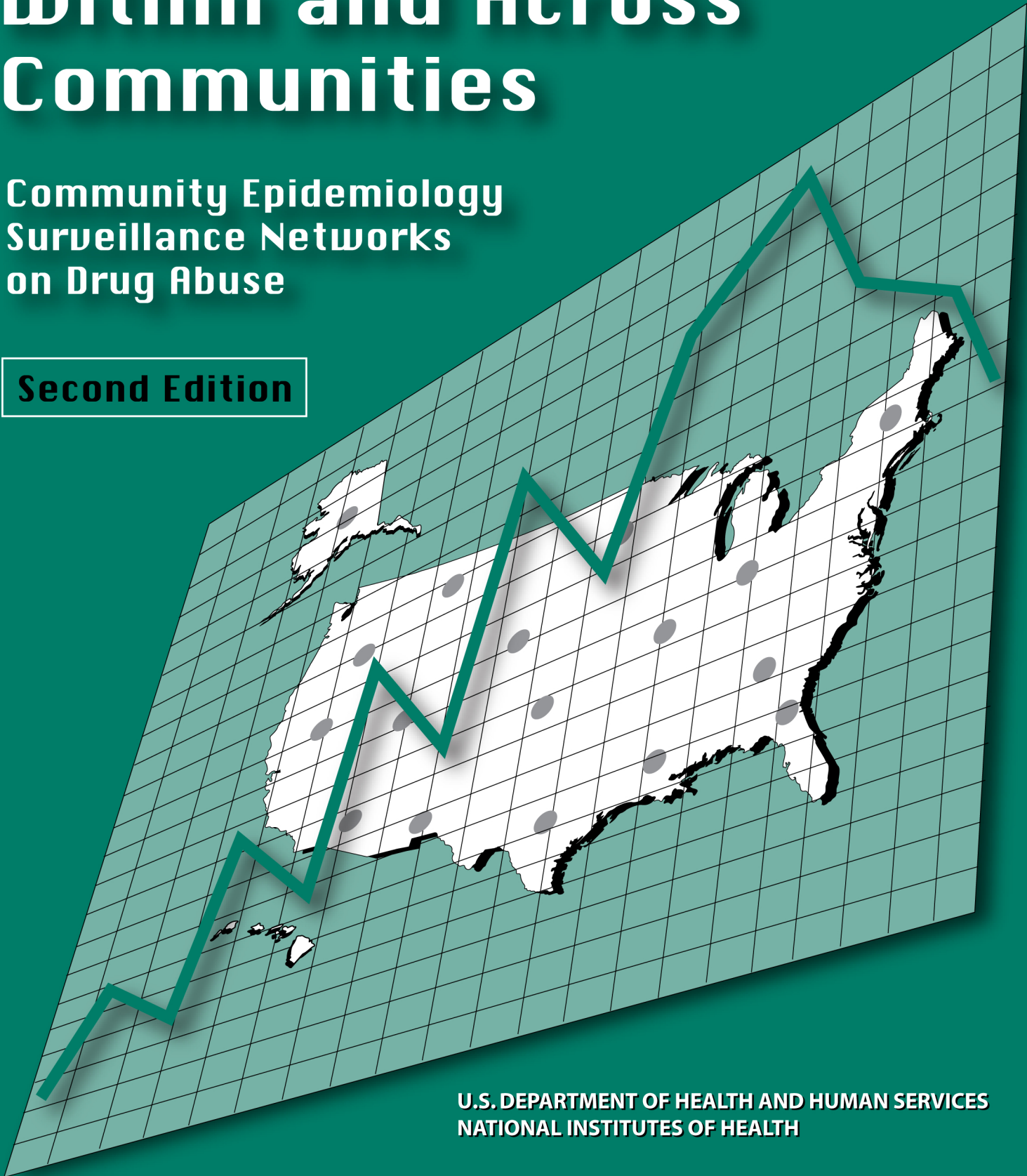


# Assessing Drug Abuse Within and Across Communities

Community Epidemiology  
Surveillance Networks  
on Drug Abuse

**Second Edition**



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Networks on Drug Abuse**

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DEPARTMENT OF HEALTH AND HUMAN SERVICES  
NATIONAL INSTITUTES OF HEALTH

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## Preface

Drug abuse has devastating consequences on individual abusers, their families, their communities, and our Nation. The phenomenon is dynamic, constantly changing, and complex. Like other diseases, it is important to identify and assess the nature and extent of drug abuse and emerging drug abuse problems as soon as possible. It is also important to closely monitor drug problems within and across communities. Epidemiology is one of the first lines of defense. It enables researchers to...

- Assess the causes, determinants, and distribution of drug problems
- Discover, identify, and track drug problems
- Identify questions, issues, and research hypotheses
- Plan appropriate intervention strategies
- Launch public information campaigns
- Alert communities

The National Institute on Drug Abuse (NIDA) supports research on all aspects of drug abuse and addiction, ranging from studies of the brain to the nature and extent of drug abuse in different populations. A considerable body of knowledge has been produced through the research supported by NIDA over the years. The research has led to...

- A greater understanding of the nature of drug addiction as a chronic disease
- Knowledge on how to prevent and treat drug abuse and drug addiction

NIDA has also supported the Community Epidemiology Work Group (CEWG) since 1976. The CEWG monitors and assesses drug abuse patterns, trends, and emerging problems across 21 sentinel areas in the United States using multiple sources of data.

One of NIDA's goals is to develop science-based tools and assist communities in using them to identify and assess drug problems, so communities, in turn, can provide the information to planners, policymakers, and interventionists who are involved in the prevention and treatment of drug abuse.

In an effort to foster this goal, we are pleased to offer our newest edition of *Assessing Drug Abuse Within and Across Communities, Second Edition*. The publication provides updated guidelines on how to effectively establish and maintain drug abuse epidemiology surveillance networks. We also invite you

to visit our Web site at <[www.drugabuse.gov](http://www.drugabuse.gov)> where this publication and other materials related to the consequences, prevention, treatment, and monitoring of drug abuse patterns and trends are offered. We hope that communities and States will find this guide useful and helpful in their work.

The strategies suggested in this guide are based on methods that have been applied in communities throughout our Nation and in other countries. Many of the examples provided on uses of different drug abuse indicators are from the CEWG and other epidemiology work groups.

*Nora D. Volkow, M.D.*  
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## **Introduction**

In 1998, the National Institute on Drug Abuse (NIDA) published the first edition of *Assessing Drug Abuse Within and Across Communities: Community Epidemiology Surveillance Networks on Drug Abuse* to share information on establishing drug abuse epidemiology networks at community and State levels. The first edition was widely distributed and well received, with ongoing requests for a reprint of the publication. However, it was clear that an update and not a reprint would be of most value to the fields of drug abuse epidemiology, research, and intervention. Since 1998, the expansion of the Internet has greatly enhanced access to relevant drug abuse information. Also, since 1998, there have been substantial changes in drug abuse data sources used by epidemiology networks. This second edition addresses these changes, but the purpose of this edition remains the same: to provide guidelines for establishing epidemiology networks to monitor and assess drug abuse patterns and trends and emerging drug problems at community and State levels to provide a foundation of information for public health response.

NIDA's Division of Epidemiology, Services and Prevention Research has continued to support epidemiology networks, including the Community Epidemiology Work Group (CEWG) consisting of 21 sentinel metropolitan areas, the Border Epidemiology Work Group in coordination with the Ministry of Health of Mexico, and State Epidemiology Work Groups. International epidemiology networks, modeled after the CEWG, often present data at CEWG meetings on drug abuse patterns and trends in other nations. Years of experience with these groups are testimony to the contributions of epidemiology work groups in advising public health response in our Nation as well as other countries.

This second edition differs from the first in format. For each data source, there is a description of the source and database, followed by guidelines on how to access the data (including Web sites) and what to request, and examples of how the data have been used by epidemiology work groups or Federal agencies. NIDA hopes that this revised guide is helpful to agencies, organizations, and researchers that are involved in or wish to establish epidemiology networks in their communities or States.



# **PART I. COMMUNITY EPIDEMIOLOGY SURVEILLANCE NETWORKS ON DRUG ABUSE**

## **What Are Community Epidemiology Surveillance Networks?**

Community Epidemiology Surveillance Networks are multiagency work groups with a public health orientation that study the spread, growth, or development of drug abuse and related problems. The networks have a common aim—the assessment of drug abuse patterns, trends, and emerging problems to provide the foundation of information for public health response. The ultimate goal is the elimination or reduction of drug abuse and its related consequences.

***...network members access existing information from multiple sources...***

To achieve this goal, network members access existing information from multiple sources, including drug abuse treatment agencies, public health offices, law enforcement agencies, hospital emergency departments, medical examiner and coroners' offices, and local school and household surveys. Much useful data are available in published reports. Furthermore, the Internet has greatly facilitated access to many data sources and published reports.

Members meet periodically to review, compare, and draw inferences from the data. The data are reported in a standardized format to facilitate the review and comparative analyses. Qualitative studies may be conducted to help members understand the quantitative findings from existing data sets.

The primary objectives of the network members are to...

- Identify drug abuse patterns in defined geographic areas
- Identify changes in drug abuse patterns over defined time periods to establish trends
- Detect emerging substances of abuse
- Communicate and disseminate the information to appropriate community agencies and organizations so it can be used in developing policies, practices, prevention strategies, and research studies

Network members are individuals who are in a position to access and assess information about drug use in specific geographic areas. They may represent agencies and organizations that have some responsibility for addressing drug abuse problems or that benefit directly from acquiring information about drug abuse. Researchers and other individuals who have special knowledge about a particular issue or drug-abusing population also may participate. Regularly

scheduled network meetings provide a forum for members to share, review, and analyze information on the epidemiology of drug abuse.

This guide focuses on practical ways of accessing and analyzing diverse indicator data from a variety of data sources and on effective ways of reporting such data.

## Where and How Did Surveillance Networks Get Started?

**...the Community Epidemiology Work Group (CEWG) has been meeting semiannually since 1976...**

The first national level surveillance network was established in 1976 by the National Institute on Drug Abuse (NIDA), National Institutes of Health, to assess current drug use patterns in major metropolitan areas across the country and to identify emerging trends within and across these areas. This network, called the Community Epidemiology Work Group (CEWG), has been meeting semiannually since 1976 to fulfill its role as a drug abuse surveillance system. CEWG members represent Atlanta, Baltimore, Boston, Chicago, Denver, Detroit, Honolulu, Los Angeles, Miami/Ft. Lauderdale, Minneapolis/St. Paul, Newark, New Orleans, New York City, Philadelphia, Phoenix, St. Louis, San Diego, San Francisco, Seattle, the State of Texas, and Washington, DC. Names and contact information for CEWG representatives are presented in *Appendix A* of this publication, in each semiannual CEWG *Volume II* report, and on the NIDA Web site <<http://www.nida.nih.gov>> (see *About NIDA/Organization/Community Epidemiology Work Group* for both CEWG contact information and meeting reports). CEWG representatives are useful contacts for information specific to their cities and for additional advice on the organization of a local community surveillance network.

Based on the NIDA CEWG model, State Epidemiology Work Groups (SEWGs) have been organized in many States. Other countries also have adopted the model. Similar work groups have been organized or are under development in Asia, Australia, Canada, Central America, Europe, Mexico, and South Africa.

National CEWG information is disseminated by the Division of Epidemiology, Services and Prevention Research, NIDA, through its biannual report series entitled *Epidemiologic Trends in Drug Abuse*. Information on the national CEWG, its reports, and other important data sources can be accessed from the NIDA Web site (specified above). By clicking on “organization,” you will find it listed under Division of Epidemiology, Services and Prevention Research.

## Why Are Networks Established?

Drug abuse and dependence strain resources at local, State, and national levels and threaten the well-being of drug abusers and their significant others. The

**...drug abusers  
continue to be an  
elusive population...**

types of drugs used and the populations using a particular drug or drugs at a particular period in time change, and drug abusers continue to be an elusive population that is not fully captured in prevalence studies. Drug abusers often remain “hidden” until they seek medical care, are arrested, or come into contact with social and criminal justice agencies.

To best understand the problem, planners, policymakers, and practitioners need timely information on a regular basis so human, financial, and medical resources can be allocated appropriately. The research community also needs such information so studies can be planned and implemented to provide more indepth and definitive data to help guide policy and prevention and treatment interventions.

In *Chapters 1–8* of this publication, descriptions are provided of major types of data sources used by a network, with examples of how these data have been used. Many of the examples are provided by representatives of the CEWG. In the description of different data sources, the reader is referred to relevant Web sites. Information about relevant Web sites is also provided in *Appendix B*. Note, however, that Web site addresses sometimes change, and it may be necessary to search by the name of an agency or organization.

**The primary  
purpose...is to share  
timely and reliable  
information...**

The primary purpose of a local surveillance network is to share timely and reliable information about drug abuse. Surveillance networks help define and determine the magnitude of drug problems and provide an early warning for emerging problems. What types of drugs are being used in particular communities? Who is using them? How are they being used? What are the consequences of use? How are the patterns of use changing?

Information of this type is essential to many agencies and organizations, especially those with responsibility for planning and allocating resources to address drug abuse and related problems. Too often, agencies plan strategies and commit resources without having up-to-date information about the nature and extent of drug abuse problems. These efforts can be wasteful and counterproductive.

Patterns of drug use are determined not only by the availability and cost of different substances, but also by the dynamics and differences within groups, cultures, and communities. Drug abuse patterns are complex, dynamic phenomena that can quickly spread through and across communities. Drug abuse has been associated with increasing rates of crime and violence, as well as health problems such as human immunodeficiency virus (HIV) infection, which causes the acquired immunodeficiency syndrome (AIDS); other sexually transmitted diseases (STDs); and other infectious diseases such as hepatitis B and C. If a pattern is identified early, appropriate action can be taken to control its spread.

By monitoring drug abuse over time, it also is possible to evaluate whether programs are having any impact on particular aspects of drug abuse problems.

***It is important for members to understand the specific purposes...***

It is important for members to understand the specific purposes, advantages, organization, and limitations of the network. Through this understanding, local networks are more likely to be successful and contribute to needs assessments.

## **What Are the Advantages of a Network?**

The surveillance network model has many advantages for planning purposes...

- It uses a practical formula.
- It is not costly.
- It makes use of existing resources.
- It provides immediate feedback.
- It works on many different levels (e.g., local, State, national, international).
- The information is useful to many agencies and organizations.
- It provides input from different perspectives.
- It establishes a network of people who share information and work together on common problems.
- It builds an infrastructure for further research.

***Often, people who are sought as members of a network already are engaged by agencies or organizations involved in the drug abuse field...***

Often, people who are sought as members of a network already are engaged by agencies or organizations involved in the drug abuse field and may be currently collecting data from or about drug-using populations. In addition, their agencies would probably recognize the short- and long-term benefits to be derived from participation in a surveillance network.

Optimally, meetings should be regularly scheduled about twice each year. This time frame provides a sufficient time gap (6 months) to assess changes in drug use patterns and keep the groups active without placing a heavy burden on participants. At least 1 full day should be set aside for each meeting.

## What Sources of Information Do Networks Access and Use?

***Each source has the potential to provide data/information about different drug-using populations...***

***...indicators help identify different types of drug abusers...***

***One source can complement and support another and help to validate information on drug use patterns.***

***Sponsoring a network can be of great benefit to an agency...***

Epidemiology networks make use of multiple sources of information, such as those described above and elaborated upon in the chapters that follow. Each source has the potential to provide data/information about particular drug-using populations and/or different facets of the behaviors and outcomes of the same or similar populations. The data/information obtained from each source is considered a *drug abuse indicator*. The direction of changes in indicators across time is a measure of relative change in drug-abuse behaviors and related problems rather than a measure of absolute change. Indicators do not provide estimates of the number (prevalence) of drug abusers at any given time. Rates (e.g., per 100,000 population) at which drug-abusing populations may be increasing or decreasing in size are sometimes reported and help standardize data. However, indicators do help identify different types of drug abusers, such as those who have been arrested, treated in hospital emergency departments, discharged from hospitals, admitted to drug abuse treatment programs, involved in accidents, diagnosed with HIV/AIDS, or died with drugs found in their bodies.

Survey data can be used to complement indicator data. Most surveys can provide estimates of the prevalence of drug use in particular populations (e.g., general household and school populations), including the prevalence of use of specific substances. However, the populations covered in surveys may not provide information on many groups at high risk for drug abuse (e.g., homeless persons, school dropouts). Methodologically sound surveys provide valuable prevalence estimates of the population groups that are sampled.

By comparing information from different sources concurrently, network members can identify and learn more about different drug-using populations, the similarities and differences across groups, and perhaps emerging patterns and trends. One source can complement and support another and help to validate information on drug use patterns. Networks, at all levels, use many data sources.

## How Are Local Networks Organized?

Generally, the impetus for organizing a surveillance network comes from an agency that recognizes the need for up-to-date information about drug abuse patterns and trends. The agency may be one that coordinates drug abuse data sources or a health planning organization. Sponsoring a network can be of great benefit to an agency, as it provides that agency with important information about drug trends, knowledge about street use, and a network of sources to answer questions. Any agency that deals with the general public,



answers questions about drugs, or provides public information will find the investment in sponsoring a local network worthwhile. In addition, it will be possible to provide education and information materials and press releases to inform the public of current trends.

***...it is important to have someone assume the role of Network Coordinator...***

For practical reasons, it is important to have someone assume the role of Network Coordinator, a member who will serve as the key point person to ensure that all members are informed of the time and place of each meeting, that a meeting agenda is finalized and disseminated to all participants, and that each member is fully aware of the roles that he or she should assume at each meeting. In some networks, members have shared this role, since it is demanding and requires ongoing coordination and communication. The Network Coordinator may be someone who works for a lead agency (e.g., a drug abuse treatment agency) and is given the time and resources to carry out this role. The Coordinator also assumes the lead role at network meetings, briefly reviewing findings and issues raised at the prior meeting, the objectives for the current meeting, and the plans for the next meeting.

***It is best to plan and maintain small work groups...***

It is best to plan and maintain small work groups so that all participants have an opportunity to contribute to the process. Try to get members from different organizations and with different perspectives. Include the medical examiner, treatment program personnel, HIV street outreach workers, health planners, university researchers, and local police officers. If the network is comprised of representatives of different towns, cities, or counties, the reporting process should be standardized so that comparisons can be more easily made across different jurisdictions.

Initially, one or two staff members can be assigned to review and report on potential benefits, other potentially valuable participants, and accessible sources of information. Representatives of other agencies can be contacted to determine how the information might be useful to them, their level of interest, and who from their agencies might meet the qualifications to participate in the network. This type of review should be completed within a 1–2 month period.

***...arrange a small planning meeting of staff from key agencies.***

If, on the basis of the information, it is decided to begin efforts to organize a surveillance network, arrange a small planning meeting of staff from key agencies. This meeting should include researchers and agency representatives who are familiar with drug abuse issues and sources of data and who are interested in the possibility of establishing a network. The meeting should be structured to...

- Establish the rationale for and the purpose of a network
- Identify potential sources of data/information
- Identify agencies and individuals with access to information
- Identify individuals who could contribute in other ways to the network
- Develop an agenda for the first meeting

- Determine who should be invited to participate in the first meeting and what they should be asked to contribute
- Establish a time and place for the first meeting
- Develop a plan for the second meeting, including the date, place, and general themes to be covered

A preliminary step that has proven useful is to hold a preplanning meeting with officials of selected organizations or agencies to discuss the purpose and goals of the network; how the agency or organization can contribute; the staff capabilities, knowledge, skills, and experience required to contribute; and the benefits to the agency of belonging to the network.

***...enlisting the official's support may increase the agency's participation and contribution...***

While it is unlikely that an agency official will be a working member of the local network, enlisting the official's support may increase the agency's participation in and contribution to the network. Unless the official understands the value of the network, he or she may not be willing to support the initiative and the investment of time by the agency. In addition, the official may help identify the most qualified person(s) from the agency to serve on the network. In some instances, it is beneficial to invite both the official and his or her data person to the meeting so the official can become informed of the benefits of the group and the data person can be involved from the beginning in identifying needed information.

## How Should the First Network Meeting Be Organized?

The first meeting is very important because it sets the stage for what the surveillance network will be, how it will function, and how it will be perceived by participants and others. Two interrelated objectives should always be kept in mind...

- Obtaining knowledge about drug abuse
- Developing and strengthening the work group

Care should be taken to avoid common pitfalls that others have encountered in planning initial network meetings. Four principles should be observed...

1. Start small. Be selective in inviting individuals to attend. It is easy to add individuals once the needs and sources have been identified and to change individuals based on the strengths and interests of the members.
2. Have clear, attainable objectives for the meeting. Avoid trying to overachieve at the beginning.

***Have clear, attainable objectives for the meeting.***

3. Establish the agenda in coordination with other participants so they feel invested from the beginning.
4. Give each participant a role to play and a contribution to make.

The first meeting should be organized to accomplish several objectives...

**...determine what steps should be taken to identify agencies and individuals who can provide access to each of these sources.**

- Identify known and potential sources of data and information. Selected participants can be asked to describe particular data sets and to prepare and briefly present data from sources to which they have access.
- Review the types of data sources (indicators) accessed by other epidemiologic networks to determine if they might be available in your area. If they are, determine what steps should be taken to identify agencies and individuals who can provide access to each of these sources.
- Assign participants to follow up (after meetings), and, if appropriate, make contacts to find out what types of data are available, how the data can be made available, and who is most knowledgeable about the data and the data sources.
- Determine how the information from the meetings should be recorded, reported, and disseminated, including to whom it should be sent. A full report with all the information will prove useful for agency planners, grant writers, and staff associated with the network member agencies. An executive summary that brings all the information together in a quick-reference format will prove very popular with the press and the general public.
- Identify current and potential sources of support for organizing and conducting the meeting and producing and disseminating meeting reports. The full report should be based largely on the papers prepared and presented by participants, along with data tables.

**Surveillance networks need to remain focused on questions...**

Surveillance networks need to remain focused on questions such as: What drugs are currently being used? Who is using them? Are drug use patterns changing from year to year? If so, how?

## **What Types of Problems Are Encountered by Networks?**

As in any network, individuals who participate in the meetings are likely to have different backgrounds and different frames of reference. It may not always be clear to them what is expected. If each member is sent the specific format for the presentation in advance, it will be easier to keep the meetings on track and to get the information in a form that is comparable with that submitted by other members.

***...define carefully what information the participants need to present and keep the meetings focused.***

It must be kept in mind that there is limited time to address the key questions and achieve the network's objectives. It is therefore important for the persons coordinating or chairing network meetings to define carefully what information participants need to present and to keep the meetings focused. Tell each member in advance the time limit for the oral presentation.

Another problem is the turnover in members and finding members who are interested in the network and willing to commit to the process and collect and report on the information on a continuing basis. The Network Coordinator will occasionally confront the need to search for new members and persons who have the time to participate. It is good policy to routinely call the agency directors to thank them for the past participation of their staff, inform them that another meeting is planned, and explain the importance of their agency's participation and the benefit to the agency. At times, unless informed, the director will not know that a meeting has been scheduled, and the local network member may be unable to attend the meeting or not have time to gather the needed data.

## **Who Should Be Invited to the First Network Meeting?**

***One of the primary objectives of the first meeting is to identify individuals who are in the best position to contribute information...***

The first meeting should be considered a planning session. The organizers should emphasize that the individuals who attend this meeting will not necessarily be permanent members and they are not obligated to attend future meetings. One of the primary objectives of the first meeting is to identify individuals who are in the best position to contribute information to the network planning process. If a national CEWG representative is located in your State, or if there is a planner at the State Substance Abuse Agency (SSAA) who is knowledgeable about sources of data, invite them to the first meeting.

The first meeting should include individuals who are capable of providing information about different sources of data, including the following:

### **Survey Data**

If not yet known, find out if any relevant local surveys have been or are currently being conducted or planned. These would include household, school, and special population surveys that provide information about substance use. In addition, some States have contracts from Federal agencies to perform surveys. In some instances, the State agency has conducted the surveys, while in other States, surveys are done by a university or survey research firm. If a relevant survey has been or is being conducted, invite the Principal Investigator or another person who can describe the data collected.

### **Drug Abuse Treatment Data**

***...find out who would be the most appropriate person to participate in the first network meeting.***

If not yet known, find out which agencies collect information about drug abusers entering, undergoing, and/or leaving treatment. Every treatment program that receives funds from the SSA is required to report data to the State. Which local drug abuse treatment programs participate in the State system, and which are required to report client data to county and city coordinating agencies? Find out who in the different agencies is responsible for coordinating these efforts. Contact these individuals to find out who would be the most appropriate person to participate in the first network meeting. Treatment facilities can be found at <<http://findtreatment.samhsa.gov>>.

### **Law Enforcement Data**

***...drug use data on local arrestees...***

If not yet known, find out which agencies, departments, or offices collect drug use data on local arrestees charged with criminal offenses, including drug violations. Drug violations, including arrests for possession and/or trafficking, are reported by counties and States. Several different State offices can be contacted to determine sources of arrest data. These include the Uniform Crime Report Office, the Statistical Analysis Center, the Law Enforcement Planning Office, and the Attorney General's Office. In some instances, the same arrest will be reported by the local police, the State police, and Federal agents, so inquire about possible duplicate reporting and overlap. Other law enforcement data that can be very useful include information on price and purity of drugs confiscated. Try to find out which levels of law enforcement agencies are included in a report. State Statistical Analysis Centers (SACs) assemble statewide criminal justice statistics, act as a clearinghouse for statewide crime information and statistics, and issue periodic reports. Contact names, addresses, and telephone numbers for the SAC office in each State can be found at <<http://www.jrsa.org/sac>>.

### **Hospital Data Pertaining to Drug Use**

***...contact the State, county, and city health departments to identify individuals who can provide information...***

If not yet known, contact the State, county, and city health departments to identify individuals who can provide information about relevant hospital data sources. If the geographic area covered by the network is relatively small, it may be appropriate to contact administrators of each hospital to find out what types of data related to drug use are collected and who coordinates such efforts within or outside the hospital.

### **AIDS Cases and HIV Seroprevalence Data**

***HIV/AIDS is a reportable condition in all States and territories in the United States.***

HIV/AIDS is a reportable condition in all States and territories in the United States. The HIV/AIDS Surveillance System, established by the Centers for Disease Control and Prevention (CDC), monitors the incidence and demographic profile of AIDS cases and describes the modes of HIV transmission among infected persons. Information can be found at <<http://www.cdc.gov/hiv/surveillance.htm>>. State and local health

departments conduct active surveillance. Standardized case report forms and software (HIV/AIDS Reporting System) are used to produce local tabulations and to report cases monthly to the CDC. All 50 States, U.S. territories and possessions, and some major cities report to the CDC surveillance system.

***...identify changing patterns in the modes of HIV transmission.***

One of the objectives of surveillance is to identify changing patterns in the modes of HIV transmission. The local health department office responsible for HIV/AIDS surveillance should be contacted to find out who is the best person to report relevant information at the first network meeting, such as information on the percentage of injection drug users who have contracted the virus.

### **Other Health Data**

Since substance abuse is also related to numerous health consequences, such as tuberculosis and sexually transmitted diseases, the State, county, or city health departments will have information on the number of individuals who have these diseases and the prevalence rates for these diseases in your local area. Contact the health department to get the statistics and to obtain information from the street outreach workers who seek out persons with these diseases. In some instances, certain outreach workers concentrate on drug-using populations, while others will concentrate on prostitutes and commercial sex trade workers.

### **School Data**

***Local and State school systems may fund surveys of drug use among students.***

Local and State school systems may fund surveys of drug use among students. If a relevant survey has been or is being conducted in your area, invite the Principal Investigator or another person who could describe the data collected.

School survey data may be available in a network's area from the Youth Risk Behavior Survey (YRBS), supported by CDC and conducted in coordination with State and local educational entities (*see Chapter 1*).

### **Community-Level Data Sources**

***...data/information sources can be obtained from smaller entities.***

At the community or neighborhood level, data/information sources can be obtained from smaller entities. Be careful to check that this information is not already included in reports from the various State agencies. The following are some suggested local sources of data:

- Drug abuse treatment and intervention programs (both public and private)
- Local hospitals and hospital associations
- State, county, and local health departments and agencies/clinics
- Medical examiners and coroners offices
- Poison control centers
- Drug helplines

- Community mental health centers
- HIV and STD outreach programs
- Pharmaceutical associations
- State and county forensic laboratories
- Criminal justice and correctional agencies that report arrest data (e.g., police, sheriff)
- Agencies that collect and report data on drug seizures and the price and purity of different drugs
- Drug courts
- Education offices and departments and schools
- Recreation facilities
- University researchers who conduct surveys or studies on drug abuse

There may be many other potential sources of information, depending on the community.

Network members may also review the Computer Retrieval of Information on Science Projects (CRISP) to determine if any studies are relevant to their area.

***CRISP is a searchable database of federally funded biomedical research projects...***

CRISP is a searchable database of federally funded biomedical research projects being conducted at universities, hospitals, and other research institutions. CRISP, maintained by the National Institutes of Health (NIH), includes NIDA grantees who are conducting drug abuse research. The information may be accessed through related links on NIDA's Web site (<[www.nida.nih.gov](http://www.nida.nih.gov)>; *see Appendix B*).

Over time, the network can identify individuals most likely to have data on drug abusers and make efforts to engage them as regular members.

## **Some Basic Steps in Accessing Drug Abuse Indicator Data**

***...it may be necessary to contact agencies and organizations to obtain needed information...***

Many data sets can be accessed on the Internet (*see Appendix B*). Other relevant data may not be available online, and it will be necessary to access information through records, publications, or some other type of documentation. In either case, it may be necessary to contact agencies and organizations to obtain needed information. However the data are accessed, taking the steps outlined below will prove useful.

1. **Identify the data set and its characteristics by addressing such questions as the following:**

- What are the data categories relevant to illicit drugs and to nonmedical use of prescribed drugs? How is each category defined?
- What populations are covered in the data set? Are data on demographic and other social or behavioral characteristics of each drug-abusing group available? How is each of these categories defined?
- What geographic area(s) is covered (e.g., State, region, county)? Can the data be aggregated into subareas of interest (e.g., metropolitan area, Zip Code)?
- What time period(s) is covered? Does each period represent a calendar year or a fiscal year? For which years are *comparable* data available so that trend analyses can be conducted?
- Are the raw data (numbers) available? Are the data reported as percentages, averages, or in some other descriptive statistic form? Are the data in a format or system that can be manipulated for further analysis? Access all numeric data of interest and any available information needed to further manipulate the data.

**Access all numeric data of interest and any available information needed to further manipulate the data.**

2. **Obtain documentation** on the system (e.g., data collection instruments, sampling methods, analytic methods) to assist in understanding the data.
3. **Identify any privacy or confidentiality procedures** that must be followed in analyzing and reporting the data.
4. **Identify a person(s)** in the agency/organization who can answer questions that may arise. Inquire if the person/agency would like to participate in analyses or receive a copy of your report. Establish ongoing rapport with the data provider.

Documenting information on the questions and issues summarized above will be important. For example, information on the questions listed in Step 1 will assist not only in understanding the data from a specific data source but also in comparing indicators across data sources. Agencies and organizations collect information relevant to their own specific mission and objectives, and there may be many differences across data systems in the populations covered, how information is categorized and defined, in the time periods represented in the data, and in the way the information is analyzed. Maintaining rapport with the data sources is also important, especially if researchers plan multiyear studies of drug abuse patterns and trends. Providing the agencies with network reports and findings also will further future cooperation.



## “Tips” on Establishing and Maintaining An Epidemiology Surveillance Network

An epidemiology network can function as a drug abuse surveillance system at any jurisdictional level—national, regional, State, county, city, or community. The descriptions in this guide focus primarily on the local community level.

Activities of an epidemiology surveillance network include those summarized in the box below.

**Planning** for regularly scheduled meetings, as well as agenda items for future meetings, collection of data from multiple sources, data analysis and reporting, timely dissemination of findings, and continuity of the network

**Developing and expanding the network** and updating data sources and contacts

**Creating a key informant network** of individuals who can be contacted quickly for information if a drug abuse problem emerges or increases

**Networking** through an ongoing group process in which members gain knowledge and current information about drugs of abuse, drug abuse patterns and trends, and emerging drug problems

**Connecting, communicating, and coordinating** with one another on an ongoing basis, and with “data sources,” that is, agencies, organizations, and systems that have relevant information/data on drugs, drug-abusing populations, and the knowledge and skills to contribute to the network

**Accessing and compiling data** at regularly scheduled times, in coordination with data sources

**Analyzing and reporting** data systematically, based on a standardized format

**Identifying the target audiences** (e.g., practitioners, administrators, policymakers, legislators) that can benefit from the data/information and findings produced by the network

**Disseminating the information** to target audiences

**Providing feedback** to participating agencies and organizations, including copies of the network’s reports

**Assessing progress** and goal attainment periodically so that changes can be made, if necessary, to ensure continuity and expansion of the network

**Developing knowledge and skills** over time. Because drug abuse is a complex and changing phenomenon, network members build collective knowledge and skills as they work together over time. By accessing and sharing information and knowledge, members impart and gain an understanding of the following:

(Continued)

- Knowledge of licit and illicit drugs and ways in which different drugs are abused
- Knowledge of relevant sources of drug abuse information/data and skills in retrieving the information/data
- Knowledge of their community/area and the “street savvy” and cultural awareness needed to ensure that relevant data are collected and that the data are interpreted accurately and in meaningful ways
- Skills in analyzing and interpreting data/information gathered collectively by the group
- Skills in preparing reports appropriate for different target audiences
- The capability to disseminate reports to different target audiences
- The skills needed to ensure continuity and effectiveness of network activities

# **PART II. ACCESSING AND ANALYZING DATA FROM DIFFERENT SOURCES**

## **1. SURVEY DATA**

***...surveys of a specific population can provide estimates of the incidence and prevalence of drug use in that population, overall and by drug type...***

Surveys are among the primary sources of epidemiologic data on drug abuse. When based on probability sampling, well-tested questionnaires, and well-controlled field procedures, surveys of a specific population can provide estimates of the incidence and prevalence of drug use in that population, overall and by drug type, as well as by demographic subgroup (e.g., gender, age, race/ethnic group). Many surveys also yield information on drug-using behaviors (e.g., age of first use, route of drug administration, frequency of use), attitudes toward drug use, and health consequences associated with drug use. Surveys conducted regularly over specific time periods (e.g., annually) provide data for trend analyses, and, thus, can show changes in overall drug use and the use of specific drugs by specific population groups across time periods.

Three periodic national surveys that provide important drug abuse data are...

- The National Survey on Drug Use and Health (NSDUH)
- Monitoring the Future (MTF)
- Youth Risk Behavior Survey (YRBS)

Occasionally, national-level data, such as NSDUH and MTF data, can be compared with data from local and State surveys to determine how a community deviates from the drug abuse patterns in larger geographic areas. NSDUH estimates are available by State, although special data requests may be needed to obtain State-level data on a specific drug of interest. When comparisons between local and national surveys are of interest, the questionnaires must be compared to determine differences in wording of questions, since they may be so different as to be noncomparable. YRBS data are available for several cities across the Nation, while the MTF represents secondary school students across the coterminous United States.

A comparison of local versus national data could, theoretically, yield a number of different but useful findings. For example, a comparison of local versus national data in a given year may show little difference between the local and national prevalence rates and patterns of drug use. Conversely, a comparison of local and national data may show divergent drug use patterns

**...national data may show the emergence of a new drug of abuse that has not yet appeared in the local data.**

overall or for a particular drug or population group. For example, national data may show the emergence of a new drug of abuse that has not yet appeared in the local data. Such a divergence could serve as an “alert” to local planners, policymakers, and providers, leading them to address such questions as: Has the trend been missed in local data gathering, or is it a pattern that may emerge in the future? How should local efforts be designed to determine whether the specific drug is or will become a substance of abuse in a confined geographic area?

Knowledge of national surveys can also be useful in planning surveys at the local and State levels. The national-level methods and questionnaires have been tested for utility and for reliability and validity. Sampling strategies have been developed by expert statisticians; confidentiality and privacy procedures conform to Federal guidelines; and methods for training data collectors have been carefully developed and monitored. Many instruments and methods are available to the public and can be used without cost.

## Accessing and Analyzing Survey Data

**Network members may care to first examine the national surveys...**

Network members may care to first examine the national surveys described below. However, network members should also inquire with State and local educational institutions and researchers to determine whether household or school surveys have been or are being conducted in their local areas.

### The National Survey on Drug Use and Health

**...NSDUH... provides information on prevalence and trends...**

The NSDUH is conducted annually under the sponsorship of the Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA). The NSDUH (formerly the National Household Survey on Drug Abuse, NHSDA) provides information on the prevalence of and trends in the use of illicit drugs, alcohol, tobacco, and the nonmedical use of prescription-type drugs among members of the civilian, noninstitutionalized population age 12 and older in the United States and represents nearly 98 percent of this population. The NSDUH also provides information about substance abuse and dependence, based on the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (American Psychological Association 1994), mental health problems, and treatment needed and received for substance abuse and mental health problems.

The survey employs a 50-State sample design with an independent, multistage area probability sample for each of the 50 States and the District of Columbia, enabling the calculation of State estimates. In the eight States that constitute 48 percent of the Nation’s population age 12 and older, SAMHSA reports substate area estimates.

**The NSDUH collects data on lifetime (“ever used”), past-year, and past-30-day use of illicit drugs...**

The NSDUH collects data on lifetime (“ever used”), past-year, and past-30-day use of illicit drugs, such as powder cocaine, crack cocaine, heroin, marijuana, methamphetamine, and various hallucinogens; psychotherapeutic drugs (nonmedical use, e.g., of narcotic analgesics, sedatives, tranquilizers, stimulants); alcohol; and tobacco (cigarettes, smokeless tobacco). As noted above, the survey also yields diagnostic data related to abuse or dependence on drugs, mental health problems (including co-occurring disorders), and treatment.

Of special note is the fact that trend analyses are limited prior to 2002 because of the redesign of the NSDUH. Data from 2002 onward should not be compared with 2001 and earlier NHSDA data to assess changes over time (SAMHSA 2004a).

**...publications/reports can be viewed at... <<http://www.oas.samhsa.gov>>.**

NSDUH publications can be obtained by contacting the National Clearinghouse for Alcohol and Drug Information (NCADI),<sup>1</sup> or publications/reports can be viewed at the following Web site: <<http://www.oas.samhsa.gov>>. Public data files for the NHSDA and NSDUH for 1979, 1982, 1985, 1988, and annually from 1990 to 2003 are currently available through the Substance Abuse and Mental Health Data Archive (SAMHDA Online Analysis) and the archive’s online data analysis system (DAS), which allows analysts to run statistical analyses directly from public use data files and obtain results online without the need to download the data file. The Web site is <<http://www.icpsr.umich.edu/SAMHDA/das.html>>.

### **Monitoring the Future Study**

**...MTF provides data on the prevalence of drug use and related attitudes among students in grades 8, 10, and 12.**

The MTF survey has been conducted for nearly three decades by the Institute for Social Research, University of Michigan, under grant support from NIDA. The MTF provides data on the prevalence of drug use and related attitudes among students in grades 8, 10, and 12. Data have been collected since 1975 on high school seniors and since 1991 on students in grades 8 and 10. The data represent public and private secondary schools in the coterminous United States. A followup panel survey is structured to collect data from a random sample of high school seniors biannually after high school, covering college students and young adults.

Information on lifetime, past-year, and past-30-day use is collected on many drugs, including illicit and licit drugs. Illicit drugs data include “any illicit drug,” marijuana, powder cocaine, crack cocaine, heroin, methamphetamine, hallucinogens, and methylenedioxymethamphetamine (MDMA or “ecstasy”). Nonmedical use of licit drugs covers such prescription-type drugs as narcotic painkillers (e.g., Vicodin, oxycodone, Ritalin), sedatives (barbiturates), stimulants, and tranquilizers. Alcohol and tobacco use are also covered. Students are also asked about the perceived risk of using specific drugs, their disapproval of people using each of the drugs, and their perception of the availability of each drug.

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<sup>1</sup>P.O. Box 2345, Rockville, MD 20852-2345; Phone: 800-729-6686; Fax: 301-468-6433.

Publications may be ordered from NCADI or through the NIDA Web site <<http://www.NIDA.NIH.gov>>. Those interested in obtaining the results and key findings from the MTF survey (1975–2004) can go directly to <<http://monitoringthefuture.org>> where tables and figures from the most recent MTF survey’s published findings can be found.

### Youth Risk Behavior Survey

**YRBSS...monitors six categories of health-risk behaviors among youth and young adults...**

The Youth Risk Behavior Surveillance System (YRBSS), developed by the Centers for Disease Control and Prevention, monitors six categories of health-risk behaviors among youth and young adults (tobacco use, unhealthy dietary behaviors, inadequate physical exercise, alcohol and other drug use, risky sexual behaviors, and behaviors that contribute to unintentional injuries and violence). The system includes a national school-based Youth Risk Behavior Survey (YRBS), as well as State, territorial, and local school-based YRBSSs conducted by education and health agencies.

**The YRBS covers lifetime use of many illicit drugs...as well as "current" (past-30-day) use of some drugs...**

The YRBS covers lifetime use of many illicit drugs, including cocaine (powder, crack, freebase), heroin, marijuana, methamphetamine, inhalants, and ecstasy, as well as “current” (past-30-day) use of some drugs (e.g., cocaine, inhalants, marijuana), and injection of any illicit drugs. YRBS also covers alcohol and tobacco use and nonmedical use of steroids. Other behaviors included in the survey are, as noted above, unhealthy dietary behaviors, inadequate physical exercise, risky sexual behaviors, and behaviors that contribute to unintentional injuries and violence.

Since 1991, the national YRBS has been conducted every other year. State and local school-based YRBS efforts are based on a two-stage cluster sample design to produce representative samples of students in grades 9–12 within their jurisdictions. In 2003, 32 States were included in the YRBS, as were 18 local jurisdictions. Data are weighted, and confidence intervals are reported.

The YRBS city data can be obtained by contacting school districts. Findings are also summarized in CDC’s *Morbidity and Mortality Weekly Report* (MMWR). The YRBSS Web site is available at <[http://www.cdc.gov/HealthyYouth/YRBS/about\\_YRBS.htm](http://www.cdc.gov/HealthyYouth/YRBS/about_YRBS.htm)>. This Web site includes the most recent YRBS questionnaire for surveys of 9th–12th grade students, published reports, data files and documentation, and Youth Online, which provides interactive access to survey results.

National-level estimates of drug use may mask substantial variations in local areas. Recent YRBS data reveal such variations in the abuse of drugs, such as the three stimulant drugs shown in exhibit 1 for 13 CEWG areas where the survey was conducted. The exhibit is based on weighted 2003 data for students in grades 9–12 and presents confidence intervals (CIs) by drug and area.

**Exhibit 1. Lifetime Use of Cocaine, Methamphetamine, and Ecstasy Among Students in Grades 9–12 in 13 CEWG Areas,<sup>1</sup> by Percent: 2003**

City	Cocaine		Methamphetamine		Ecstasy	
	Percent	CI <sup>2</sup> (±)	Percent	CI (±)	Percent	CI (±)
Boston PS	3.3	1.1	3.6	1.4	6.2	1.7
Broward Co., FL PS	5.9	1.4	4.5	1.1	7.8	1.6
Chicago PS	5.6	1.6	3.7	1.7	5.3	1.9
Dallas ISD	11.9	1.8	5.2	1.2	NA <sup>3</sup>	–
DeKalb Co., GA PS	3.4	1.2	2.9	0.8	4.7	1.3
Detroit PS	2.3	0.8	2.6	1.0	NA	–
Los Angeles USD	9.9	2.2	8.0	1.7	4.7	2.0
Miami-Dade Co., FL PS	6.3	1.1	3.8	1.0	8.2	1.6
New Orleans PS	3.4	1.3	5.8	1.8	7.2	1.9
New York City PS	3.5	0.6	2.4	0.5	5.0	0.8
Philadelphia SD	2.9	0.9	2.0	0.9	4.9	1.5
San Diego USD	7.7	1.7	7.6	1.5	9.0	1.6
Wash., DC PS	6.2	1.5	5.7	1.5	8.8	2.0

<sup>1</sup>PS=Public school; SD=school district; ISD=independent school district; USD=unified school district.

<sup>2</sup>At the 95 percent confidence level.

<sup>3</sup>NA=Not available.

SOURCE: Centers for Disease Control and Prevention, Youth Risk Behavior Survey

As shown in exhibit 1, estimates of lifetime use of cocaine among high school students ranged from a low of 2.3 percent in Detroit to 11.9 percent in Dallas. Lifetime use of methamphetamine varied from 2 percent in Philadelphia to 8 percent in Los Angeles. Ecstasy use, reported from 11 CEWG areas, also shows variation, with a low of 4.7 percent in the Atlanta area (DeKalb County) and a high of 9.0 percent in San Diego.

### Other Surveys

Network members should check with education departments, public health departments, and universities in their area to determine whether other surveys on drug use have been or will be conducted in their local area or State. For example, in Texas, a school survey is conducted every other year, and data can be accessed from school districts in different parts of the State. Exhibit 2 shows data from four different survey years on students in grades 7–12 in two Independent School Districts in Webb County, Texas, as reported by Jane Maxwell, Ph.D. (2003), at the September 2003 Border Epidemiology Work Group meeting.

**...check with education departments, public health departments, and universities...**

**Exhibit 2. Substance Use Among 7th–12th Grade Students in Webb County (Laredo), Texas, ISDs,<sup>1</sup> by Year<sup>2</sup> and Percent: 1993–2002**

ISD	Lifetime Substance Use (Percent)				Past-Month Substance Use (Percent)			
	1993	1998	2000	2002	1993	1998	2000	2002
<b>United ISD</b>								
Tobacco	61	56	54	47	28	28	27	21
Alcohol	75	74	76	73	43	44	45	41
Inhalants	21	17	19	18	3	8	8	8
Any Illicit Drug	19	28	29	31	7	14	15	15
Marijuana	17	25	25	27	6	11	12	12
Cocaine/Crack	7	11	13	13	2	6	6	5
<b>Laredo ISD</b>								
Tobacco	56	56	55	44	25	25	25	21
Alcohol	75	76	75	71	40	42	42	40
Inhalants	13	13	18	16	4	4	7	8
Any Illicit Drug	18	20	30	26	8	8	14	12
Marijuana	16	17	26	22	7	7	10	9
Cocaine/Crack	7	8	13	12	3	3	6	4

<sup>1</sup>ISD=Independent School District.

<sup>2</sup>Laredo ISD did not participate in the 2000 survey.

SOURCE: Texas Commission on Alcohol and Drug Abuse and Public Policy Research Institute of Texas A&M University



## 2. DRUG ABUSE TREATMENT DATA

**Data collected by programs that treat substance abusers can be another important indicator of substance abuse patterns and trends...**

**...network members can quickly make comparisons between the different types of drug abusers and draw some important inferences.**

Data collected by programs that treat substance abusers can be another important indicator of substance abuse patterns and trends in particular geographic areas. These data, generally collected uniformly at admission and reported to State and Federal agencies, include the numbers and types of substances used by drug abusers entering treatment. They also include the characteristics (e.g., gender, age, ethnicity/race) of the treatment admissions by specific drug. For example, it is possible to determine how many admissions report cocaine as their primary drug at treatment entry during a specific time period and the characteristics of the cocaine abusers. What percent were male and female? African-American, White, Hispanic, or of an other racial/ethnic group? What were the specific age categories for these admissions? Based on these variables alone, many comparisons can be made. The characteristics of primary cocaine abusers, for example, can be compared with the characteristics of those who reported other types of primary drugs during the same admission period. Consequently, network members can quickly make comparisons between the different types of drug abusers and draw some important inferences. Many other reported data elements collected at admission could be analyzed to learn more about the drug-abusing population. These elements will be presented later in this chapter of the guide. The chapter includes information on...

- Advantages of treatment data
- Major limitations of treatment data
- How to locate/identify treatment programs in specific geographic areas
- Obtaining information about treatment programs and their facilities, including data from local programs, State agencies, and the Federal Government
- Examples of how treatment data can be analyzed and reported

### **Advantages of Treatment Data**

Some of the advantages of using treatment data are as follows:

- Treatment data are generally a good indicator of the types of drugs being used in geographic areas; these data also show changes in patterns of drug use over time.
- Treatment admissions data are collected and reported by all publicly funded and some privately funded substance abuse treatment programs, based on standardized questions.
- Data on the specific drugs (primary, secondary, and tertiary) used and the characteristics of the users are collected systematically at intake by trained staff.

- These data are relatively easy to access and analyze.
- These data can be analyzed over time (e.g., years) to assess changes over time and trends.
- These data may show emerging drugs or drug problems that require treatment.
- Comparisons can be made with treatment data from other areas within a State or across States.

### Major Limitations of Treatment Data

The limitations of treatment data include...

***These data only represent drug abusers who enter particular types of treatment programs...***

- Treatment data cannot be used to make drug abuse prevalence estimates for or by geographic area. These data only represent drug abusers who enter particular types of treatment programs and exclude the majority of drug abusers who are unable to access treatment or who do not seek the treatment services that are available. An unknown number of drug abusers obtain treatment from private programs that are not required to report data.
- There is a gap between the time when a person starts using a drug or drugs and the time when that individual seeks or is referred to treatment. By the time an individual enters treatment, it is likely that s/he had been using drugs for some time. The data are unlikely to reflect the newest drug patterns on the street.
- A drug abuser can enter treatment more than one time in a calendar year and is most likely to be counted each time s/he was readmitted. However, some programs can provide unduplicated counts, and network members should request unduplicated data. Multiple admissions by the same person are more likely in short-term outpatient programs.
- The substances reported at treatment admission are the substances that led individuals to seek or be referred to treatment at that particular time. Therefore, treatment data often do not provide a complete history of all substances used.
- In seeking treatment, drug abusers may not be totally honest in reporting their primary drug problem. For example, some may be afraid of reporting an illicit drug problem that has more serious legal implications. Interviews with active methamphetamine abusers in Ohio suggest that some may conceal their use of the drug from treatment providers or avoid treatment altogether because of heightened media attention and increased law enforcement efforts focused on methamphetamine (Wright State University 2005).

## Where to Start: How to Locate/Identify Treatment Programs in Specific Geographic Areas

**...SAMHSA's  
National Survey of  
Substance Abuse  
Treatment Services  
(N-SSATS).**

The first step is to identify treatment programs in your area. The yellow pages of the telephone directory may be useful in identifying substance abuse treatment programs in your area or areas for which the network is attempting to assess drug abuse patterns and trends. Network members may also contact the local Chamber of Commerce for this information.

A useful online source is the Substance Abuse and Mental Health Services Administration's Treatment Facility Locator, which is based on facility responses to SAMHSA's National Survey of Substance Abuse Treatment Services (N-SSATS) and periodically updated. New facilities are added monthly, if facilities inform SAMHSA of changes.

For a listing of programs on the Treatment Facility Locator go to: [findtreatment.samhsa.gov](http://findtreatment.samhsa.gov).

1. Click to enter the drug abuse and alcoholism Treatment Facility Locator.
2. A Quick Search with Map It page will appear. Click on the State or Territory of interest to the network.
3. On the next page, to search for programs in your area, type in the City name and the Search Radius (e.g., 30 miles), that is, the geographic area of network interest. Optional choices are available for Zip Code areas and Street Address.
4. Continue, and a map of the area (e.g., 30 miles around your city) will appear that identifies the geographic areas where programs are situated. Scroll down, and the following information will be provided on each program: facility number (corresponding to the map number), name of the facility, address, and phone number. Other information summarizes the program's focus (e.g., mix of mental health and substance abuse services), services provided, type of care (e.g., residential, outpatient), special programs (e.g., women, adolescents), and forms of payment accepted. Some programs also list their Web sites.

## What to Request

Network members need to carefully consider the types of information that will be most useful. If State or local data are not easily accessible, network members may wish to use data from SAMHSA's Treatment Episode Data Set (TEDS), which is described later in this chapter. Some useful types of information for a specified geographic area or areas, which should be accessible from your State or TEDS, include the following:

- The primary drug of abuse (the drug the client feels caused him/her to enter treatment) as well as the secondary and tertiary drugs of abuse
- Sociodemographic characteristics of different primary drug-abusing groups (e.g., gender, age, race/ethnicity, educational level, employment status, criminal justice system involvement)
- Frequency of drug use (e.g., daily, several times a week or month)
- Route of drug administration (e.g., injection, smoking, inhalation)
- The demand for treatment generated by referral source (e.g., the criminal justice system)

Other data that may be important for analysis, especially if discharge data are used, include date of admission and type of service provided at admission. If discharge data are requested and available, the following types of information can be accessed for the 20 or more States that provide such data to TEDS:

- Type of service at discharge
- Date of last contact
- Date of discharge
- Reason for discharge, transfer, or discontinuance of service

If network members contact drug abuse treatment programs directly to access client data, the following things should be kept in mind:

- Do not request information that would potentially make it possible to identify an individual client; such information cannot be divulged under penalty of Federal law. Programs can only provide data at aggregate or summary levels.
- The primary responsibility of treatment programs is treating clients. As appropriate, staff see treatment as their primary obligation, and are likely to be less interested in the potential benefits of research. Some may feel that any attempt to obtain client data is another demand on their limited time.

### **Obtaining Information about Treatment Programs and Facilities**

Substance abuse treatment programs differ in many ways, e.g., by area, modality, services provided, length of treatment, and treatment philosophy. In the *National Directory of Drug and Alcohol Abuse Treatment Programs*, SAMHSA uses the codes shown in the box below to distinguish between types of providers, services, and care and specialized programs by agency.

### **Codes for Providers, Services, Care, and Special Programs**

**Primary Focus of Provider**

- Substance abuse treatment services
- Mental health services
- Mix of mental health and substance abuse services
- General health services

**Type of Care**

- Outpatient
- Partial hospitalization
- Hospital inpatient

**Services Provided**

- Substance abuse treatment
- Detoxification
- Methadone/LAAM
- Halfway house

**Special Programs/Groups Offered**

- Adolescents
- Dually diagnosed
- Persons with HIV/AIDS
- Gay and lesbian
- Seniors/older adults
- Pregnant/postpartum women
- Other women's groups
- Groups of men only
- DUI/DWI offenders
- Other criminal justice groups

The most recent *National Directory of Drug and Alcohol Treatment Programs* can be accessed through the Internet at <<http://findtreatment.samhsa.gov>>. Hard copies of the directory can be obtained from the NCADI by calling 1-800-729-6686.

#### **Obtaining Treatment Data from Local Programs**

***It may be possible to obtain treatment data directly from substance abuse treatment agencies.***

It may be possible to obtain treatment data directly from substance abuse treatment agencies. To release data, the Executive Director would have to be informed about the reasons for requesting the data, how the data would be used, and the goals and makeup of the network. The Executive Director would have to be convinced that the data would be used appropriately and for a good purpose. It may be that the Executive Director is already familiar with the network and knows some of the members. Following an introductory telephone call to the Executive Director, the network should follow up with a formal letter, making the request in writing. It might be helpful to invite the Executive Director, or his/her representative, to the next network meeting to discuss the possibility of obtaining the data, how the data can be obtained, and how the information produced by the network can be of use to the agency.

If the network covers a large geographic area where many substance abuse treatment agencies are located, the process involved in acquiring the data directly from agencies would obviously be more difficult. However, there are many advantages in getting data directly from each treatment agency rather than from the State or Federal agencies. First, it is possible to obtain insight and understanding from program staff about the different types of clients admitted to treatment and the patterns of drug use. Second, local programs can identify more specifically the geographic areas where clients reside. They cannot identify specific addresses of clients, but by using "mapping" software they can show the general locations where client addresses are clustered. When done by type of drug used by clients, mapping can identify even more

**Treatment staff often serve as "key informants"...**

information about the geographic areas where specific types of drug abuse problems are clustered. Third, treatment program staff (e.g., counselors) are often able to help surveillance networks answer questions that emerge from the quantitative admissions data. Treatment staff often serve as "key informants" for CEWG representatives, providing insight on issues that emerge from the data.

**...a link on Treatment Facility Locator lists SSAAs in each State and U.S. Territory.**

### **Obtaining Treatment Data from State Agencies**

Those who wish to obtain data for their area from their State Substance Abuse Agency will find a link on Treatment Facility Locator that lists SSAAs in each State and U.S. Territory. This listing provides the name, address, and telephone number for each SSAA. Network members are likely to find SSAAs useful in providing the most recent treatment data.

### **Obtaining Treatment Data from the Federal Government**

Characteristics of clients entering publicly funded programs (and some private programs) are collected at admission and reported to the State Substance Abuse Agency, which in turn, forwards the data in a standardized "Minimum Data Set" to SAMHSA for inclusion in TEDS. Some States also submit a more detailed Supplemental Data Set on admissions, and all States will be submitting discharge outcome data in the future. The TEDS Minimum Data Set is collected in a standardized way within each State, which permits comparisons across geographic areas (e.g., counties, cities, States) and also provides information on the types of clients served in publicly funded programs.

**TEDS is an exceptionally large treatment data set...**

The Treatment Episode Data Set was established through the 1988 Comprehensive Alcohol Abuse, Drug Abuse and Mental Health Amendments (Public Law 100-690), which mandates that data be collected and reported on clients receiving treatment from publicly supported programs for either alcohol or drug abuse. Some States also voluntarily collect and report data from private programs. TEDS is an exceptionally large treatment data set, so caution must be taken in interpreting the data.

**Accessing TEDS Data.** The quickest way to access the most recent TEDS data is through the SAMHSA Web site <<http://www.drugabusestatistics.samhsa.gov>>.

Hard copies of the most recent TEDS annual report can be obtained by calling NCADI at 1-800-729-6686.

**TEDS does not include all substance abuse treatment admissions in States.**

**Limitations of TEDS.** TEDS does not include all substance abuse treatment admissions in States. The scope of the treatment facilities included in TEDS is affected by differences in State licensure, certification, accreditation, and disbursement of Federal funds. Crisis intervention facilities and hospital emergency departments are not included in TEDS. Hospital-based substance abuse treatment facilities are not licensed through the State substance abuse

agencies. Some State agencies include data from correctional facilities, while others do not.

TEDS, an admission-based information system, does not represent individuals. An individual admitted to a treatment program twice within a calendar year would be counted as two admissions.

Another disadvantage to using TEDS is the fact that data from a particular year may not be available until 1 or 2 years later.

### **Standardizing Treatment Data**

Exhibit 1 on the following page illustrates how network members can record treatment data in a standardized way, using their own data form to collect information the network considers most important. It is vital to obtain the total number of admissions for a given time period, since the total serves as a denominator (e.g., to calculate the percentage of, say, primary cocaine admissions in a specific time period and geographic site). Network members may wish to add drugs to their recording form (e.g., opiates other than heroin) or to add other client characteristics (e.g., age of first use for each drug).

## Exhibit 1. Standard Treatment Data Request Form

Site: _____								
<b>Characteristics of Clients Admitted to Treatment</b>								
From _____ To _____, _____ (Months/Year)								
Total Number of Treatment Admissions: N= _____								
Characteristics	Alcohol (Only or in Combo)	Cocaine	Heroin	Other Opiates	Marijuana	Metham- phetamine	(Other) Stimulants <sup>1</sup>	All Other
<b>Total n:</b>								
<b>Gender</b>								
Male	%	%	%	%	%	%	%	%
Female	%	%	%	%	%	%	%	%
<b>Race/Ethnicity</b>								
White	%	%	%	%	%	%	%	%
African-American	%	%	%	%	%	%	%	%
Hispanic	%	%	%	%	%	%	%	%
Other 1.	%	%	%	%	%	%	%	%
Other 2.	%	%	%	%	%	%	%	%
<b>Age at Admission</b>								
17 and younger	%	%	%	%	%	%	%	%
18 to 25	%	%	%	%	%	%	%	%
26 to 34	%	%	%	%	%	%	%	%
35 and older	%	%	%	%	%	%	%	%
<b>Route of Administration</b>								
Smoking	%	%	%	%	%	%	%	%
Sniffing	%	%	%	%	%	%	%	%
Intravenous	%	%	%	%	%	%	%	%
Other/multiple	%	%	%	%	%	%	%	%
<b>Secondary Drug</b>								
Type of Drug								
	%	%	%	%	%	%	%	%
<b>Tertiary Drug</b>								
Type of Drug								
	%	%	%	%	%	%	%	%

<sup>1</sup>Use this column if you cannot provide separate data on methamphetamine (MA) OR to document other stimulant admissions if you can provide data on MA admissions.

SOURCE: Adapted from the National Institute on Drug Abuse, 1998, page 14.



## Uses of the Data: Examples of How Treatment Data are Analyzed and Reported

Treatment data can be analyzed in many ways, as illustrated in the examples below. When trend data are used and there are substantial changes in the numbers and types of clients over time, network members may need to check with treatment providers and the State funding agency. The changes may reflect new services to specific populations (e.g., drug courts, pregnant women) or the closing of one or more programs.

### Detecting Emerging Drugs in Ohio

As noted earlier, treatment data can be an indicator of emerging drug problems. Wright State University researchers, who manage the Ohio Substance Abuse Monitoring (OSAM) surveillance network for the Ohio Department of Alcohol and Drug Addiction Services, reported the following example in their January 2005 *OSAM-O-GRAM*: In the year 2000, information about methamphetamine abuse in the State was beginning to filter down from law enforcement officials and drug abusers. In 2002, treatment programs in Akron reported increases in methamphetamine treatment admissions. Dayton treatment providers reported increases in methamphetamine treatment admissions in 2004. Although methamphetamine abusers still only represented a small proportion of the 2004 treatment admissions in the State, treatment and other indicator data were being closely monitored by area and State officials.

### A Metropolitan Area: Baltimore

Leigh Henderson, Ph.D., the CEWG representative for Baltimore, accesses substance abuse treatment admissions data from the Maryland Drug Abuse Administration (State authority). She accesses data for the Baltimore Primary Metropolitan Statistical Area (PMSA) and two different segments of the PMSA: Baltimore City and the PMSA areas excluding Baltimore City. Recently, Dr. Henderson requested multiyear data (2000 to 2004), by drug category, and the characteristics (gender, age and race/ethnicity) of first time treatment admissions. Exhibit 2 displays data for the drug category Narcotic Painkillers, by year and geographic area (PMSA, city, and non-city). Similar tables were constructed for the following drug categories: powder cocaine, smoked cocaine, intranasal heroin, injected heroin, and marijuana (see Henderson and Walker 2006). From each table, one can determine the demographic characteristics by area and year, and these variables can be compared with the similar variables in tables displaying the same type of data for other drugs. Several different variables are shown in exhibit 2 (e.g., daily use, first treatment episode, median duration of use, and criminal justice referral), and these can be compared by type of area and drug. As findings in exhibit 2 illustrate, the numbers of primary Narcotic Painkiller admissions to treatment increased each year (2000 to 2004) in all three Baltimore areas.

**Exhibit 2. Characteristics of Narcotic Painkiller (Primary, Secondary, or Tertiary) Admissions in Baltimore, by Percent: 2000–2004**

Characteristic	Total PMSA				Baltimore City				PMSA excluding Baltimore City						
	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004
(Number of Admissions)	(960)	(1,413)	(1,907)	(2,201)	(2,293)	(192)	(282)	(509)	(531)	(728)	(768)	(1,131)	(1,398)	(1,670)	(1,565)
Gender															
Male	55.0	56.5	54.6	56.5	56.6	45.8	50.7	46.4	49.7	54.5	57.3	58.0	57.7	58.7	57.5
Female	45.0	43.5	45.4	43.5	43.4	54.2	49.3	53.6	50.3	45.5	42.7	42.0	42.3	41.3	42.5
Race/Ethnicity															
White	87.3	88.9	86.6	87.4	87.7	63.0	73.4	67.6	66.4	75.4	93.4	92.8	93.6	94.1	93.4
African-American	10.6	8.6	10.9	10.0	9.7	33.9	24.8	30.6	30.0	21.2	4.8	4.6	3.7	3.6	4.3
Hispanic	0.6	1.3	1.5	1.5	1.6	- <sup>1</sup>	1.4	-	2.5	2.1	0.8	1.3	2.1	1.3	1.3
Other	1.5	1.1	1.0	1.0	1.0	3.1	0.4	1.8	1.1	1.4	1.0	1.2	0.7	1.0	0.9
Age at Admission															
Younger than 18	5.3	6.3	6.1	6.4	7.5	13.2	14.2	7.1	8.5	8.2	3.3	4.4	5.7	5.7	7.1
18–25	16.0	20.4	23.7	27.6	26.1	17.4	18.1	21.7	20.9	25.4	15.6	20.9	24.5	29.7	26.5
26–34	25.3	24.1	23.4	21.7	22.7	22.6	21.4	26.8	21.1	21.3	26.0	24.7	22.1	21.9	23.3
35 and older	53.4	49.3	46.8	44.3	43.7	46.8	46.3	44.4	49.5	45.1	55.1	50.0	47.7	42.7	43.1
Median Age at Admission (Years)	(35)	(34)	(33)	(32)	(32)	(33)	(33)	(33)	(34)	(32)	(36)	(35)	(34)	(32)	(32)
Daily Use	51.4	71.1	65.0	66.6	66.7	59.0	73.6	70.9	74.9	81.8	64.4	70.5	63.0	64.0	59.5
First Treatment Episode	42.1	42.8	40.6	40.2	44.3	47.4	48.9	32.6	37.5	39.3	40.8	41.3	43.5	41.1	46.6
Median Duration of Use <sup>2</sup> (Years)	(5)	(3)	(3)	(4)	(4)	(5)	(3)	(3)	(3)	(3)	(5)	(3)	(4)	(4)	(4)
Criminal Justice Referral	14.6	16.0	13.0	13.9	13.0	18.2	18.4	9.0	12.1	7.1	13.7	15.4	14.4	14.4	15.7

<sup>1</sup>Quantity is zero

<sup>2</sup> For first-time treatment admissions.

SOURCE: Based on data from Alcohol and Drug Abuse Administration, Maryland Department of Health and Mental Hygiene

### A Network of Areas Within a State: Louisiana

A drug abuse surveillance network has been operational in Louisiana since 1997. Established by the Louisiana State Office for Addictive Disorders, the State drug abuse authority, the network has been using treatment data as one of its primary sources for assessing drug abuse patterns and trends in parishes located throughout the State. Representatives of the parishes assume responsibility for analyzing the treatment data along with other local data sources and reporting findings at annual meetings. Exhibit 3 is an example of treatment admissions data reported by parish, making it possible to assess similarities and differences in the types of 2004 treatment admissions (in Thornton-Collins 2006). Crack cocaine (smoked cocaine) has been one of the most serious drug problems throughout the State for many years. Almost one-half (45.5 percent) of the 2004 admissions in Baton Rouge reported smoked cocaine as their primary drug of abuse. The percentages of heroin admissions were low in all parishes, with the exception of Orleans Parish, where 11 percent of the 2004 admissions reported heroin as the primary drug. The percentages of methamphetamine admissions were also relatively low, but two parishes (Rapides and Bossier) reported higher percentages of primary methamphetamine admissions in 2004 than in prior years.

**Exhibit 3. Treatment Admissions for Selected Drugs in Nine Parishes of Louisiana, by Primary Drug and Percent: 2004**

Drug	Parish								
	Orleans	Bossier	Calcasieu	East Baton Rouge	Lafayette	Ouachita	Rapides	St. Tammany	Terrebonne
Cocaine	31.6	26.7	15.8	45.5	32.3	24.8	26.5	28.4	17.3
Heroin	11.1	0.0	0.3	0.8	0.9	0.3	0.7	3.3	0.3
Other Opiates	3.6	8.9	11.4	5.0	11.5	4.7	11.4	21.1	7.5
Marijuana	32.1	15.4	30.0	13.2	13.3	26.6	17.5	17.3	37.3
Methamphetamine	0.2	6.2	4.2	2.1	1.0	3.8	6.7	1.6	1.0
Alcohol	18.7	40.8	30.7	32.6	37.8	36.1	32.9	24.7	34.2
Other Drugs	2.5	2.0	7.6	0.8	3.2	3.7	4.3	3.6	2.4
<b>Total (N=)</b> <sup>1</sup>	<b>(2,306)</b>	<b>(292)</b>	<b>(983)</b>	<b>(3,432)</b>	<b>(885)</b>	<b>(914)</b>	<b>(1,295)</b>	<b>(1,026)</b>	<b>(986)</b>

<sup>1</sup>Excludes admissions for whom a primary drug was not reported.  
SOURCE: Louisiana State Office of Alcohol and Drug Abuse

### 3. DRUG ABUSE-RELATED HOSPITAL DATA

**Hospitals treat a broad range of substance abuse-related conditions and populations...**

Hospital data on the effects of drug abuse can be a valuable indicator in assessing drug abuse patterns and trends within a community or State. Hospitals treat a broad range of substance abuse-related conditions and populations presenting with those problems. Hospitals are the only type of care available 24 hours a day, 365 days a year, to provide emergency care and rehabilitative inpatient treatment. Hospitals are in a position to test patients for alcohol and drug use and to provide treatment or refer patients to appropriate treatment. Detoxification and medical rehabilitation are among the primary services provided to substance abusers in a hospital setting.

Often serious complications from abuse of drugs and alcohol occur at times when the hospital is the provider. Cases involving accidents and illnesses may be complicated by drug or alcohol abuse. Some individuals are admitted to the hospital for a medical or psychiatric condition that is a consequence of drug-using behavior. Or, there may be a “co-morbid” condition, such as affective disorder coexisting with drug or alcohol dependence.

Many drug abusers, especially those who do not have medical insurance, use the hospital emergency department (ED) as their primary source of care. Some chronic drug abusers relapse from time to time and seek care at various hospitals.

Generally, alcohol and drug abuse patients receive care in three basic types of hospitals: acute general, private psychiatric, and State psychiatric hospitals.

#### Accessing Hospital Data

Hospital data may be difficult to access for a new network. SAMHSA’s Drug Abuse Warning Network (DAWN) ED data, described below, are the easiest to review and access, if a network’s area is included in DAWN. Automated hospital discharge data that have already been analyzed are also useful and can provide some insight into the effects of drugs in an area. Local ED data are more difficult to obtain and analyze, but they can provide critical insights into the health impacts of drug use. Local hospital data will generally provide smaller numbers than comparable DAWN ED data, and they may provide less insight into serious acute consequences of drug use.

**Local ED data can... provide critical insights into the health impacts of drug use.**

**...ties may need to be established with State and local health agencies to obtain the data.**

For network members interested in accessing data directly from local hospitals, ties may need to be established with State and local health agencies to obtain the data. For hospitals that do not have public online data, permission must be obtained to collect the data directly from medical records. Hospital confidentiality procedures are stringent. Strategies will need to be devised to convince those with data to share it with the network in ways that will be useful to the work group. Assurances must be explicitly stated regarding

maintaining confidentiality of records. The purpose of collecting the data needs to be made clear to hospital staff. It should also be made clear that the network will provide the hospitals with a report of its findings.

To facilitate accessing information, contact should be made with the hospital's Executive Director, the official in charge of planning or marketing, or the hospital's epidemiology department. If the hospital is relatively small, it should be fairly easy to identify the appropriate hospital representative.

**...the purposes for collecting the data should be explained to the hospital staff...**

- Whether the data are accessed electronically or manually by searching medical or toxicology records, the purposes for collecting the data should be explained to the hospital staff and it should be stated that the findings will be shared with the hospital.
- Collecting and sharing the data will allow community-based providers to work more closely together to provide better case management and after-care services.

In cases where network members must collect the data directly from medical records, the data may be categorized by codes. The diagnostic codes may be the Diagnostic Related Groups (DRGs), which are used to set limits on Medicare reimbursement, as established by the enactment of the Tax Equity and Fiscal Responsibility Act of 1982. Or the data may be classified according to the *International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)*.<sup>1</sup> *Addendum A: Guidelines on Using Diagnostic Codes*, presented at the conclusion of this chapter, lists the addiction-related codes, with a section on matching DRGs and ICD-9-CM codes.

Admittedly, hospital-based drug use data are difficult to collect, aggregate, and analyze. While most hospitals collect and record drug-related data, there is a lack of uniformity among public, private, and not-for-profit hospital databases that makes it challenging to report the extent of substance abuse in any jurisdiction, region, or on a statewide basis. Some of these challenges are encountered in the DAWN national coverage of emergency departments. Ways in which "Reporters" are trained to systematically record drug-related data from patient records are described in *Drug Abuse Warning Network: Development of a New Design (Methodology Report)* (SAMHSA 2002), and may be useful to network members who need to explore different ways hospitals patient record data and the systematic way in which DAWN retrieves data.

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<sup>1</sup>While ICD-9 has been the medical coding system in the United States for more than a quarter century, there is an effort underway to adopt the World Health Organization's ICD-10, which is better suited for new electronic health systems and is used in all other developed countries. The American Health Information Management Association (AHIMA) calls for the adoption of ICD-10-CM for diagnostic coding and ICD-10-PSC for hospital inpatient services no later than 2008, and for support in the form of legislative authority and financial allocation. The decision rests with the Secretary of Health and Human Services. Additional information on ICD-10, including testing of the system, is available at <<http://www.ahima.org/coding/index.asp>> and <<http://www.cdc.gov/nchs/about/major/dvs/icd10des.htm>>.

**...identify someone at the local level who has knowledge, skills, and time to do the necessary work.**

Given the difficulties in accessing hospital data directly from medical records, and the limited time and resources of a network, it is advisable to identify someone at the local level who has knowledge, skills, and time to do the necessary work. Unless there is a network member who has knowledge of and expertise in accessing and analyzing hospital data sets, via record search or electronically, a second step might be to identify a researcher who can assist the network in collecting and analyzing the data. This person may well be interested in becoming a member of the network. Ideally, this person would access, prepare, and report the data at the network meeting in a simple format so the data can be used with other indicator data to assess drug abuse patterns and trends. There should be a periodic independent investigation on a sampling basis of the quality and accuracy of different hospital data systems.

The remainder of this section focuses on accessing and using the following types of hospital data—emergency department drug-abuse data and drug-related hospital admissions and discharge data.

## Emergency Department Data

The American Hospital Association (1991) defines an emergency department as “an organized hospital facility for the provision of unscheduled outpatient services to patients whose conditions are considered to require immediate care. An ED must be staffed 24 hours a day.”

### ***The Drug Abuse Warning Network (DAWN)***

*Judy K. Ball, Ph.D., M.P.A.*

DAWN is administered by the Office of Applied Studies (OAS) at the Substance Abuse and Mental Health Services Administration (SAMHSA). DAWN has two components: the emergency department (ED) component and the mortality component (which is described in Chapter 4).

**DAWN’s ED component provides information about drug-related ED visits for the Nation and for a selection of metropolitan areas.**

DAWN’s ED component provides information about drug-related ED visits for the Nation and for a selection of metropolitan areas. ED estimates are published annually. DAWN cannot be used to measure the *prevalence* of drug abuse (i.e., how many people abuse or misuse drugs); instead, it provides valuable information about the more severe health consequences of drug use, misuse, and abuse.

DAWN was redesigned in 2003. The current ED component is based on a statistical model that is more precise and a sample of hospitals that permits

generalizations for the entire Nation. Other changes to DAWN include new case criteria, new case-finding methods, new data items, and improved quality assurance. For these reasons, data published prior to 2003 are no longer comparable to those collected in the redesigned system (see SAMHSA 2002).

***DAWN relies on a stratified probability sample of short-term, general, non-Federal hospitals that operate 24-hour emergency departments.***

DAWN relies on a stratified probability sample of short-term, general, non-Federal hospitals that operate 24-hour emergency departments. The sample of hospitals was designed to represent such hospitals nationally and also over-samples such hospitals in selected metropolitan statistical areas (MSAs), including some of the MSAs that were in DAWN prior to 2003. Network members interested in learning whether the DAWN ED component includes their MSA in any given year can access the information at the following World Wide Web site: <<http://DAWNinfo.samhsa.gov>>.

***Any emergency department visit related to recent drug use is reportable as a DAWN case. This broad definition covers "drug use," "drug misuse," and "drug abuse."***

Any emergency department visit related to recent drug use is reportable as a DAWN case. This broad definition covers "drug use," "drug misuse," and "drug abuse." All types of drugs are included: illicit drugs, prescription and over-the-counter medications, dietary supplements, non-pharmaceutical inhalants, and alcohol. Excluded are cases in adults when alcohol is the only drug involved, but alcohol in combination with other drugs is always reportable. Alcohol only cases are included for persons younger than 21. Each case is assigned to one of eight case types, according to documentation in the medical chart (see exhibit 1 below). Case types include suicide attempt, seeking detoxification, "underage drinking" (when alcohol is the only drug in a person under age 21), adverse reactions, overmedication, malicious poisoning, accidental ingestion, and "other." The final case type "other" includes all drug-related cases not assigned to any of the previous seven case types. It is the category designed to capture most cases involving illicit drugs of abuse. For analyses focusing on drug misuse and abuse, DAWN cases classified as overmedication, malicious poisoning, and case type "other" are combined. Accidental ingestion and adverse reactions are never classified as "drug abuse." Multiple drugs plus alcohol may be reported for any case.

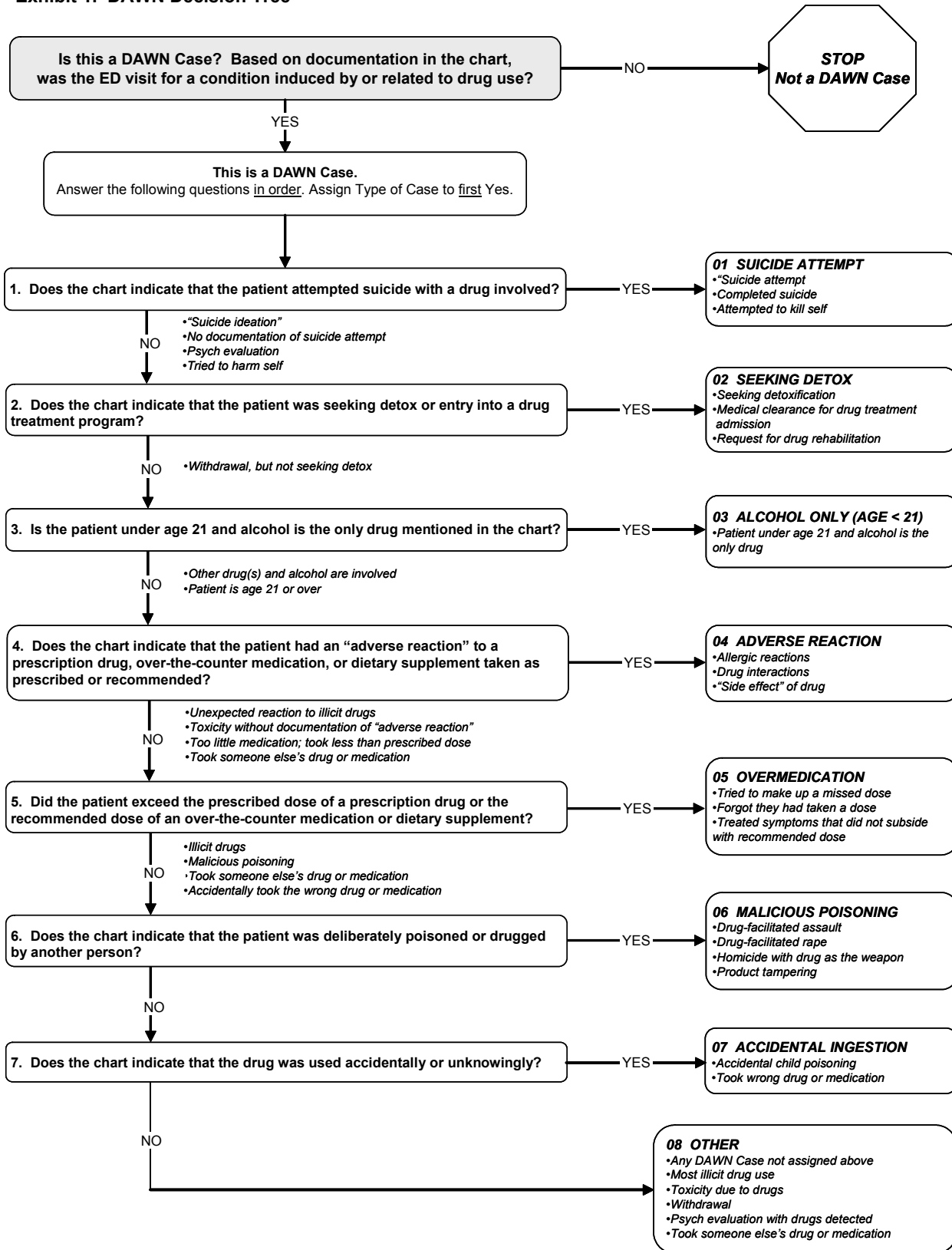
***To be a DAWN case, a drug does not have to have been the direct cause of the visit; the drug only needs to be implicated in the ED visit.***

To be a DAWN case, a drug does not have to have been the direct cause of the visit; the drug only needs to be implicated in the ED visit. Only recent drug use is included. Case criteria are sufficiently broad to encompass all types of drug-related events, including explicit drug abuse. It is recognized that medical records, the source of DAWN data, often lack explicit documentation of substance abuse, and distinctions between drug use, misuse, and abuse are often subjective (SAMHSA 2004b). Therefore, explicit documentation of drug "abuse" is not used in making DAWN case determinations or in assigning case type.

***...DAWN Reporters review medical charts for all patients treated in participating EDs.***

To find cases, DAWN Reporters review medical charts for all patients treated in participating EDs. The Reporters submit data only for the ED visits that meet the DAWN case criteria. Data are submitted electronically over a secure Internet connection, and the system alerts Reporters of inconsistent or invalid data.

**Exhibit 1. DAWN Decision Tree**



SOURCE: Office of Applied Studies, SAMHSA



Primary users of the DAWN ED data are the participating hospitals, local public health officials, Federal agencies (SAMHSA, the Food and Drug Administration, the Office of National Drug Control Policy, and the Drug Enforcement Administration), and the Community Epidemiology Work Group. DAWN data for MSAs can be accessed from SAMHSA publications or online.

For additional information, contact Dr. Judy Ball, Acting Director, Division of Operations, OAS, SAMHSA; Phone: 240-276-1256; E-mail: <Judy.Ball@samhsa.hhs.gov>.

## **Local ED Data**

The availability of local ED data (for hospitals not included in the DAWN sample) will vary from hospital to hospital and from community to community. Network members will need to obtain information about their local hospital emergency department before requesting access to the data.

## **Where to Start: Accessing ED Data**

**Communities located in metropolitan areas that are part of the DAWN ED system can access data on their MSAs from DAWN's annual publications... or online at <<http://DAWNinfo.samhsa.gov>>.**

**Network members whose communities are not covered in DAWN... should check with the State hospital association, local health department, or other hospitals directly...**

**...check first as to what types of information the hospital maintains on drug-abusing patients, and then determine whether the data will be useful...**

**DAWN Data.** Communities located in metropolitan areas that are part of the DAWN ED system can access data on their MSAs from DAWN's annual publications, available in hard copy from NCADI or online at <<http://DAWNinfo.samhsa.gov>>. These data are released approximately 6 to 12 months after the close of the data year. There is a time lag between the end of the data year and the release of the data, because DAWN ED data must undergo a series of checks before they are weighted and analyzed. SAMHSA ED publications now include confidence intervals (i.e., the margin of error) and relative standard errors (RSE), which provide information about the reliability and precision of the estimates.

Network members whose communities are not covered in DAWN, or who wish to use data in addition to or other than DAWN, should check with the State hospital association, local health department, or other hospitals directly to determine whether any information on drug abuse-related ED patients can be accessed electronically.

If data must be collected directly from hospital records, members need to check first as to what types of information the hospital maintains on drug-abusing patients, and then determine whether the data will be useful to the network. If the information appears useful and network members request and obtain permission to access information directly from medical records, and perhaps also toxicology laboratory reports, it will be most useful to prepare a data form(s) before requesting the data.

**Local Data.** CEWG representative James Hall, together with colleagues in South Florida, gathered data on drug-related emergency department cases semiannually from a hospital in Broward County (Fort Lauderdale) before it became part of the DAWN sample. These data were derived from medical records, reported at the semiannual CEWG meetings, and published in CEWG *Volume II Proceedings* reports.

In addition to extracting data from medical records, the Florida researchers found it useful to generate a daily printout of all toxicology laboratory work done by the lab from the previous day and to focus on those cases with a positive toxicology report. The lab data helped in identifying specific drug-related cases that may be missed or difficult to find by chart review alone. These researchers also educated ED staff in identifying drug-related cases and provided them assistance on how to document the cases.

### ***What to Request***

For networks that will rely on DAWN published reports, there will be ample data from which to select, including the types of information listed below.<sup>2</sup> Similar information may be available from local EDs that are not part of DAWN or other databases.

- The total number of drug-related ED visits in a metropolitan area, and the ED visits broken out by case type.
- The number of drug misuse/abuse ED visits. For analyses using DAWN drug misuse/abuse data, cases classified as overmedication, malicious poisoning, and the category “other” are combined; accidental ingestion and adverse reactions are never classified as “drug abuse.”
- The total number of ED visits and the number of drug misuse/abuse ED visits that involved a particular drug or drug category.
- Drug concomitance (whether the ED visit involved a single drug or multiple drugs).
- Demographic information about patients in drug-related ED visits (e.g., gender, age group, race/ethnicity).
- The disposition (i.e., outcome) of the drug-related ED visits: treated and released, admitted to the hospital, and all other dispositions.

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<sup>2</sup> DAWN will publish metropolitan-level estimates beginning with the 2004 ED estimates; these will be available at <http://DAWNinfo.samhsa.gov/>.

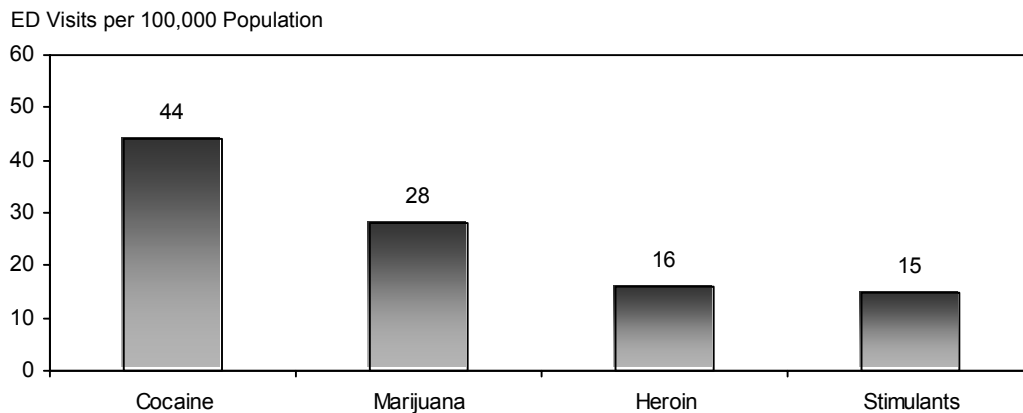
**If raw data are collected from a hospital, it is important to provide a context for the data.**

If raw data are collected from a hospital, it is important to provide a context for the data. This can be done by documenting the total number of ED visits in the hospital, and/or the number of ED visits reviewed, as a denominator for the data. The denominator can be used to calculate percentages (i.e.,  $X$  percent of ED visits were drug-related, or  $X$  percent of drug-related ED visits involved  $Y$  drug).

### **Uses of ED Data: Some Examples**

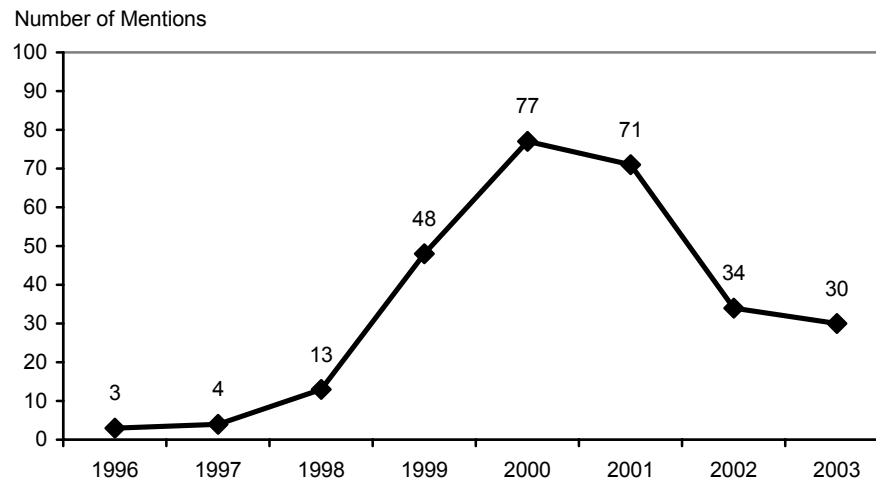
**DAWN Data.** Exhibit 2 is an example from the first publication from the redesigned DAWN. This simple chart shows the rate of ED visits for four major illicit drugs, per 100,000 population, in the second half of 2003.

**Exhibit 2. Rates of Illicit Drugs per 100,000 Population in DAWN ED Visits in the Coterminous United States: Third and Fourth Quarter 2003**



SOURCE: Adapted from the Office of Applied Studies, SAMHSA, Drug Abuse Warning Network 2004b, p.37

**Local Data.** Exhibit 3 illustrates some findings from the Fort Lauderdale hospital; these involved ED mentions of gamma hydroxybutrate (GHB) from 1996 through 2003. As shown, GHB mentions peaked in 2000 but remained higher in 2003 than from 1996 to 1998.

**Exhibit 3. Emergency Department GHB Mentions in Fort Lauderdale, Florida: 1996–2003**

SOURCE: Broward General Medical Center

Other analyses of the Fort Lauderdale ED data accessed from the local ED were also reported including, by drug, patient demographic characteristics (age, gender, race/ethnicity), reasons for visiting the ED (e.g., depression/suicidal, dependence/seeking detoxification, trauma/accident), and combinations of drugs used by patients (see Hall and Camejo 2005).

## Drug-Related Hospital Admissions and Discharge Data

***Hospital drug-related admissions and discharge data can be a valuable indicator of drug abuse and associated health consequences.***

Hospital drug-related admissions and discharge data can be a valuable indicator of drug abuse and associated health consequences. Many drug abusers require hospitalization and may be admitted to the hospital for a medical or psychiatric illness that is the consequence of a drug-using behavior. These data may be among the most difficult for network members to access and analyze. The data may be available from a local or State hospital association or a State health department. Two examples are presented below. The first was prepared by James Cunningham, Ph.D., University of Arizona, and illustrates how drug-related hospital admissions data can be accessed and analyzed to provide information about the epidemiology of drug problems and the impacts of drug policies on hospital admissions. The second, prepared by former CEWG representative Bruce Mendelson, illustrates how hospital discharge data are used in Colorado.

## **Hospital Admissions Data: Access and Uses in Drug Analysis**

*James K. Cunningham, Ph.D.*

***...hospital admissions data can provide important information about the epidemiology of drug problems and the impacts of drug policies.***

***Data for the study of hospital admissions comes from what is known as hospital discharge data systems. These systems consist of patient-level records that include date of admission as well as date of discharge.***

***There are two main sources of data from hospital discharge systems... State-based agencies and the Healthcare Cost and Utilization Project.***

***Most States now have agencies... that have been entrusted with the supervision, storage, analysis, and dissemination of statewide hospital discharge data.***

Drug-involved hospital admissions data can provide important information about the epidemiology of drug problems and the impacts of drug policies. This paper describes procedures and sources for accessing these data and examples of their use in epidemiologic and drug policy analysis.

### **Where to Start: Accessing the Data**

Data for the study of hospital admissions comes from what is known as hospital discharge data systems. These systems consist of patient-level records that include date of admission as well as date of discharge. The systems, however, are called discharge data systems because hospitals submit their data to the systems based on the date of patient discharge. Researchers extract records from the systems and conduct analyses as needed. Drug researchers typically extract the records for analyses that involve the date of admission. Later in this paper, for example, data from a hospital discharge data system is used to examine trends in methamphetamine, cocaine, and heroin/opioid-related hospital admissions. The term “discharge data” is used here in reference to the systems that provide the data. The term “admissions data” is used in reference to data that have been extracted from these systems and analyzed according to date of admission.

There are two main sources of data from hospital discharge systems in the United States—State-based agencies and the Healthcare Cost and Utilization Project.

Most States now have agencies—governmental, educational, or private—that have been entrusted with the supervision, storage, analysis, and dissemination of statewide hospital discharge data. Many of these agencies belong to the National Association of Health Data Organizations (NAHDO), which lists contact information for each of its member organizations (see <[www.nahdo.org](http://www.nahdo.org)>). To illustrate how discharge data are accessed from State-based agencies, procedures for obtaining data in Arizona, California, and Nevada follow.

In Arizona, the Department of Health Services, Bureau of Public Health Statistics, makes two types of limited (public use) discharge data sets available for the purposes of supporting research, public health, and health care operations. One set consists of discharge data from acute care hospitals, the other includes discharge data from emergency room departments. Each data set includes principal and secondary diagnoses (ICD-9-CM), as well as demographic (e.g., race/ethnicity, age, and gender), geographic (e.g., county), and service (e.g., principal and secondary procedures) variables. Each data set requires an approved application form and fee. In addition to providing

discharge data, the Bureau of Public Health Statistics also responds to requests for customized data reports.

**...the Healthcare Cost and Utilization Project (H-CUP) is a Federal-State-Industry partnership... H-CUP operates the State Inpatient Databases (SID), which consist of records of all inpatient discharges from each of 36 different States...**

In contrast to State-based agencies, the Healthcare Cost and Utilization Project (H-CUP) is a Federal-State-Industry partnership sponsored by the Agency for Healthcare Research and Quality. H-CUP operates the State Inpatient Databases (SID), which consist of records of all inpatient discharges from each of 36 different States, representing about 90 percent of all community hospital discharges in the Nation. Of the 36 States that participate in SID, 20 provide their discharge data for direct access through H-CUP. These States are Arizona, California, Colorado, Florida, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Nebraska, New Jersey, New York, North Carolina, Oregon, South Carolina, Utah, Washington, West Virginia, and Wisconsin. H-CUP provides information on how to obtain SID files directly from the remaining 16 states: Connecticut, Georgia, Hawaii, Illinois, Kansas, Minnesota, Missouri, Nevada, Ohio, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Virginia, and Vermont.

**While there are differences across States in the availability of variables, each State's SID... generally includes... principal/secondary diagnoses as well as basic demographic, geographic, and service variables.**

While there are differences across States in the availability of variables, each State's SID data set generally includes at a minimum principal/secondary diagnoses as well as basic demographic, geographic, and service variables. Moreover, where possible, standardized formatting and coding are used to increase uniformity across the data sets. Approved applications are required before a SID data set is released. The fees charged generally differ from one State data set to another. SID files are provided on CD in ASCII format for use with statistical packages such as SAS or SPSS.

When interpreting local drug-related hospital discharge trends, it can be helpful to contrast them with national trends. To this end, researchers may wish to consider H-CUP's National Inpatient Sample (NIS), which contains discharge data from a national sample of approximately 1,000 hospitals. As with SID, NIS includes principal/secondary diagnoses as well as demographic, geographic, and service variables; requires approval and a fee; and provides data on CD in ASCII format.

### **Uses of Hospital Data**

Data derived from hospital discharge data sets may be unique in that they can provide information on drug problems both statewide and regionally, as well as information on the impact of specific drug policies. An example of each is presented here using Arizona hospital admissions related to methamphetamine, cocaine, and heroin/opioids.

## Methods Used in Analyzing Arizona Hospital Data

**[In Arizona, coders] assign ICD-9-CM codes to describe what occasioned the admission of a patient, what contributed to the patient's length of stay and financial charges, and the Diagnostic Related Group appropriate to the patient.**

Data for the Arizona Hospital Discharge Data System (AHDDS) are abstracted from hospital patient charts by coders employed by hospitals or hospital subcontractors to maintain medical records. The coders review charts of all patients and abstract information such as race/ethnicity, sex, age, source of admission, and patient disposition. They also assign ICD-9-CM codes to describe what occasioned the admission of a patient, what contributed to the patient's length of stay and financial charges, and the Diagnostic Related Group appropriate to the patient. The abstracted information and diagnostic codes are forwarded to the Arizona Department of Health Services, which until 1994, used up to five fields for diagnostic codes. (Note that the ICD-9 E codes were entered in the diagnostic fields through 1994.) Starting in 1995, the AHDDS began using nine fields for diagnostic codes that are not E codes (i.e., not external cause of injury or poisoning codes) and up to two E-code fields. Starting in 2004, the system included four E-code fields. All available diagnostic code and E-code fields were used in the analyses for this paper. The increase in diagnostic fields beginning in 1995 may have led to more accurate reporting, and thus slightly larger drug admission counts for the years 1995–2004 versus 1990–1994. The changes in E-code fields may have had similar effects. (Note, however, that a record that includes a drug-related E code usually includes other diagnostic codes related to the same drug.)

The ICD-9-CM codes used to identify whether a hospital admission was amphetamine-related are 304.4 (amphetamine and other psychostimulant dependence), 305.7 (amphetamine or related acting sympathomimetic abuse), 1969.7 (psychostimulant poisoning), and E854.2 (accidental psychostimulant poisoning). These diagnostic codes are for the general category of amphetamines/psychostimulants; thus, analyses in this paper do not distinguish among types of amphetamines. Notwithstanding this, most of the chemicals offered on the street as amphetamine or the other terms listed above include d-methamphetamine. For this reason, the admissions examined here are referred to as methamphetamine admissions.

The codes used to identify whether an admission was cocaine-related are 304.2 (cocaine dependence), 305.6 (nondependent abuse of cocaine), 968.5 (poisoning by surface and infiltration anesthetics including cocaine), and E855.2 (unintentional poisoning by local anesthetics including cocaine). A case having any one of these codes was considered a cocaine admission.

The codes used to identify whether an admission was heroin/opioid-related are 304.0 (opioid type dependence), 304.7 (dependence involving combinations of opioid type drug with any other), 305.5 (opioid use), 965.0 (poisoning by opiates and related narcotics), E850.0 (accidental poisoning by heroin), E850.1 (accidental poisoning by methadone), and E850.2 (accidental poisoning by other opiates and related narcotics). A case having any one of these diagnoses was considered a heroin/opioid-related admission. (Codes for opioids causing adverse effects in therapeutic use—E950, E951, E952—were

not used to identify admissions because such use is generally not indicative of morbidity caused by heroin/opioid abuse.) Historically, heroin has been the single most common opioid associated with hospital admissions. In light of this, the term heroin/opioids, rather than opioids, is used here.

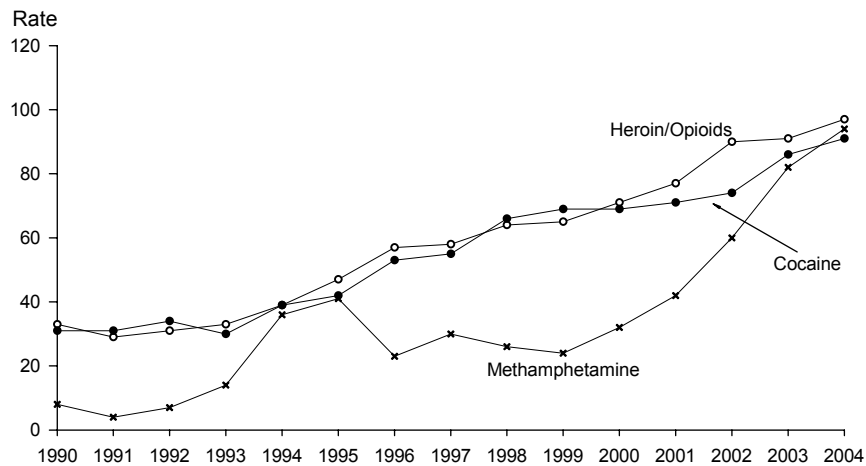
**Population data from the U.S. Census and the Arizona Department of Health Services were used in the construction of hospital admission population rates.**

Population data from the U.S. Census and the Arizona Department of Health Services were used in the construction of hospital admission population rates.

#### *Statewide Trends in Arizona*

In Arizona, methamphetamine hospital admissions rose and fell sporadically during the 1990s, then surged 229 percent during 2000–2004, from 1,649 admissions to 5,424. The increase in the rate of admissions per 100,000 population during 2000–2004 was 194 percent (exhibit 1). At the end of the study period (2004), there were 94 methamphetamine admissions per 100,000 population, more than twice the highest rate of the 1990s (41 per 100,000 in 1995). During 1990–2004, the population rate for methamphetamine admissions increased 1,075 percent.

**Exhibit 1. Methamphetamine, Cocaine, Heroin/Opioid Hospital Admissions per 100,000 Population in Arizona: 1990–2004**



SOURCE: The University of Arizona

Cocaine admissions climbed steadily throughout the 15-year study period and increased 47 percent during 2000–2004, from 3,554 to 5,227—a 32-percent rise in the rate per 100,000 population. During 1990–2004, the population rate for cocaine admissions increased 194 percent.

Heroin/opioid admissions also climbed steadily throughout the study period and increased 52 percent during 2000–2004, from 3,658 to 5,568—a 37-percent rise in the population rate. During the 15-year study period, the population rate increased 194 percent.



**Annual methamphetamine, cocaine, and heroin/opioid admissions for Arizona were comparable in number in 2004, related in part to the surge of methamphetamine admissions...**

Annual methamphetamine, cocaine, and heroin/opioid admissions for Arizona were comparable in number in 2004, related in part to the surge of methamphetamine admissions during the last 5 years of the study period.

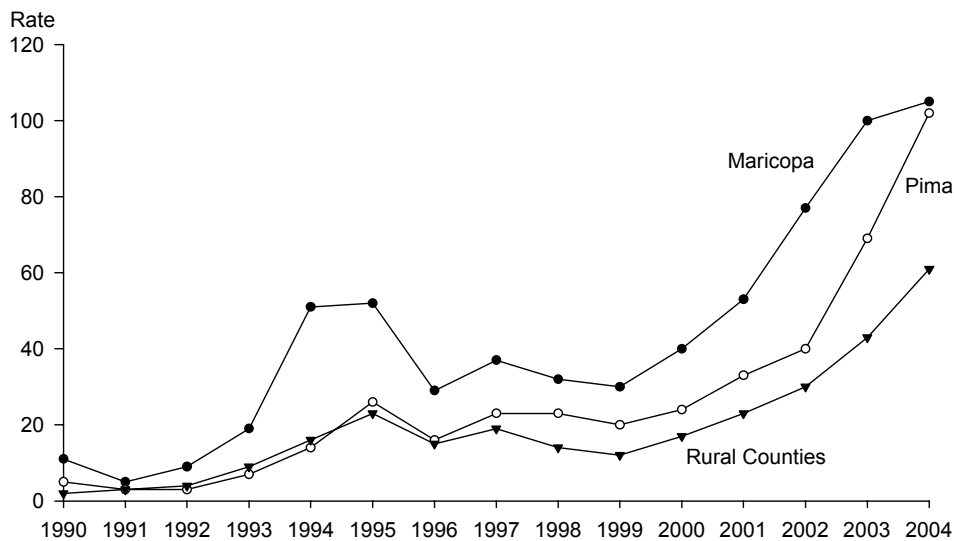
*Regional Trends*

Trends in admissions for three Arizona regions are shown in exhibit 2. One region is Maricopa County, which includes the city of Phoenix; another is Pima County, which includes the city of Tucson; and the third consists of the remaining counties in Arizona, which are predominantly rural and referred to here as the “Rural Counties.” Rates in all three regions rose substantially during the last 5 years of the study period.

Maricopa County had the highest rates throughout the study period. This notwithstanding, and largely because of a particularly sharp rise in 2003–2004, the rate in Pima County approached that of Maricopa County in 2004.

The Rural Counties had the lowest rates. This finding should be interpreted with caution, however, because it is possible that people from these counties often go to hospitals in Maricopa and Pima Counties (Arizona’s major population centers), which would artificially lower rates in rural areas, while raising rates in metropolitan areas.

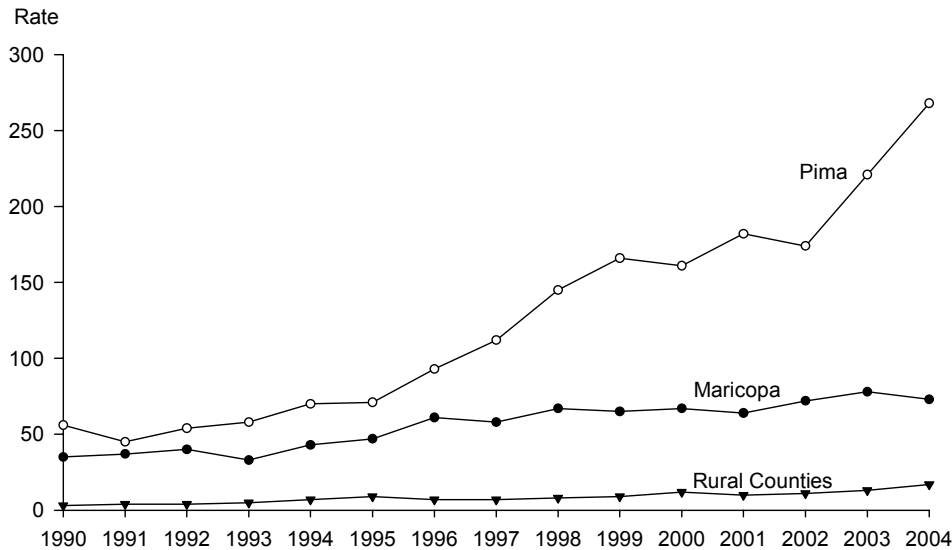
**Exhibit 2. Methamphetamine Hospital Admissions per 100,000 Population in Maricopa, Pima, and Rural Counties in Arizona: 1990–2004**



SOURCE: The University of Arizona

Cocaine admission rates in Maricopa County and the Rural Counties increased slightly, while rates in Pima County surged during the last 10 years of the study period (exhibit 3). Early in the study period, rates in Maricopa and Pima Counties were fairly similar. During the last study year, Pima County's cocaine rate was more than three times that of Maricopa County and also substantially higher than that of the Rural Counties.

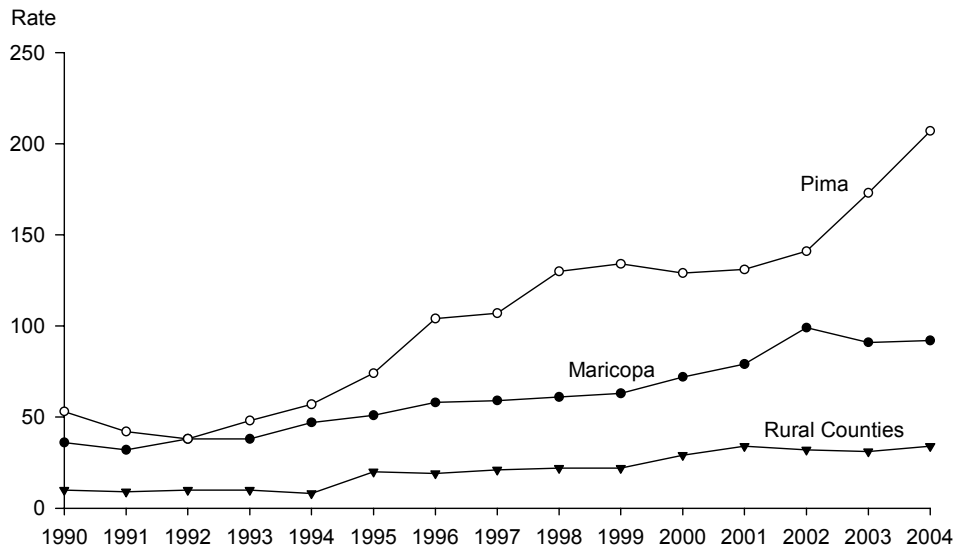
**Exhibit 3. Cocaine Hospital Admissions per 100,000 Population in Maricopa, Pima, and Rural Counties in Arizona: 1990–2004**



SOURCE: The University of Arizona

As with cocaine, heroin/opioid admission rates in Maricopa County and the Rural Counties increased slightly during the study period (exhibit 4). In contrast, heroin/opioid rates in Pima County increased sharply during 1996–1998, and again during 2003–2004. During the first 5 years of the study period, rates in Maricopa and Pima Counties were fairly similar. During the last year of the study period, Pima County's heroin/opioid rate was more than twice that of Maricopa County. It was also substantially higher than that of the Rural Counties, which consistently had the lowest rates of the three regions.

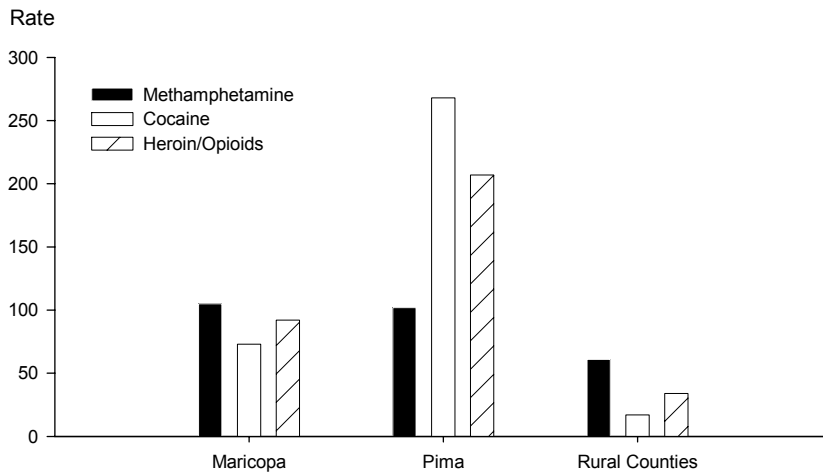
**Exhibit 4. Heroin/Opium Hospital Admissions per 100,000 Population in Maricopa, Pima, and Rural Counties in Arizona: 1990–2004**



SOURCE: The University of Arizona

In 2004, cocaine and heroin/opioid admission rates in Pima County far surpassed the rates for any of the drugs in Maricopa County and the Rural Counties (exhibit 5). Maricopa and Pima Counties had similar methamphetamine rates, even though methamphetamine was the top drug associated with admissions in Maricopa County and the bottom drug associated with admissions in Pima County. Within the Rural Counties, the three types of drug admissions ranked in the same order as those in Maricopa County.

**Exhibit 5. Methamphetamine, Cocaine, and Heroin/Opium Hospital Admissions per 100,000 Population in Maricopa, Pima, and Rural Counties in Arizona: 2004**



SOURCE: The University of Arizona

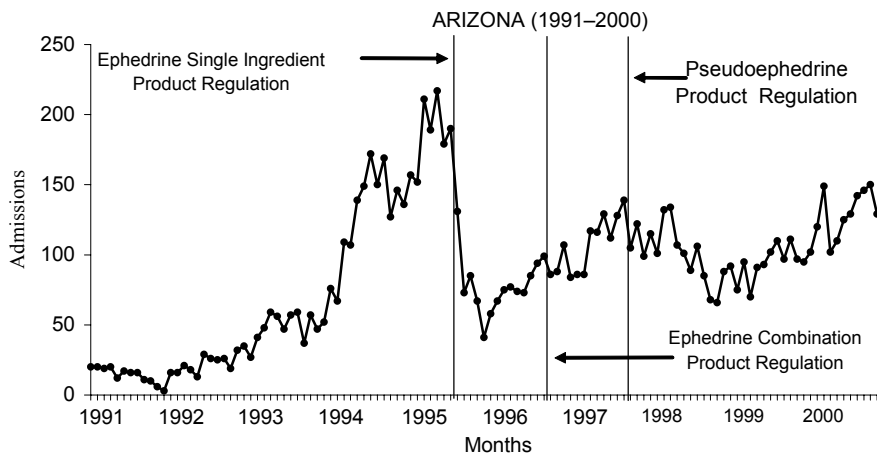
### Relevant Findings: Admissions Data and Drug Policy Impacts

**...the time-series intervention design... involves assessing baseline data (i.e., data patterns prior to a policy change), and then determining whether the data changed beginning with the implementation of the policy.**

One of the more useful approaches for evaluating large-scale drug-policy impacts is the time-series intervention design (also known as the interrupted time-series design). This design involves assessing baseline data (i.e., data patterns prior to a policy change) and then determining whether the data changed beginning with the implementation of the policy. Critical to the design is the availability of data with fine-grained time units. Annual or biannual time periods are typically not appropriate for time series intervention designs, as the periods are too gross to facilitate a reasonable analysis. Fortunately, hospital data can often be analyzed using finer-grained time periods such as months or even weeks. As such, they are particularly useful for policy analysis.

To illustrate, monthly methamphetamine admissions data in Arizona and the points in time when the Federal Government implemented methamphetamine precursor regulations to reduce methamphetamine problems are shown in exhibit 6. The first regulation noted in exhibit 6 targeted ephedrine pills in single ingredient form (ephedrine is a common chemical precursor used in the illicit production of methamphetamine). Methamphetamine admissions fell sharply when the regulation was implemented. Products that contained ephedrine in combination with other medicinal ingredients were implemented in 1996. This regulation appears to have had little effect on admissions. Products containing pseudoephedrine (another common precursor chemical) were regulated in 1997, and hospital admissions began dropping once again.

**Exhibit 6. Trends in Methamphetamine Hospital Admissions in Arizona Following Different Precursor Chemical Regulations: 1991–2000**



SOURCE: Public Statistics Institute

Compare the monthly data in exhibit 6 to the annual methamphetamine data in exhibit 1. While the associations between the regulations and hospital admissions data are easily seen in exhibit 6, the annual data in exhibit 1 (which are very useful for epidemiologic purposes) would be too gross to facilitate a quality policy impact analysis.

**When conducting time-series impact analyses, impacts should be examined not only visually, but statistically as well using procedures such as ARIMA analysis.**

Note: When conducting time-series impact analyses, impacts should be examined not only visually, but statistically as well using procedures such as ARIMA analysis. More information on hospital discharge data, precursor regulations, and ARIMA analysis can be found in Cunningham and Lon-Mu (2003).

## **Using Drug-Related Hospital Discharge Data in Colorado**

*Bruce Mendelson, M.A.*

In this example, the author explains how drug-related hospital discharge data are accessed in Colorado and provides examples of how the data are analyzed. Findings from this database continue to be reported regularly in CEWG reports and to State planners (e.g., Brace 2006).

### **Where to Start: Accessing Hospital Discharge Data**

**In Colorado... codes are based on... ICD-9-CM**

In Colorado, all hospital discharge data are initially collected and coded by the Colorado Hospital Association (CHA). Codes are based on the *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM). CHA annually provides a tape of all such discharge data to the Colorado Department of Public Health and Environment (CDPHE), which in turn provides the Colorado Alcohol and Drug Abuse Division (ADAD) with an Excel file of requested hospital discharge information. The file includes the drug-related codes listed in exhibit 1. (ADAD also requests alcohol codes.) In requesting data, network members need to be familiar with these codes.

ADAD can request a file from CDPHE with statewide data only (i.e., aggregated) by the specific ICD-9-CM codes; a file with a number of disaggregated cross tabulations by ICD-9-CM codes including age, gender, and county; or any combinations of these (e.g., a three-way cross tab of ICD-9-CM code by gender by age). In the data request, ADAD must clearly specify whether the needed data set is to be limited to only Colorado residents, or to both residents and out-of-state individuals (i.e., an “occurrence” vs. a “resident” analysis).

**Exhibit 1. ICD-9-CM Drug-Related Codes Used in Colorado Department of Public Health and Environment Discharge Data**
**Drug Dependence (304.0-304.9):**

- Drug Dependence – Opioid Type 304.0
- Drug Dependence – Barbiturate Type 304.1
- Drug Dependence – Cocaine 304.2
- Drug Dependence – Cannabis 304.3
- Drug Dependence – Amphetamine Type and Other Psychostimulants 304.4
- Drug Dependence – Hallucinogens 304.5
- Drug Dependence – Other 304.6
- Drug Dependence – Combination of Morphine Type With Other 304.7
- Drug Dependence – Combination Excluding Morphine Type 304.8
- Drug Dependence – Unspecified 304.9

**Drug Abuse, Not Alcohol or Tobacco (305.2-305.9):**

- Nondependent Abuse of Drugs – Cannabis 305.2
- Nondependent Abuse of Drugs – Hallucinogens 305.3
- Nondependent Abuse of Drugs – Barbiturates and Tranquilizers 305.4
- Nondependent Abuse of Drugs – Morphine Type 305.5
- Nondependent Abuse of Drugs – Cocaine Type 305.6
- Nondependent Abuse of Drugs – Amphetamine Type 305.7
- Nondependent Abuse of Drugs – Antidepressants 305.8
- Nondependent Abuse of Drugs – Other, Mixed, or Unspecified 305.9

**Drug Poisoning (E850.0-E858.9):**

- Accidental Poisoning By Analgesics, Antipyretics, etc. E850
- Accidental Poisoning by Barbiturates E851
- Accidental Poisoning by Other Sedatives and Hypnotics E852
- Accidental Poisoning By Tranquilizers E853
- Accidental Poisoning By Other Psychotropic Agents E854
- Accidental Poisoning By Other Drugs Acting on Nervous System E855
- Accidental Poisoning By Other Drugs E858

**Opiates and Related Narcotics N965.0**
**Barbiturates N967.0**
**Surface and Infiltration Anesthetics N968.5**
**Antidepressants N969.0**
**Phenothiazine-Based Tranquilizers N969.1**
**Other Antipsychotics, Neuroleptics and Major Tranquilizers N969.3**
**Benzodiazepine-Based Tranquilizers N969.4**
**Other Tranquilizers N969.5**
**Psychodysleptics (Hallucinogens) N969.6**
**Psychostimulants N969.7**

SOURCE: *International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)*, World Health Organization

## Uses of Hospital Discharge Data: Colorado Highlights

**ADAD uses the hospital discharge data in a variety of analyses...**

ADAD uses the hospital discharge data in a variety of analyses, including the following:

- Statewide single-year or trend analysis of aggregate alcohol and/or drug hospital discharge numbers and/or rates; the analysis may also be done by demographic characteristics
- Statewide single-year or trend analysis of specific alcohol and/or drug ICD-9-CM codes. For drugs, this analysis usually focuses on drug types (e.g., cocaine or cannabis)
- Substate planning area (typically counties) single-year or trend analysis of aggregate alcohol and/or drug hospital discharge numbers and/or rates

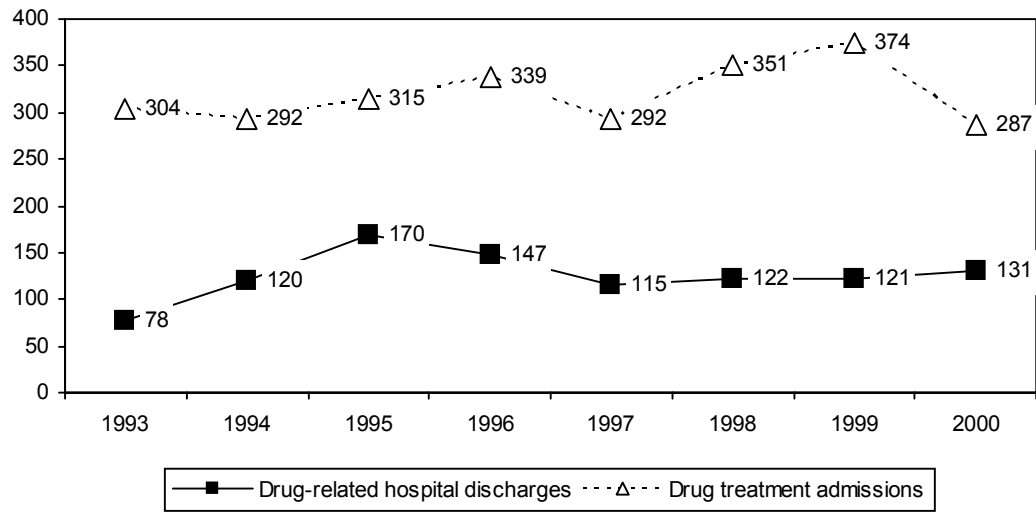
The types of analyses described above represent only a fraction of those that can be done with this versatile data set. However, there may be data issues, such as “small cell sizes,” that can present a misleading picture if not dealt with appropriately (e.g., when calculating rates for substate planning areas with small populations). It may be necessary to suppress data for small geographic areas or specific subgroups, report averages for multiple years, or aggregate data by several geographic areas to increase case size.

The examples that follow show how drug-related hospital discharge data have been used at the county and State level, with some illustrations of how the hospital discharge data have been triangulated with other drug abuse indicator data.

### *Using Hospital Discharge Data for Local Planning in Colorado*

**...hospital discharge and treatment data can be used for local substance abuse services planning.**

Exhibit 2, based on data from Adams County, illustrates how hospital discharge and treatment data can be used for local substance abuse services planning. In this populous county, east of the city and county of Denver, drug-related hospital discharges increased dramatically (87 percent) during the 8-year time period shown. The overall rate increase (23 percent) in drug-related treatment admissions from 1993 to 1999 indicated the county was attempting to respond appropriately with increased treatment services funding. The decline in the treatment admission rate between 1999 and 2000 needed to be explored in depth by local planners to determine whether the drop reflected data system/reporting problems or an actual decline in the treatment effort that warranted a review of drug treatment funding policies.

**Exhibit 2. Adams County Rates per 100,000 Population of Drug-Related Hospital Discharges and Treatment Admissions: 1993–2000**

SOURCE: Colorado Alcohol and Drug Division (analysis by Bruce Mendelson)

#### Statewide Trend Analysis of Drug-Related Hospital Discharge Data

**...it is important to put hospital discharge data into perspective in comparison to population growth.**

Exhibit 3 shows Colorado statewide aggregate (i.e., all ICD-9-CM codes) drug-related hospital discharges by age group from 1995 through 1999. Overall, the discharges increased by 15.1 percent during the 5-year period, with those for those patients age 20 and younger increasing by nearly 36 percent. Like any other indicator, it is important to put hospital discharge data into perspective in comparison to population growth. The last line of exhibit 3 does this by showing the annual rate of drug-related hospital discharges per 100,000 population. The results clearly demonstrate that drug-related hospital discharges were increasing at a faster rate than the population size. Such rate calculations can also be made by age group.

**Exhibit 3. Colorado Drug-Related Hospital Discharges by Age: 1995–1999**

Age Group	1995	1996	1997	1998	1999
20 and younger (n)	1,310	1,935	2,210	2,069	1,779
21 and older (n)	9,556	9,194	10,096	10,531	10,729
<b>Total</b>	<b>10,866</b>	<b>11,129</b>	<b>12,306</b>	<b>12,600</b>	<b>12,508</b>
20 and younger (%)	12.1%	17.4%	18.0%	16.4%	14.2%
21 and older (%)	87.9%	82.6%	82.0%	83.6%	85.8%
<b>State Population (N)</b>	<b>3,764,585</b>	<b>3,819,789</b>	<b>3,892,996</b>	<b>3,966,198</b>	<b>4,039,402</b>
<b>Hospital Discharge Rate per 100,000 Population</b>	<b>288.6</b>	<b>291.4</b>	<b>316.1</b>	<b>317.7</b>	<b>309.6</b>

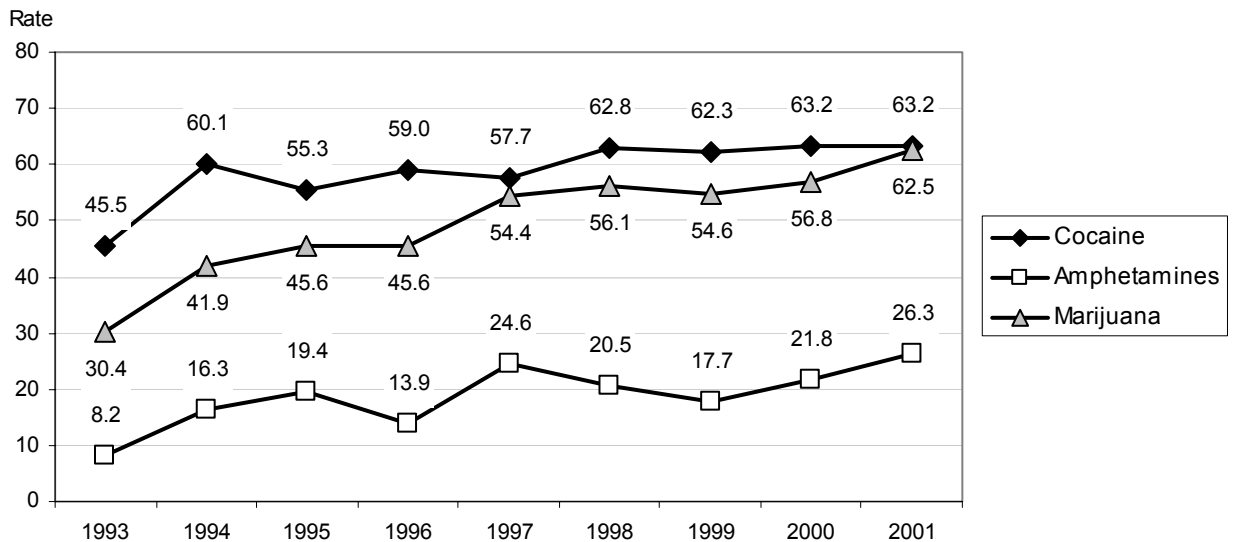
SOURCE: Colorado Alcohol and Drug Division (analysis by Bruce Mendelson)



**Analysts can go beyond examining aggregate drug-related hospital discharge data and document trends in specific types of drugs...**

Analysts can go beyond examining aggregate drug-related hospital discharge data and document trends in specific types of drugs, as illustrated in exhibit 4. Statewide Colorado hospital discharge rates for the three drugs in the graph showed different trends from 1993 through 2001. Cocaine rates increased from 1993 to 1998 but then stabilized; marijuana discharge rates climbed rather steadily; and amphetamine hospital rates fluctuated considerably, but still more than doubled over the 9-year period.

**Exhibit 4. Colorado Drug-Related Hospital Discharge Rates per 100,000 Population for Selected Drugs: 1993–2001**

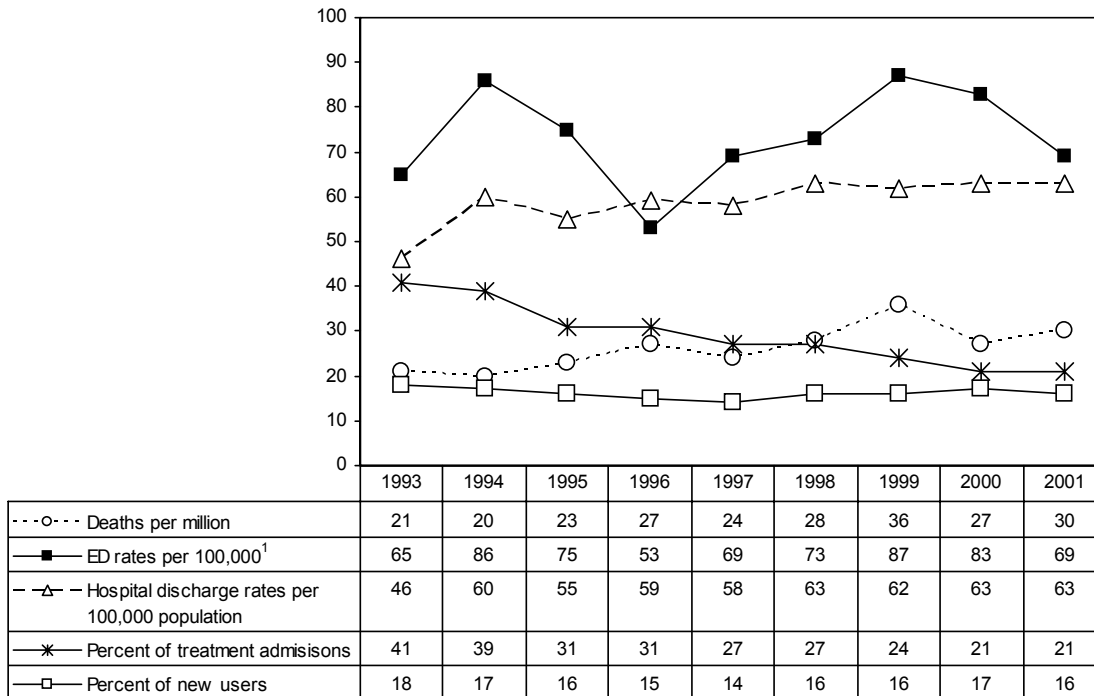


SOURCE: Colorado Alcohol and Drug Division (analysis by Bruce Mendelson)

**Another way to look at single drug-type hospital discharge rates is to compare them with trends in other indicators for the same drug...**

Another way to look at single drug-type hospital discharge rates is to compare them with trends in other indicators for the same drug, as in exhibit 5. While the indicators shown are not based on comparable samples or data collection methods, showing trends for each data source is a parsimonious way of looking at the findings. As illustrated in exhibit 5, cocaine-related hospital discharge rates increased through 1993–2001, while other indicators showed a mixed pattern. ED mentions fluctuated dramatically, peaking in 1999; cocaine-related death rates rose fairly steadily up to 1999 and then declined; the percentages of primary cocaine treatment admissions declined dramatically; and there was a slight decline in the proportion of cocaine admissions among new users (i.e., those who entered treatment within the first 3 years of their cocaine use).

**Exhibit 5. Colorado Cocaine Trends—Selected Indicators: 1993–2001**



<sup>1</sup>Based on the DAWN system prior to its redesign in 2003.  
 SOURCE: Colorado Alcohol and Drug Division (analysis by Bruce Mendelson)

The mixed picture in this assessment of multiple cocaine indicators suggests that a more detailed examination might be useful. For example, one might look at age group proportions across indicators. The increasing percentage of older users among the various indicator populations represented in exhibit 5 suggested an aging cocaine-using population that was experiencing consequences of long-term drug use, rather than a new cocaine epidemic.

## Psychiatric Hospital Data

***...contact the State mental health authority and become familiar with its data system and the people who maintain it.***

Both State and private psychiatric hospitals sometimes have units dedicated to the dually diagnosed patient or units dedicated to the addicted population. For State psychiatric hospital data, one should contact the State mental health authority and become familiar with its data system and the people who maintain it. If the private psychiatric hospital data are not in a State database, this information will be harder to access; one will need to visit each private

psychiatric hospital to determine the extent to which these hospitals serve drug-abusing populations. Network members might want to see if there is a separate association of private psychiatric providers in the area who would be interested in the network's data collection and reporting efforts.

An Internet site that identifies psychiatric hospitals in communities is <http://www.hospitallink.com><sup>®</sup>.

## ADDENDUM A: **Guidelines on Using Diagnostic Codes**

As noted earlier, it may be necessary to collect hospital data by diagnostic code (as shown in the examples in Arizona and Colorado drug-related hospital admissions and discharge data). This addendum provides an overview of widely used diagnostic classification systems and focuses primarily on ICD-9-CM and Diagnostic Related Groups (DRGs).

**...ICD-9-CM delineates the clinical picture of each patient...**

The International Classification of Diseases (ICD) led the way for the current text in international use today in the United States, the *International Classification of Diseases, 9th Revision, Clinical Modification*, referred to as ICD-9-CM. This version precisely delineates the clinical picture of each patient, providing exact information beyond that needed for statistical groupings and analysis of health care trends.<sup>3</sup>

**Nearly all six DSM-IV classifications are identical to ICD-9-CM codes.**

Another classification system is the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) published by the American Psychiatric Association (1994). In DSM-IV, psychoactive substance use means “the persistence of psychoactive substance use for at least 1 month or repeatedly over a long period of continuing use despite the recurrence or persistence of one or more known adverse consequences or taking of recurrent physical risks such as driving while intoxicated.” Nearly all six DSM-IV classifications are identical to ICD-9-CM codes.

**...DRGs have been used to set limits on Medicare reimbursement.**

Another classification system is the DRGs. Since 1982, DRGs have been used to set limits on Medicare reimbursement.

Since it requires considerable knowledge and expertise to work with these data, networks should identify a researcher who knows how to access and analyze the information. This might be someone who is associated with a hospital, health department, or university.

### **Drug-Related ICD-9-CM Diagnoses and Diagnostic Related Groups**

Computer systems can usually use either the ICD-9-CM or DRG classification system.

**ICD-9-CM... provides principal, secondary, and tertiary diagnostic codes.**

The ICD-9-CM classification system provides principal, secondary, and tertiary diagnostic codes. It will be useful to look at secondary (and perhaps

<sup>3</sup>ICD-9-CM, *Official Guidelines for Coding and Reporting* can be obtained from: Superintendent of Documents, P.O. Box 37194, Pittsburgh, PA 15250-7954; fax (202) 512-2250.

tertiary) codes. There may be as many drug cases that fall into the secondary diagnostic codes as fall into the principal diagnostic codes. The majority of cases where the drug code is not the principal code may have a mental health code (e.g., affective disorder, adjustment reaction) as the principal code. Other conditions that may have a secondary code related to drug or alcohol dependence, psychosis, or nondependent abuse are pregnancy, accidental poisoning, and fractures.

Below are the addiction-related DRG codes matched to ICD-9-CM codes.

DRG 433:	Alcohol/Drug Abuse or Dependence, Left Against Medical Advice
DRG 434:	Alcohol/Drug Abuse Dependence, Detoxification or Other Symptomatic Treatment with Complication Condition
Principal ICD-9-CM Codes:	
291	Psychosis, alcoholic
292	Psychosis, drug
303.0	Intoxication, acute alcoholic, or alcoholism
303.9	Other and unspecified alcohol dependence
304	Dependence, drug
304.9	Other and unspecified drug dependence
305.0	Abuse, alcohol; nondependent
305.2	Abuse, cannabis; nondependent
305.3	Abuse, hallucinogen; nondependent
305.4	Abuse, barbiturate, similarly acting sedative or hypnotic; nondependent
305.5	Abuse, opioid-mixed; nondependent
305.6	Abuse, cocaine; nondependent
305.7	Abuse, amphetamine; nondependent
305.8	Abuse, antidepressant; nondependent
305.9	Abuse, unspecified drug; nondependent
790.3	Excessive levels of blood alcohol
DRG 435:	Alcohol/Drug Abuse or Dependence, Detoxification or Other Symptomatic Treatment Without Complicating Condition
DRG 436:	Alcohol/Drug Dependence with Rehabilitation Therapy
Principal or secondary ICD-9-CM codes:	
291.0	Delirium, alcohol withdrawal
291.1	Syndrome, amnestic, alcohol
291.2	Dementia, alcoholic, other
291.3	Hallucinoses, alcohol withdrawal
291.8	Psychosis, alcoholic, specified
291.9	Psychosis, alcohol, unspecified
292	Drug withdrawal syndrome
303.0	Intoxication, acute alcoholic, alcoholism
Secondary ICD-9-CM codes: Non-operating room procedures	
94.61	Rehabilitation, alcohol
94.64	Rehabilitation, drug
94.67	Rehabilitation, combination alcohol and drug
DRG 437:	Alcohol/Drug Dependence with Combined Rehabilitation and Detoxification Therapy
Secondary ICD-9-CM codes: Non-operating room procedures	
94.63	Rehabilitation/detoxification, alcohol
94.66	Rehabilitation/detoxification, drug
94.69	Rehabilitation/detoxification, alcohol and drug

In addition to these DRG codes and the 29 ICD-9-CM codes corresponding to them, there are drug-related ICD-9-CM codes that are not matched to DRG codes, including the following:

265.2	Pellagra (alcoholic)
357.5	Alcoholic polyneuropathy
357.6	Polyneuropathy due to other toxic agents (specific illicit drugs can be found in E codes 850-854)
425.5	Alcoholic cardiomyopathy
535.3	Alcoholic gastritis
571.0	Alcoholic fatty liver
571.1	Acute alcoholic hepatitis
571.2	Alcoholic cirrhosis of liver
571.3	Alcoholic liver damage, unspecified
572.3	Portal hypertension
573.3	Hepatitis (unspecified toxic)
648.3	Complications of pregnancy due to drug dependence
648.4	Complications of pregnancy due to alcohol and drugs
655.4	Suspected damage to fetus from alcohol
655.5	Suspected damage to fetus from drugs
760.71	Fetus affected by alcohol (fetal alcohol syndrome)
760.72	Fetus affected by narcotics
760.73	Fetus affected by hallucinogenic agents
760.75	Fetus affected by cocaine
965.00	Poisoning by opium
965.01	Poisoning by heroin
965.09	Poisoning by other drugs
967.0	Poisoning by barbiturates
967.4	Poisoning by methaqualone compounds
967.8	Poisoning by other sedatives and hypnotics
968.5	Poisoning by topical and infiltration anesthetics (e.g., cocaine)
970.0	Poisoning by central nervous system stimulants analeptics
970.1	Poisoning by central nervous system-opiate antagonists
980.0	Toxic effect of alcohol

## Limitations of Using Hospital Data

Limitations of the ICD-9-CM handicap efforts to assess the true nature and magnitude of drug-related health consequences. For example, there is no code-specific category for acute alcoholic pancreatitis or drug-related HIV transmission. Therefore, it is impossible to separate drugs or alcohol from other causes of illness; when presenting the information, one can say the utilization data being prepared present a conservative estimate, since the data do not include all drug-related conditions (Dufour and Caces 1993). Many State health statistics units are working on these issues and should be consulted by network members.

## 4. DRUG-RELATED MORTALITY DATA

**ME/Cs provide vital information about drug-related mortality patterns and trends...**

Medical examiners and coroners (ME/Cs) provide vital information about drug-related mortality patterns and trends in the United States, and they are an excellent source of data for epidemiology networks. Often, ME/Cs or members of their staff will be interested and active participants in a network because they need to know what drugs are on the street, as well as information on changes in purity or drug combinations that could be causing a series of overdose deaths.

Causes of death are listed on death certificates, which are completed by local doctors, coroners, and justices of the peace, among others. The death certificate is submitted by the local official to the section of the State health department that is responsible for handling birth and death data. The names, addresses, and telephone numbers for State officials in charge of mortality data can be accessed through CDC's Medical Examiner and Coroner Information Sharing Project (MECISP) at <<http://www.cdc.gov/epo/dphsi/mecisp>>. Go to "About MECISP" and to the link on Death Investigation System Description for U.S. States; this will lead to a place where one can click on a State name to find information.

**...it may be necessary to contact local ME/Cs or the toxicology laboratory...**

Many State databases on drug-involved mortality aggregate all drug-involved deaths into a "single" drug category and present the data alongside alcohol-involved deaths. To obtain information on specific drugs, it may be necessary to contact local ME/Cs or the toxicology laboratory to which the local jurisdictions send samples for testing.

Network members whose local jurisdictions participate in SAMHSA's Drug Abuse Warning Network (see below) may find these data the easiest to use if they are reported for their area, since these data are already collected and analyzed. ME/C annual reports often have drug-specific data and are also easy to use. Secondary analyses of ME/C or toxicology data can provide far more detail than DAWN or ME/C annual reports; they allow an analyst to examine drug-specific combinations and demographic data. However, secondary analyses can be quite complicated and time intensive. Other death data may be available from State or county health or law enforcement agencies, either in preformatted or raw format form.

There are limitations in drug-related mortality data. As noted in MECISP, only about 20 percent of the deaths in the United States are investigated by ME/Cs, although the percentage varies by State. The guidelines for which deaths are to be investigated also vary widely by jurisdiction (whether State, county, district, or city). The most notable difference is that some jurisdictions use the medical examiner system while others use the coroner system. The type of system used may be uniform throughout the State or may vary from county to county within a State. Medical examiners may have

State, district, or county jurisdiction. Usually the MEs are appointed and must be licensed physicians; some are expert forensic pathologists. In comparison, coroners or justices of the peace may have district or county jurisdiction, are usually elected, and need not be physicians. Many are only required to be of a minimum age (often 18) and a resident of the county or district.

***...guidelines for which deaths are to be investigated vary widely by jurisdiction...***

Within local jurisdictions, there is also variation in the percentage of deaths that are investigated. In addition, the guidelines for which deaths are to be investigated vary widely by jurisdiction, but most require the following types of deaths to be investigated:

- Deaths caused by homicide, suicide, or accidental causes such as motor vehicle crashes, falls, burns, or the ingestion of drugs or other chemical agents
- Sudden or suspicious deaths or unattended deaths
- Deaths caused by an agent or disease constituting a public health threat
- Deaths that occurred while the decedent was at work
- Deaths of people in custody or confinement and those institutionalized for reasons other than organic diseases
- Deaths of persons to be cremated

The thoroughness of death investigations (and, consequently, the completeness of death investigation records) also varies from case to case. Sometimes a postmortem examination may consist of only an external examination of the body. A record of a complete examination includes the following items:

- The initial report of the death made to the ME/C office (e.g., by a family member, police officer, or attending physician)
- A determination of the circumstances surrounding the death
- Findings of a scene investigation
- Findings of a postmortem examination or autopsy
- Results of laboratory tests conducted to determine the presence of drugs, toxins, or infectious agents
- Certification of the cause and manner of death

***Discrepancies and nonreporting can occur for several reasons***

As noted above, there are variations across States and local jurisdictions in who completes the death certificate, e.g., trained personnel such as pathologists or medical examiners versus persons with no formal training. Discrepancies and nonreporting can occur for several reasons. For example, staff of the ME's office may not be consistent in their reports; one may specify the exact drugs involved while another may record only "drug abuse," even when toxicological reports are available. Or, to spare the feelings of the family, a coroner may not mention drugs on the certificate. In areas where suicide has a negative religious connotation, suicide may not be mentioned as



the motive on the certificate. There is no way of determining how widespread such underreporting is.

The death certificate may be submitted to the responsible State health department immediately, or there may be a significant time lag with the cause of death shown as “pending.” In the latter case, an amended certificate will be issued later, following receipt of the toxicology or pathology report. It could take 6–10 months to get complete data.

One standardized system for collecting information on deaths related to drug abuse is the Drug Abuse Warning Network’s system described below.

## Drug Abuse Warning Network

*Elizabeth Crane, Ph.D., M.P.H.*

Medical examiner/coroner data on drug abuse cases is one component of the OAS, SAMHSA, DAWN surveillance system (the emergency department [ED] component was described in *Chapter 3*).

***The DAWN mortality component provides information about drug-related deaths that were investigated by medical examiners/ coroners in participating jurisdictions.***

The DAWN mortality component provides information about drug-related deaths that were investigated by medical examiners/coroners in participating jurisdictions. Data are currently collected from 8 States and 35 metropolitan areas. Profiles of the States and metropolitan areas are published annually. DAWN does not produce national estimates of drug-related deaths.

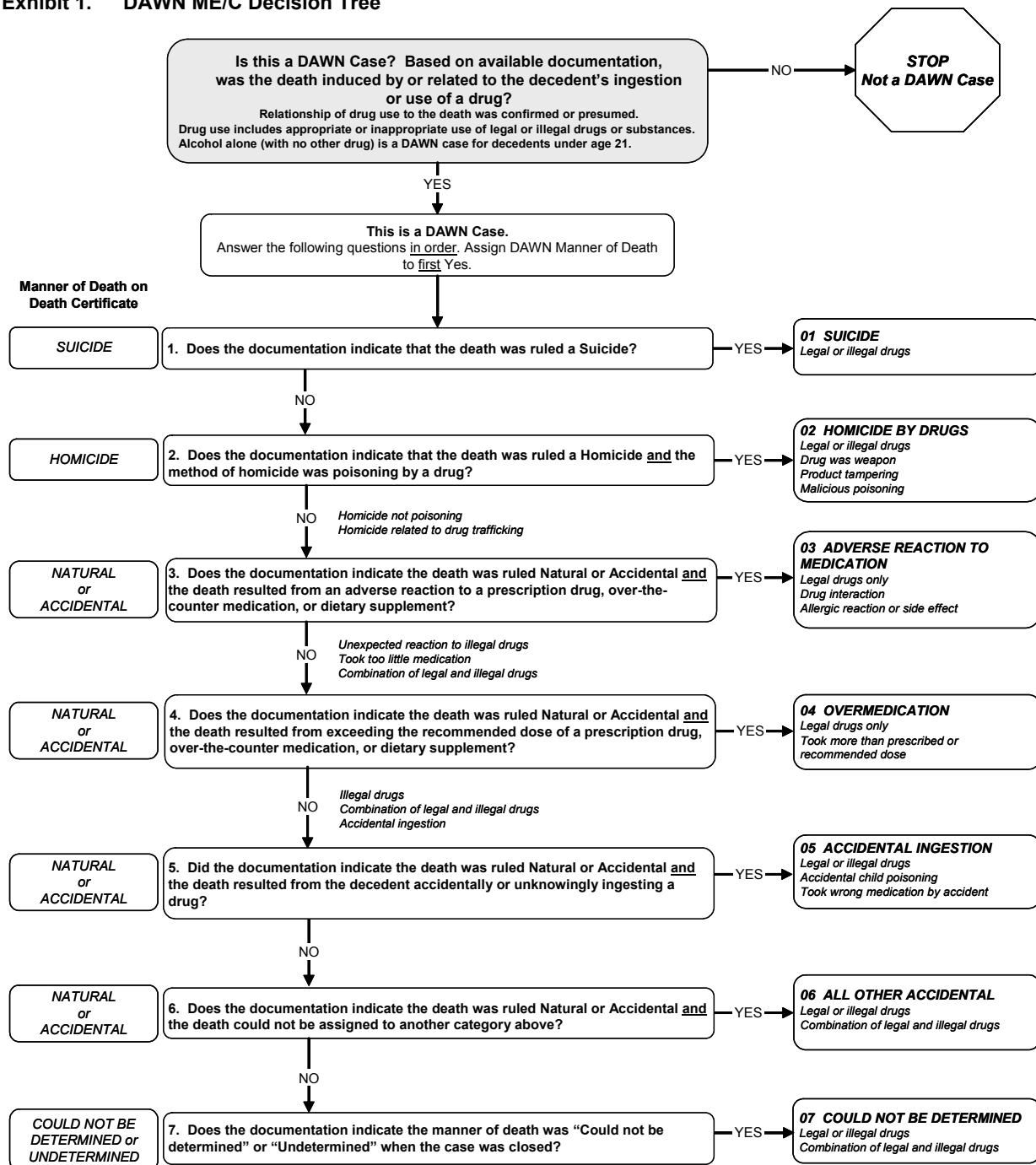
When DAWN was redesigned in 2003, the case definition and types of information collected changed. The metropolitan area boundaries were updated to be consistent with the ED component; the new DAWN also seeks to cover 100 percent of death investigation jurisdictions in each of the selected metropolitan areas. DAWN now collects data on all drug-related deaths, which are then categorized by manner of death. Data collected by the redesigned system are not comparable to data collected in 2002 or before.

***The new DAWN mortality component includes all deaths related to recent drug use, both intentional and accidental, for all ages. In addition to deaths that were the result of drug use (such as an overdose or allergic reaction), DAWN includes deaths where drugs contributed, but did not directly cause, the death...***

The new DAWN mortality component includes all deaths related to recent drug use, both intentional and accidental, for all ages. In addition to deaths that were the direct result of drug use (such as an overdose or an allergic reaction), DAWN includes deaths where drugs contributed, but did not directly cause, the death (such as motor vehicle crash where the driver was the under the influence of drugs). DAWN data are abstracted from death certificates and the ME/C’s death investigation records by a trained DAWN Reporter. After determining that the death was a DAWN case (i.e., drug-related), the Reporter completes an electronic case report form. Detailed information about the manner and cause(s) of death is recorded, together with information about all drugs that were involved in the death. All types of drugs are included: illicit drugs, prescription drugs, over-the counter medications, dietary supplements, nonpharmaceutical inhalants, and alcohol.

From 2003 to 2005, DAWN Reporters assigned each death to one of seven case types, as shown in the “Decision Tree” diagram (exhibit 1). For analytic purposes, deaths in the following case types—homicide by drugs, overmedication, all other accidental, and could not be determined—were combined to create a new analytic category, drug misuse deaths.

Exhibit 1. DAWN ME/C Decision Tree<sup>1</sup>



<sup>1</sup>Discontinued in 2006. In order to align the DAWN case types with the categories with the death certificate and improve data consistency, DAWN replaced its case types with the Manner of Death categories from the standard death certificate, effective January 1, 2006. Because the Manner of Death is obtained directly from the death certificate, a Decision Tree is no longer needed. SOURCE: Diagram adapted from DAWN, OAS, SAMHSA, 2005, page 10

The 2003 *Area Profiles of Drug-Related Mortality* focuses on deaths from drug misuse and drug-related suicides. Profiles of illicit drugs also include all case types and manners of death. The drug categories included in the 2003 mortality publication are illustrated in exhibit 2 for the Boston-Cambridge-Quincy metropolitan area (see below); rates per 100,000 population are illustrated for each participating jurisdiction in the metropolitan area for drug misuse and suicide cases (exhibit 3). Alcohol is reported if at least one other drug is involved in the death. Deaths involving alcohol alone are only reported to DAWN for persons under age 21. For drug misuse and suicide cases, the number of single-drug deaths (those involving only one drug) are published.

There are a number of things to keep in mind when using DAWN mortality data...

- Participation in DAWN is voluntary, and the number of participating jurisdictions is likely to vary from year to year. It is therefore important for DAWN users to note which jurisdictions did and did not participate in DAWN in any given year.
- The jurisdictions in DAWN do not represent a statistical sample; therefore, the counts do not represent the Nation as a whole.
- The mortality data for a metropolitan area are only representative if all of the jurisdictions in the metropolitan area participated.
- Because different areas have different population sizes, they should only be compared using rates, which take population size into account.
- Because DAWN data are collected directly from death investigation records, they reflect any differences in the way deaths are investigated and documented by ME/Cs in different jurisdictions. For example, some jurisdictions may report cases as drug-related based on circumstantial evidence, while others may only consider a death as drug-related if it is confirmed by toxicology. The types of toxicology tests used may also differ; for example, some jurisdictions do not test for marijuana.
- Death investigations are often complex, and reporters may have to wait for the results of autopsies and laboratory tests to determine whether a death involved drug abuse. This can affect data completeness.
- The case types used by DAWN in 2003 (exhibit 1) differed from the case types on death certificates, which was confusing for DAWN Reporters and data users. Therefore in 2006, DAWN adopted the categories from the “manner of death” on the standard death certificate: Natural; Accident; Suicide; Homicide; Could not be determined; and Other. The new DAWN categories now align with the death certificate and will improve data consistency. DAWN will still report drug misuse deaths, and it will still be possible to examine trends from 2003 on because data from the old case types will be mapped to the new case types.

***Because DAWN data are collected directly from death investigation records, they reflect any differences in the way deaths are investigated and documented by ME/Cs in different jurisdictions.***

## **Where to Start: Accessing DAWN ME/C Data**

**...States and metropolitan areas that participated in DAWN in 2003 can be found at <<http://dawninfo.samhsa.gov>>.**

The first publication from the new DAWN ME/C component provides mortality data from 2003 for 122 jurisdictions in 35 metropolitan areas for 2003 (SAMHSA 2005). Based on participating jurisdictions, the overall population coverage for the metropolitan areas was 64 percent, with coverage exceeding 90 percent in 13 metropolitan areas. Data are also presented for six States. Information about the States and metropolitan areas that participated in DAWN in 2003 can be found at <<http://dawninfo.samhsa.gov>>. Network members should periodically check the DAWN Web site to determine whether data are available for their area in any given year. Mortality publications can be accessed at <<http://dawninfo.samhsa.gov/pubs/mepubs/>>.

## **What to Access from DAWN ME/C**

The following information in the DAWN system would be useful to an epidemiology network:

- Number of death cases by category and by drug or drug category
- For each drug, the number of single-drug deaths (i.e., deaths that involved only that drug)
- Demographic characteristics (gender, age, race/ethnicity) of the decedents
- Cause of death (e.g., drug abuse, body systems [includes infections], accident and/or injury)
- Alcohol involvement in drug-related deaths and, for decedents younger than age 21, deaths in which alcohol was the only substance involved

As the redesigned system matures, the mortality publications will add data from multiple years, which will enable networks to monitor the trends in drug-related deaths, the involvement of particular drugs, and other factors in their areas.

## **Uses of DAWN ME/C Data**

Exhibit 2 shows the number of drug-related deaths by drug category for the DAWN area that includes the Boston, Massachusetts, metropolitan area in 2003. This is one of the areas where the entire population is covered by the DAWN mortality system. As shown, opiates/opioids, heroin, and cocaine were the most frequently recorded drugs of misuse, while cocaine and opiates/opioids accounted for the largest numbers in the suicide category.

**Exhibit 2. Drug-Related Deaths by Drug Category in the Boston-Cambridge-Quincy, MA-NH Area: 2003**

Drug Category	Illicit Drugs (All Case Types)		Drug Misuse		Suicide	
	Deaths	Single-drug Deaths	Deaths	Single-drug Deaths	Deaths	Single-drug Deaths
<b>All Drugs</b>	<b>334</b>	<b>135</b>	<b>486</b>	<b>206</b>	<b>63</b>	<b>31</b>
Alcohol <sup>1</sup>			114	– <sup>2</sup>	15	0
Cocaine	237	80	216	72	21	8
Marijuana	18	–	18	–	0	0
Stimulants	–	0	–	0	0	0
Club Drugs <sup>3</sup>	–	0	–	0	0	0
Hallucinogens <sup>4</sup>	0	0	0	0	0	0
Inhalants	6	4	5	–	–	–
Antidepressants			32	6	11	–
Antipsychotics			10	–	5	–
Benzodiazepines			88	16	7	–
Misc. Anxiolytics, Sedatives, and Hypnotics			5	–	5	–
Opiates/Opioids			316	99	23	7
Heroin (specified)	111	50	109	50	–	0
Methadone			35	8	–	0
All other opiates/opioids			118	41	20	7
Nonsteroidal anti-inflammatory agents			0	0	0	0
Salicylates/Combinations			–	0	–	–
Misc. Analgesics/Combinations			4	–	–	–
Anticonvulsants			–	–	0	0
Muscle Relaxants			–	0	0	0

<sup>1</sup>Includes alcohol in combination with other drugs (all ages) and alcohol alone in decedents under age 21.

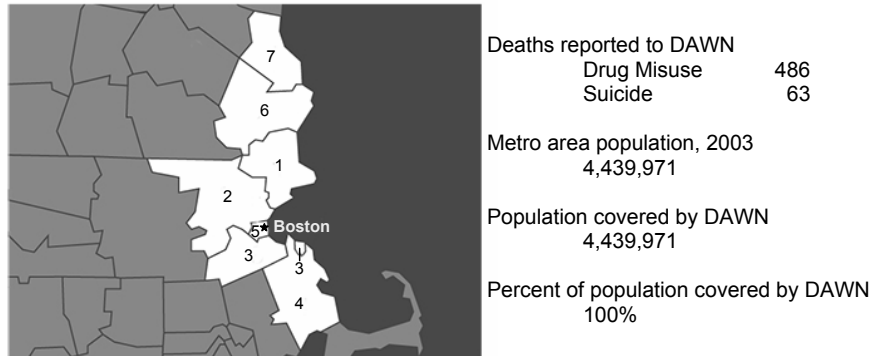
<sup>2</sup>Dashes indicate a number less than 4 has been suppressed.

<sup>3</sup>Includes MDMA (ecstasy), GHB, flunitrazepam (Rohypnol), and ketamine.

<sup>4</sup>Includes PCP, LSD, and miscellaneous hallucinogens.

SOURCE: Adapted from DAWN, OAS, SAMHSA, 2005, page 53

DAWN also provides mortality rates for drug misuse and suicide cases in each reporting jurisdiction in a metropolitan area. Exhibit 3 illustrates these data for the Boston-Cambridge-Quincy, Massachusetts, and New Hampshire DAWN metropolitan area.

**Exhibit 3. Boston-Cambridge-Quincy, MA-NH Area Overview: Deaths and Population by County: 2003****Metro Area Overview: Deaths and Population by County, 2003**

Metro Area Component	Drug Misuse		Suicide		Total Population
	Deaths	Rate <sup>1</sup>	Deaths	Rate <sup>1</sup>	
Total Participating (7)	486	109.5	63	14.2	4,439,971
1. Essex County, MA	93	126.0	13	17.6	737,848
2. Middlesex County, MA	108	73.4	14	19.5	1,471,724
3. Norfolk County, MA	56	85.6	11	16.8	654,331
4. Plymouth County, MA	51	104.6	4	8.2	487,521
5. Suffolk County, MA	132	193.9	14	20.6	680,705
6. Rockingham County, NH	31	106.9	6	20.7	290,102
7. Strafford County, NH	15	127.4	1	8.5	117,740

<sup>1</sup>Deaths per 100,000 population.

SOURCE: Adapted from DAWN, OAS, SAMHSA, 2005, page 52

**Local Mortality Data**

**...access the information directly from local medical examiners or coroners...**

Another way to obtain mortality data related to drug abuse is to access the information directly from local medical examiners or coroners, as is done by some CEWG representatives. Medical examiners in these jurisdictions vary somewhat in their classification of death cases in which drugs are detected, as will be illustrated by information from two CEWG representatives—Caleb Banta-Green, Seattle, and Samuel Cutler, Philadelphia. Additional information on accessing mortality data was provided by the St. Louis representative, Heidi Israel, Ph.D.

Because there are no standardized ways of classifying death cases, and because the data are complex, it is important that network members establish a continuing and fruitful working relationship with the ME's office. The following strategies have proven useful to one or more of the CEWG representatives mentioned above, resulting in longstanding collaboration between the representatives and their local MEs:

**Begin by sending a letter of introduction to the chief ME.**

- Begin by sending a letter of introduction to the chief ME. The letter might include...
  - A statement that a new work group is being formed, with a brief description of its mission and goals, how it will function, and the types of agencies/organizations involved in the group
  - An emphasis on the importance of mortality data in the array of indicators that will be analyzed and used by the group to portray drug abuse patterns and trends in the area
  - An invitation to the ME to attend the next meeting of the group, or to send an assigned staff member to the meeting
  - A request for the ME to assign a representative to be a permanent member of the group
  - An inquiry as to the most appropriate person to contact about obtaining information on deaths in which there is a presence of illicit drugs and probable abuse of licit drugs, with a mention that the network will follow all ME regulations related to confidentiality
  - Inform the ME that his/her office will receive network reports and that they may review summaries of their data prior to release if they request

**Once an initial contact has been identified, set up a meeting...**

- Once an initial contact has been identified, set up a meeting to define the network's needs and to obtain relevant information, such as...
  - Reports by the ME's office. There will probably be a "Glossary" that defines terms. Familiarizing yourself with these terms is a good way to learn about and understand the language used by the ME's office. Study the data (e.g., abbreviations that appear in case reports, such as "6-MAM, heroin" and "PND," presumed natural death).
  - A clear understanding of how the ME's office defines "drug mortality." In Philadelphia, the case definition is "deaths with the presence of drugs," and alcohol is not counted. To meet this definition, a decedent must have at least one drug that is not alcohol in his/her system. In other areas, the data may be subsumed under "drug-related" or "drug-induced," as noted earlier in the DAWN ME/C database. As Samuel Cutler notes, there are difficulties in assigning a case using definitions such as drug-related and drug-induced (e.g., a pedestrian stricken and killed by a vehicle may be found to have heroin, cocaine, and alcohol in his/her system, but whether use of the drugs was "related" or "involved" in the death is probably unknown). The definitions used by the Philadelphia ME to classify "deaths with the presence of drugs" are summarized at the conclusion of this chapter in *Addendum A*.
  - A clear understanding of the confidentiality "laws" followed by the ME's office. Generally the death certificate data are public, while the case file data are not. Find out which data are considered "sensitive"

and which are actually “confidential.” Make it clear that the network will never report data that could identify an individual (e.g., by reporting date of death, an individual’s demographic characteristics).

- Find out whether the ME data are automated. If not, work with staff to develop a system. As Caleb Banta-Green notes “This might take some of your time, but then you are ‘giving’ them something in return and you will be getting the data in the format you require. Someone with a moderate level of analytic skill can easily create a useful database in a relatively short amount of time.”

***...it is useful to call the ME representative from time to time to share information.***

Note that between network meetings, it is useful to call the ME representative from time to time to share information. For example, the Philadelphia CEWG representative shares with the ME representative information obtained from conversations with drug users and outreach workers about a new drug or combination of drugs being used in the area, and any information obtained on new drug-using groups. This may alert the ME to conduct tests on new drugs. An inquiry is also made with the ME representative as to whether the ME staff is witnessing any new drug trends.

### ***Accessing Local Mortality Data***

If ME data are not available electronically, it will be necessary to pull the charts on a regular basis (e.g., the Philadelphia CEWG representative did this every 6 months for many years before the system was automated). This will be time consuming because not all deaths will be drug-related, and it will involve a “learning curve” on the network’s part. In either case, the task will be facilitated by knowing which data and case types to request and having a system for recording the data.

At a minimum, network members will want to request the following, as is the case in Seattle:

- The case number (this will be useful if there are any questions about a case)
- Date of the death
- Demographic characteristics of the decedent (e.g., age, gender, race/ethnicity)
- Manner of death (e.g., accident, suicide, undetermined, or “other”)
- “BAC” for alcohol (this may be inconsistently coded)
- Primary, secondary, tertiary, and quaternary causes of death
- Other conditions
- Zip Code (last known residence of the decedent)



(Similar data are retrieved in Philadelphia, following the definitions shown in *Addendum A.*)

**Use of statistical software allows for additional analyses...**

In Seattle, Caleb Banta-Green receives data in Excel format and has created an SPSS program to recategorize drugs identified under causes of deaths into drug types, e.g., prescription opiates and sedatives/depressants. Use of statistical software allows for additional analyses, including the total number of drugs, counts for multiple drugs of the same type, and counts of specific combinations of drugs. An example of the recategorized data that are ready for analysis is illustrated in exhibit 4. Note that this table is a simplified form of the necessary data. One would want to collect information on at least six drugs; data on additional drug categories such as muscle relaxants and hallucinogens would need to be included, and Zip Code should be gathered if available.

**Exhibit 4. Example of Method for Documenting Drug Deaths in King County, Washington**

Case Descriptors					Original Data Disaggregated Manually			Data Recategorized Automatically with Statistical Software				
DOD	Age	Sex	Race	Manner	Drug 1	Drug 2	Drug 3	Cocaine	Heroin/ Opiate	Other Opiate	Amphet- amine	Depres- sant
1/1/09	22	F	Nat. Amer.	Accident	Opiate	Cocaine		1	1	0	0	0
1/2/09	33	F	White	Suicide	Mepro- bamate			0	0	0	0	1
1/3/09	44	F	White	Undeter- mined	Clozapine			0	0	0	0	0
1/4/09	55	M	Black	Accident	Metham- phetamine	Metha- done	Oxyco- done	0	0	2	1	0
1/5/09	66	M	White	Accident	Opiate	Cocaine		1	1	0	0	0
1/6/09	77	M	Asian	Accident	Metha- done	Oxyco- done	Prometha- zine	0	0	2	0	1

SOURCE: Caleb Banta-Green; information provided for this publication

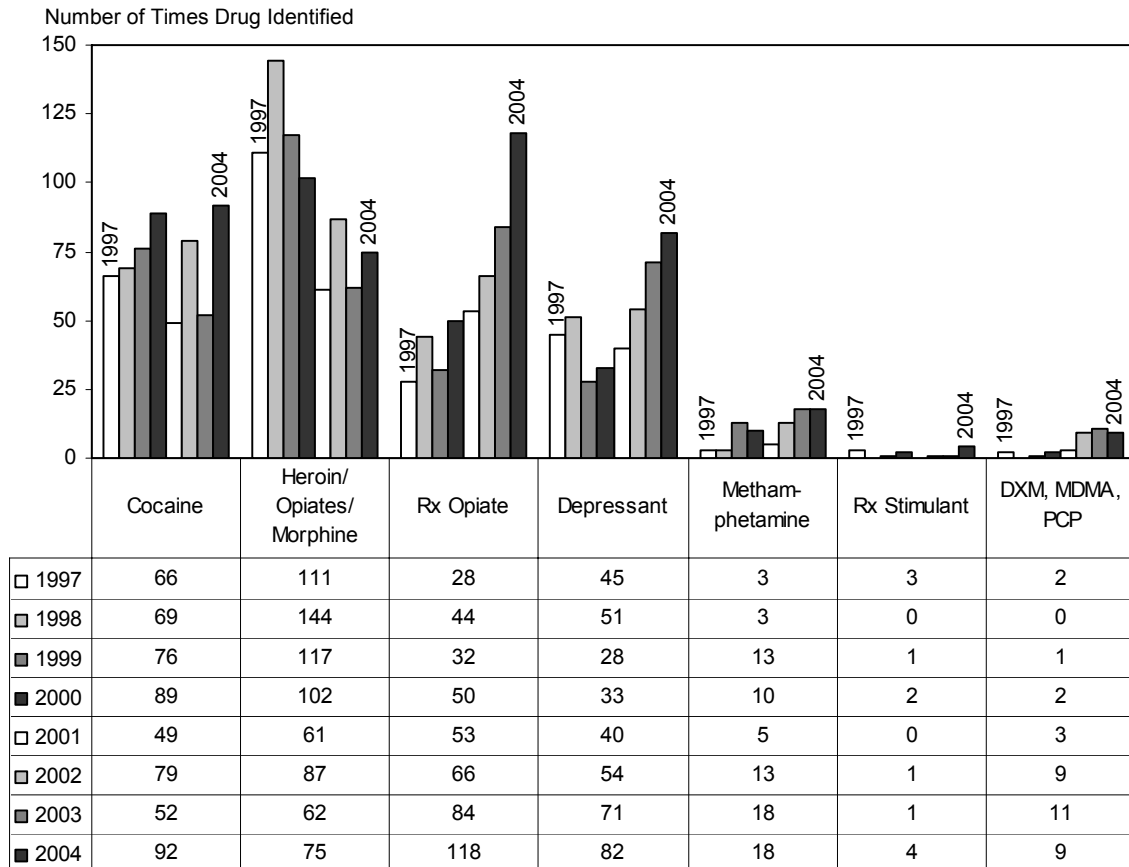
### **Uses of Local Mortality Data: King County, Washington, Example**

Both the Philadelphia and the Seattle CEWG representatives have developed methods for analyzing drug death data received from the local MEs. Both use descriptive statistics (e.g., frequencies, percentages, averages) in reporting data, and both report trends over time. The Seattle representative notes that when the data are received from the ME, drug names are often collapsed within one cell and need to be disaggregated manually. For example, Primary Cause may read as “combined effects of methamphetamine, oxycodone, citalopram, and dextromethorphan.” In this case, four new variables are created: drug 1=methamphetamine, drug 2=oxycodone, and so on. Occasionally, data are received for deaths involving only drugs that cannot be abused (e.g., acetaminophen, aspirin), and such cases are excluded.

Exhibit 5 illustrates one of the ways the data are reported for King County over an 8-year period (see Banta-Green et al. 2006). As can be seen, deaths

involving heroin and cocaine have tended to account for more deaths than the other drugs in most years; however, the increases in deaths involving depressants and prescription (Rx) opiates are substantial when 1997 data are compared with 2004 data for these two drug types.

**Exhibit 5. Deaths in King County, Washington, Related to Illicit and Prescription (Rx) Drugs: 1997–2004**



SOURCE: Medical Examiners Office, Public Health Seattle – King County

## Heroin and Prescription Opiates—Categorization Issues

**Recent data indicate that deaths involving prescription opiates have surpassed those involving heroin in some cities...**

As Caleb Banta-Green notes, heroin is identified in a large proportion of drug-involved deaths in many areas. Recent data indicate that deaths involving prescription opiates have surpassed those involving heroin in some cities across the Nation. It is therefore vital to disaggregate heroin-involved deaths from opiate prescription drug-involved deaths whenever possible. Recent data indicate important similarities and differences for heroin- and prescription opiate-involved deaths that would be undetectable if these two substances were aggregated into a single category. While it is impossible to perfectly disaggregate these two types of opiates, it is possible to separate them in the

majority of cases if sophisticated equipment is used. Many toxicology labs, including the labs in Washington State, use the type of equipment that will detect most prescription-type opiates in the blood or other bodily fluids of a decedent. Urine screens alone do not detect all prescription-type drugs.

Heroin can be definitively identified by the presence of a heroin-specific metabolite (monoacetylmorphine); however, this metabolite degrades quickly and is often not detected by toxicological analysis. Often, other evidence obtained by the ME/Cs or the death investigator points to use of heroin. Heroin may be noted in the death record even if only more general opiate metabolites are detected by toxicology. The ME in King County, Washington, recently added a “flag” to its database so that any ME entering “opiate” into the death record must indicate whether the death was heroin-related. Frequently, opiate or morphine is noted in the toxicology report. Some ME/Cs will aggregate heroin, morphine, and opiate into a “presumed heroin” category. This probably slightly overestimates heroin-involved deaths.

It is most appropriate to create a “presumed heroin” case type if there are detailed data on which prescription opiates are present, and it is possible to create a very specific prescription opiates category. Most prescription opiates are readily detectable and identifiable via toxicological analysis, including oxycodone, methadone, hydrocodone, hydromorphone, meperidine, and propoxyphene. Fentanyl is difficult to detect for some toxicologists. Codeine may be pharmaceutical or it may be secondary to heroin. However, as noted earlier, the range of prescription-type opioids are easily detected only by the highly specific screens, not by the “run of the mill” urine screens.

These are general rules that can be followed in identifying and categorizing heroin/morphine/opiate versus prescription opiates, and these should be verified with local experts.

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## **ADDENDUM A. Classification of Mortality Cases in Philadelphia**

*Samuel Cutler*

Deaths with the presence of drugs, based on the cause of death determined at the Philadelphia ME's Office, are placed into the following five groups for CEWG reporting.

### **1. Adverse Effect of Drugs (AED) or Adverse Reaction to Drugs**

AED cases are deaths attributable to the ingestion of drugs. These cases may have just one drug present; however, they often involve positive toxicology reports for more than one drug, although not necessarily in excessive quantities. It is the action of one or more drugs, or the interaction of the drugs with each other or on the body, that cause the adverse (and unexpected) reaction.

The Philadelphia ME records the levels of drugs detected by the toxicology screen and uses this information to attempt to distinguish the intent of the decedent. AED is the most common cause of death with drugs in the system in Philadelphia.

### **2. Overdose**

The most rare cause of death with drugs in the system is overdose. In overdose cases, there is a toxic level of a drug or drugs detected by the toxicology screen. Sometimes there is even a suicide note. Other factors may help distinguish adverse reaction cases from overdose cases, especially if there are notes in the record that came from the scene of the death.

The CEWG representative from Philadelphia has always taken pains to use the precise expression to convey what we mean by "overdose." Overdose usually implies intent to die, and definitely includes findings of abnormally high levels of a drug or drugs. Conversely, "adverse reactions" are absent of the intent to die and such cases generally have lower levels of drugs than "overdose" cases. Overdose, in fact, is a relatively uncommon event, so it is important to define and provide information about AED and the other causes.

### **3. Violence—Other and 4. Violence—Self**

Violence is often the attributed cause of death with drugs in the system. In Philadelphia, it is broken down by "violence inflicted by another person" (called "Violence—Other") or "violence to oneself" (called "Violence—Self").

The most common forms of violence encountered are gunshot wound, stabbing, and hanging; however, there are other, less common ways, such as being pushed or jumping from a roof or bridge, jumping in front of a moving train or other vehicle, and bleeding to death from cutting. Generally speaking, homicides are “Violence–Other” cases, but not all homicide victims have positive toxicology reports.

## **5. Other Causes**

There are other ways to die with drugs in the system (or not), and these are lumped into the catchall "Other" category in dealing with Philadelphia ME data. These include vehicular deaths (driver, passenger, or pedestrian), a variety of accidents (such as falling off the roof while working as a roofer), other accidents (such as falling in the home and hitting the head in such a way that death results), and people who die from illnesses or natural causes (e.g., liver failure). For the CEWG reports and other purposes, such information (e.g., falling from the roof) is recorded.

## 5. OTHER DRUG-RELATED HEALTH DATA

This chapter focuses on other sources of drug-related health data that may be useful to epidemiology work groups:

- *Poison Control Center Data.* In areas where a poison control center operates, network members can access drug-specific data on illegal, prescription, and over-the counter drugs. These data can be analyzed and are often summarized in reports.
- *Telephone Hotline Data.* These data represent both the level of drug use and the level of concern about drugs; some hotline calls represent informational calls.
- *HIV/AIDS and Hepatitis B and C Data.* These data are important population-level indicators of specific risk factors associated with transmission of these blood-borne diseases, including drug use in some proportion of the population.

### Poison Control Center Data

*Jane C. Maxwell, Ph.D., and William A. Watson, Pharm.D.*

Poison Control Centers (PCCs) are a potential source of current information on trends and patterns of the abuse of illicit and licit drugs. The primary purpose of PCCs is to provide information and management guidelines to callers from designated geographical areas. Trained professionals are available by telephone to respond to concerns and emergency situations related to exposures to a chemical, environmental, or drug product. The specialists in poison information offer telephone advice, treatment recommendations, and referral sources. Profiles, problems, and procedures are recorded by PCC staff to ensure appropriate practices and procedures are followed.

**...a particularly important value of PCC data relates to emerging drug trends...**

With regard to misuse and abuse of illicit and licit drugs, a particularly important value of PCC data relates to *emerging drug trends* (e.g., as in the use of dextromethorphan illustrated later in this paper). The system can provide data on new patterns of abuse that have only been heard anecdotally elsewhere. PCCs can report *leading* data, incidents that can occur early in the abuse cycle of a substance, rather than *lagging* data, such as after the users have become dependent and are reported in treatment data years later. Information is uploaded to the database in real time, so data are available for analysis almost immediately.

## Where to Start: Accessing PCC Data

**All PCCs in the United States can be contacted using a single toll-free telephone number...**

There are currently 76 PCCs in the United States. They provide services to all 50 States, the District of Columbia, and Puerto Rico. More detailed information about PCCs and the American Association of Poison Control Centers is provided in *Appendix B*. All PCCs in the United States can be contacted using a single toll-free telephone number, 800-222-1222, which routes the call to the center providing service for the caller area. The administrative telephone numbers of each poison control center can be found on the AAPCC Web site in the Poison Center Lists section <<http://www.aapcc.org/director2.htm>>.

## What to Request

**...the substance(s) involved in the exposure is coded both as the specific substance (including slang terms), and also classified into larger categories...**

To track patterns of drug use, a request can be made for PCC data. The Toxic Exposure Surveillance System (TESS) is a database of all human exposures; more recently added to the database are requests for information that are received by poison control centers when no exposure has occurred. All PCCs use the same dictionary of terminology and case coding.

For substance abuse, *confirmed human exposures*, as well as the age, age group, and gender of each case, together with the county from which the call was made, are documented for each case when the data are available. In addition, the substance(s) involved in the exposure is coded both as the specific substance (including slang terms) and also into larger categories, such as “hallucinatory amphetamines.” Information about the route of drug administration, and whether it is acute, acute or chronic, or chronic is also documented. Also of interest is information collected on the exposure site, where the patient was taken for health care, treatments provided, medical outcome, clinical effects, and duration of clinical effects. These latter variables can be used for special studies.

Before requesting data, the *Annual Report of the American Association of Poison Control Centers Toxic Exposure Surveillance System* should be reviewed to understand the various data fields that are collected. The Annual Reports are also available on the AAPCC Web site.

**There are five major categories of reasons for exposure: unintentional, intentional, adverse reaction, other, and unknown...**

There are five major categories of reasons for exposure: unintentional, intentional, adverse reaction, other, and unknown...

- **Unintentional** reasons for exposure include subcategories of general, therapeutic error, bite/sting, misuse, environmental, food poisoning, occupational, and unknown. Unintentional exposures are unplanned or unforeseen events. Unintentional misuse involves the improper or incorrect use of a nonpharmaceutical substance.
- **Intentional** reasons for exposure include suspected suicides, abuse, misuse, and unknown. Intentional *misuse* is defined as an exposure resulting from the improper or incorrect use of a substance for reasons

other than the pursuit of a psychotropic or euphoric effect. Intentional *abuse* is an exposure resulting from the improper or incorrect use of a substance, where the likely intent of the victim was to achieve a euphoric or psychotropic effect. All recreational uses of substances for any effect are included in this category. Intentional *unknown* is an exposure determined to be intentional but the specific motive is unknown.

- **Adverse reaction** is an adverse event occurring with normal, prescribed, labeled, or recommended use of a product. This includes cases caused by allergic reactions to a drug or food.
- **Other** includes “*contamination or tampering*” that occurs when the patient is an unintentional victim of exposure to a substance that has been adulterated either maliciously or unintentionally; “*malicious*” is used to capture data on patients who are victims of another person’s intent to harm them. “*Withdrawal*” is a recently added code.
- **Unknown** includes those exposures for which the reason for exposure is unknown.

### ***Uses of PCC Data: Texas Highlights***

In the remainder of this paper, several examples of ways PCC data can be used are provided from the Texas PCC data. Persons need to confirm the accessibility of data with the PCCs in their locale.

Exhibit 1 on the following page shows categories of drugs that can be requested. For illicit drugs listed in the A column (e.g., cocaine, heroin, marijuana, and ecstasy), it is important to gather data on all calls that involved direct human contact with the drug, regardless of reason for exposure (or “intent codes”). Illicit drugs are not normally available except in drug-using situations, so all cases are of interest. Using census data, the number of human poison exposure cases reported per 1,000 individuals per year in the population served can be determined, and using the penetrance rate, comparisons of a single substance, or various substances, can be made over time.

For prescription drugs or substances that have common household use (but can also be abused), the intent codes are needed to separate cases in which there was an adverse reaction or unintentional use, as compared with intentional misuse or abuse for euphoric effects. These drugs are listed in column B in exhibit 1. Because some users may not admit to having used the substance specifically for euphoric or psychotropic effects, researchers should use both the intentional misuse and abuse categories listed in the footnote in exhibit 1.



**Exhibit 1. Suggested Categories of Substances and Exposure Reasons<sup>1</sup>**

A. Drugs—All Reasons/Codes	B. Drugs—Separate Intent Codes	
Cocaine	Hydrocodone	Ritalin
Heroin	Oxycodone	Alprazolam/Xanax
Marijuana	Methadone	Diazepam/Valium
Ecstasy	Amphetamine/Methamphetamine	Clonazepam/Clonopin
Rohypnol/Flunitrazepam	Ketamine	Fentanyl
Gamma Hydroxybutyrate	Formaldehyde/Formalin	Hydromorphone
Phencyclidine/AMP/Fry	Dextromethorphan	Codeine
Lysergic Acid Diethylamide	Coricidin HBP	Meperidine
	Mushrooms	Inhalants

<sup>1</sup>Exposure/Intent Codes

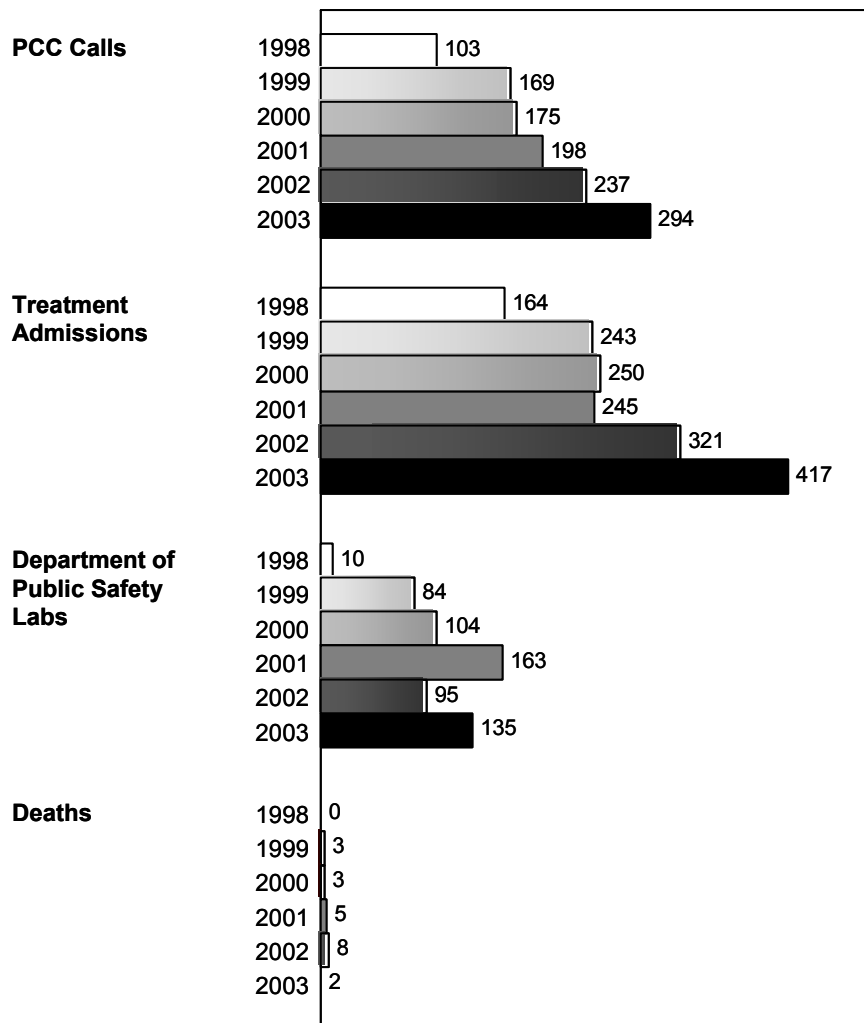
- a Intentional – Misuse
- b Intentional – Abuse
- c Intentional – Unknown
- d Contamination/tampering
- e Other – Malicious
- f Withdrawal

SOURCE: Texas Poison Control Center Network, Texas Department of Public Health

***...PCC data can also be triangulated with other drug indicators to provide a clearer picture of trends.***

The PCC data can also be triangulated with other drug indicators to provide a clearer picture of trends. Exhibit 2 presents data on four phencyclidine (PCP) abuse indicators in Texas from 1998 to 2003. PCC calls involving PCP increased each year. PCP treatment admissions followed a similar trend, as did the number of PCP exhibits identified in the Department of Public Safety labs. Overdose deaths involving PCP increased from 1999 to 2002, but declined in 2003.

Exhibit 2. PCP Indicators in Texas: 1998–2003



SOURCES: Texas Poison Control Center Network, Department of Health; Texas Commission on Alcohol and Drug Abuse; Texas Department of Public Safety; and Bureau of Vital Statistics, Texas Department of State Health Services

**...PCC data...  
may provide  
information about  
substance abuse that  
is usually  
not available  
from other data  
sources.**

One advantage of PCC data is that they may provide information about substance abuse that is usually not available from other data sources. Inhalant abuse, for example, appears to be one of the most hidden substance abuse problems. Death data are often underreported, the proportion of treatment admissions is often low (less than 1 percent in Texas), and users are not seen in large numbers in surveys of older youth and adults. Yet, the Texas PCC data for 1998–2003 show that inhalant abuse occurs not only among young teenagers, but also among persons in their twenties. This phenomenon is illustrated in exhibit 3, which shows the number of misuse and abuse cases involving the inhalation of various substances during that time period. Persons who misused or abused typewriter correction fluid were young, with an average age of 12.9 years. Persons who used amyl or butyl nitrite (“poppers”) were age 27.6, on average. Those who misused paint and other products used in painting were in their early twenties.

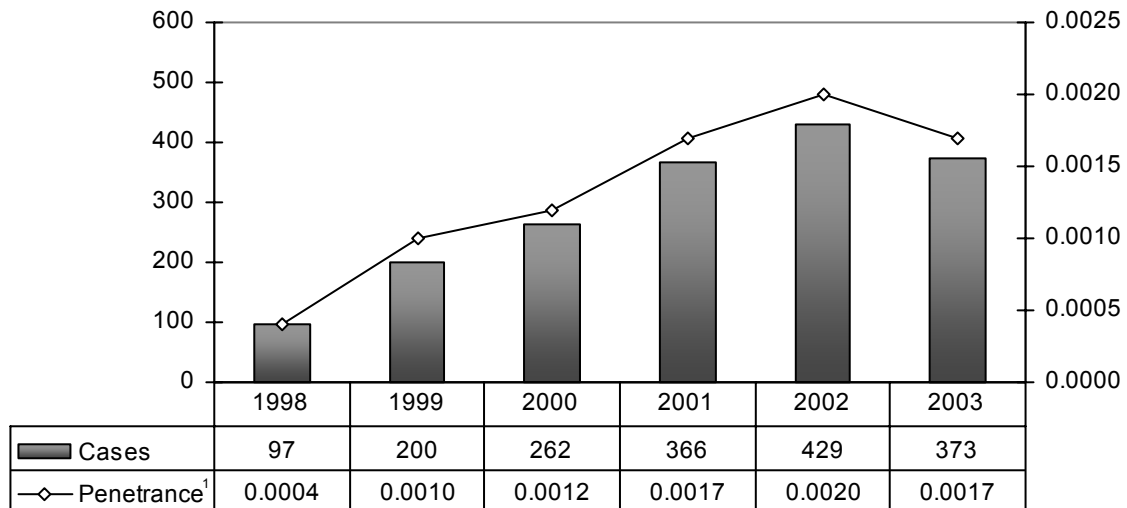
For a study of inhalants, request all substances (not just those listed in exhibit 1) by inhalation as route of administration and then delete those that are not substances of interest. Also, delete all that were not intentional abuse or misuse cases, since many products can be misused unintentionally in an accident.

**Exhibit 3. Exposures Involving Misuse or Abuse of Inhalants Reported to the Texas PCC, by Year and Average Age: 1998–2003**

Product	Year						Total	Average Age
	1998	1999	2000	2001	2002	2003	1998–2003	1998–2003
Air Freshener: Aerosol	4	3	9	3	10	4	33	14.6
Amyl/Butyl Nitrite	1	2	1	1	–	8	13	27.6
Automotive Product: Hydrocarbon (Transmission Fluid, Power Steering Fluid)	6	7	10	16	16	23	78	20.2
Automotive Product: Methanol (Dry Gas, Windshield Washing Solution)	5	5	9	14	18	23	74	25.3
Freon/Other Propellant	23	24	21	20	23	15	126	17.6
Gasoline	24	19	16	18	18	6	101	14.8
Mineral Spirits/Varsol/Stoddard Solvent	3	6	5	6	4	2	26	23.5
Nitrous Oxide	4	4	2	5	4	2	21	23.4
Paint: Oil-Base	30	22	17	18	20	7	114	23.6
Propane and Other Simple Asphyxiant	18	14	10	4	10	7	63	15.5
Toluene/Xylene (Excluding Adhesives)	10	19	14	10	10	4	67	24.3
Typewriter Correction Fluid	2	4	3	1	3	2	15	12.9
Unknown Paint, Varnish or Lacquer	16	7	14	8	10	7	62	23.8
Varnish and Lacquer	–	6	2	–	1	1	10	20.2

SOURCE: Texas Poison Control Center Network, Texas Department of Public Health

Exhibit 4 provides another example of an emerging drug, but one that seldom appears with any frequency in other indicators—dextromethorphan (DXM). The over-the-counter DXM-containing products most commonly abused include Robitussin-DM, Tussin, and Coricidin Cough and Cold Tablets HBP. The drug has also been linked to deaths among those who obtained it in pure bulk form via the Internet. Exhibit 4 shows that not only have the number of abuse and misuse cases of human exposure to DXM increased in Texas, but also that this increase has occurred even when the increase in population is considered, which is shown in the penetrance rate per 1,000 persons.

**Exhibit 4. Dextromethorphan Abuse and Misuse Calls to Texas PCCs: 1998–2003**

<sup>1</sup>Rate per 1,000 population.

SOURCE: Texas Poison Control Center Network, Texas Department of Public Health

For additional information, see Watson, W.A. et al. 2003 Annual Report of the American Association of Poison Control Centers Toxic Exposure Surveillance System, *American Journal of Emergency Medicine* 22(5): 335-404, 2004.

For additional information on accessing a relevant Web site, see *Appendix B*.

## Telephone Helpline Data

Drug helplines provide confidential telephone-based treatment referral and assistance. Typically, helplines operate on a 24-hour basis, and are organized to provide education and counseling services to individuals concerned about or experiencing problems after using drugs. Caller data are recorded and can be a useful source of information about drugs and drug abusers.

By quantifying information collected by helplines in a systematic way, it is possible to detect potential changes in the use of particular drugs and the emergence of new drugs of abuse. However, one should keep in mind that helpline information cannot be used to determine the actual prevalence of use of specific drugs in the population. Furthermore, the caller may not inquire about his or her own drug use but because he or she is concerned about

***[Helpline] data may be considered an indicator of drug use in a community but also an indicator of community concern about use of a particular drug...***

someone else's drug use. The data may be considered an indicator of drug use in a community and also an indicator of community concern about use of a particular drug or drugs in an area, sometimes in response to community education forums.

These data are particularly subject to historical context, both on the part of callers and of staff. For example, a call that might have been recorded as a "pain pill" in 1999 might be recorded in 2004 as OxyContin if the staff person probed the caller about the specific name of the pill they took.

Generally, helpline counselors fill out forms to record information about each telephone contact, including the types of problems of concern to the caller, drugs involved, services needed, and assistance/information provided to the caller. The information is often recorded on a standardized form by trained staff so it can be aggregated and analyzed systematically and efficiently.

### ***Where to Start: Accessing Helpline Data***

Network members need to identify the helpline agency. For example, in Washington State the agency is the Alcohol/Drug Help Line. This confidential 24-hour helpline has a computerized database that maintains and quantifies information from callers throughout the State. CEWG representative Caleb Banta-Green utilizes this database semiannually to analyze data for various counties, particularly for King County (in which Seattle is located); the information is documented regularly in his CEWG paper. In Massachusetts, CEWG representative Daniel Dooley accesses such data semiannually from the Massachusetts Substance Abuse Information and Education Hotline for the Boston region (comprising the cities of Boston, Brookline, Chelsea, Revere, and Winthrop) and reports findings in the Boston CEWG paper.

### ***What to Request***

***...first become familiar with the helpline's database...***

Before you request helpline data, first become familiar with the helpline's database so you can be specific about the types of information that will be most useful to the network. The number of mentions for each drug will exceed the number of calls, because some callers inquire about more than one substance. Besides requesting numeric data (number of calls for each drug within a specific time period), network members may wish to talk with helpline counselors. Counselors can provide valuable explanations and insights into what appear to be new drug abuse trends and "fads."

It may be possible to obtain the helpline datafile electronically in an Excel format, which will clearly show any small numbers for a particular drug (or area). The Seattle CEWG representative, Caleb Banta-Green, is sent the data in an Excel format; the "threshold" set for noting a change for a particular

drug is a substantial change from the previous reporting period (e.g., if cocaine were to increase from 30 to 40 percent of the calls, but benzodiazepines were to increase from only 5 to 8 percent, only the cocaine data are reported for that time period).

### **Uses of Helpline Data: Boston Example**

Exhibit 1, developed by CEWG representative Daniel Dooley (in publication), exemplifies the type of information that can be accessed and analyzed from helplines. Like other Boston drug abuse indicators, these helpline data substantiate alcohol, heroin, and cocaine/crack abuse in the city. The 6-year trend data also substantiate findings from other indicator data that point to the increased abuse of narcotic analgesics (especially oxycodone) the Boston area. As shown in exhibit 1, the proportion of calls involving narcotic analgesics rose from 6 percent of the calls in FY 2000 to 19 percent in FY 2005.

**Exhibit 1. Helpline Calls in Greater Boston,<sup>1</sup> by Drug and Percent: FYs 2000–2005**

Drug <sup>2</sup>	FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		FY 2005	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Alcohol-only	2,034	(37)	2,206	(39)	1,965	(34)	1,627	(31)	1,597	(28)	1,730	(35)
Cocaine/ Crack	1,118	(20)	1,1068	(19)	1,072	(18)	1,041	(20)	1,017	(18)	949	(19)
Heroin	1,832	(33)	1,862	(33)	2,038	(35)	1,895	(36)	2,230	(40)	1,562	(31)
Narcotic Analgesics	344	(6)	508	(9)	785	(14)	832	(16)	1,025	(18)	931	(19)
Marijuana/ Hashish	309	(6)	291	(5)	339	(6)	261	(5)	253	(5)	226	(5)
Benzodiazepines	151	(3)	154	(3)	204	(4)	187	(4)	175	(3)	168	(3)
Methamphetamine	2	(<1)	7	(<1)	11	(<1)	10	(<1)	14	(<1)	16	(<1)
MDMA	43	(1)	40	(1)	45	(1)	32	(1)	24	(<1)	17	(<1)
Hallucinogens	17	(<1)	24	(<1)	8	(<1)	14	(<1)	8	(<1)	6	(<1)
Inhalants	100	(2)	55	(1)	40	(1)	15	(<1)	25	(<1)	12	(<1)
<b>Total Number of Calls</b>	<b>5,478</b>		<b>5,695</b>		<b>5,814</b>		<b>5,221</b>		<b>5,627</b>		<b>4,977</b>	

<sup>1</sup>Greater Boston includes Boston, Brookline, Chelsea, Revere, and Winthrop (CHNA 19).

<sup>2</sup>Narcotic Analgesics include codeine, methadone, morphine, oxycodone (incl. OxyContin), Percocet, Roxicet, Vicodin and other opiates. Benzodiazepines include Ativan, Halcion, Klonopin, Librium, Rohypnol, Valium, and Xanax. Hallucinogens include LSD, PCP, psilocybin, and mescaline. Inhalants include acetone, aerosols, glue, markers, paint, and other inhalants.

SOURCE: Massachusetts Substance Abuse Information and Education Helpline; data analysis by the Boston Public Health Commission Research Office

## HIV/AIDS and Hepatitis B and C Data

HIV/AIDS, hepatitis B (HBV), and hepatitis C (HCV) may be transmitted through the use of contaminated needles and other paraphernalia by injection drug users (IDUs) and from having unprotected sex with an IDU.

For more than two decades, studies of HIV seroprevalence among IDUs have shown that spread of this infection can occur rapidly among IDUs and their sexual partners, especially among men who have sex with men (MSM) and are also IDUs. Studies have also shown considerable variation in HIV seroprevalence by geographic area and by demographic characteristics such as age, gender, and race/ethnicity.

### ***Where to Start: Accessing HIV, HBV, and HCV Data***

***Another CDC Web site offers links for State and local HIV/AIDS surveillance reports: <[www.cdc.gov/hiv/stats/hasr1402/website.htm](http://www.cdc.gov/hiv/stats/hasr1402/website.htm)>.***

The Centers for Disease Control and Prevention's Divisions of HIV/AIDS Prevention Web site offers easily accessible information on HIV/AIDS by region and for the Nation overall <[www.cdc.gov/hiv/dhap.htm](http://www.cdc.gov/hiv/dhap.htm)> (click on *Statistics & Surveillance*, then *Reports*). Another CDC Web site offers links for State and local HIV/AIDS surveillance reports: <<http://www.cdc.gov/hiv/stats/hasr1402/website.htm>>. The link will lead to the Web site by State (e.g., Alabama) <<http://www.adph.org/aids>>. After you click on the URL for the State, click on Annual Report for several options to access the data by region of the State (counties are combined in regions) or HIV/AIDS Cases Countywide and Statewide. States vary in how this information is presented.

***Other sources of HIV/AIDS data include State health departments, local health departments, local AIDS programs, universities, and outreach programs.***

Other sources of HIV/AIDS data include State health departments, local health departments, local AIDS programs, universities, and outreach programs. The Chicago CEWG representative and colleagues, for example, use CDC data in reporting HIV/AIDS patterns and trends, but also use information from State and city health departments and data from studies conducted by the University of Illinois at Chicago (see, e.g., Broz et al. 2005).

Some local health departments, as in the State of Washington, have increasingly maintained trend data on HIV exposure categories. Network members may wish to contact their local health department and inquire whether such data are available for their area.

***The CDC also collects information on hepatitis, including HBV and HCV. These data are reported weekly to CDC...***

The CDC also collects information on hepatitis, including HBV and HCV. These data are reported weekly to CDC by State and territory health departments. The data are prepared in reports by CDC that are available at <[www.cdc.gov/hepatitis](http://www.cdc.gov/hepatitis)> (see also below). Most local health departments have infectious diseases epidemiologists who track HBV and HVC.

**State epidemiologists are listed on the Council of State and Territorial Epidemiologists Web site...**

State epidemiologists are listed on the Council of State and Territorial Epidemiologists Web site at <[http://www.cste.org/members/state\\_and\\_territorial\\_epi.asp](http://www.cste.org/members/state_and_territorial_epi.asp)>.

Hepatitis Surveillance Report No. 60, September 2005, as an example, includes data from 1975 through 2003. Figure 12 of the report shows the Rate Per 100,000 Population of Incidence of Acute Hepatitis by Region of the Nation; Figure 13 shows the same data by county (see <http://www.cdc.gov/ncidod/diseases/hepatitis/resource/index.htm>; click on Hepatitis Surveillance Report). Network members may find State and local health departments, outreach programs, and universities useful sources of data on HVB and HVC. Sources of information on HBV and HCV found useful by CEWG representatives are shown later in exhibit 2.

### **What to Request**

For diagnosed AIDS cases, request the following types of information by year (e.g., 1999 through 2005) and for “cumulative” cases (e.g., 1981–2005):

- Gender (male, female)
- Race/ethnicity (e.g., White, Black, Hispanic, Asian/Pacific Islander, Unknown)
- Age group (e.g., 0–12, 13–19, 20–29, 30–39, 40–49, 50–59, 60 and older)
- Mode of exposure
  - MSM
  - IDU/MSM
  - IDU
  - Heterosexual contact
  - Mother with HIV
  - Others that may be of interest (e.g., hemophilia, transfusion/transplant, other)
- Deaths during each year

Similar data can be requested for HIV cases and, if available, for HBV and HCV cases.

**...be sure to inquire about case coding protocols...**

For these data, be sure to inquire about case coding protocols. For example, in some areas heterosexual contact will only be recorded for women if they have never injected drugs or had sex with an MSM. This rules out many prostitutes who may have contracted HIV through sex with a man.

### **Uses of the Data on AIDS and Hepatitis B and C**

CEWG representatives regularly report data on HIV/AIDS. An example is provided in exhibit 1, as reported by CEWG representative Heidi Israel, Ph.D., and James Topolski, Ph.D. (2006). These data show, for example, that



the majority of persons living with HIV in St. Louis are male, White or African-American, and between the ages of 30 and 49. Injection drug use and combined male-to-male sex and injection drug use accounted for 10 percent of the positive cases through June 2004.

**Exhibit 1. Persons Living with HIV Disease in St. Louis Metropolitan Area by Exposure Category, Gender, Race/Ethnicity, and Age: Year-to-Date and Cumulative Totals: 1995–June 2004**

Category	HIV-Positive Test Results			
	January 2004–June 2004		Cumulative from 1995 through June 2004	
	Number	Percent	Number	Percent
Exposure Category				
MSM	61	50.0	4,583	70.0
IDU	6	5.0	301	5.0
IDU/MSM	3	2.0	319	5.0
Hemophilia	0	0.0	58	1.0
Heterosexual	12	10.0	920	14.0
Blood transfusion	0	0.0	34	0.2
Perinatal	0	0.0	41	1.0
Unknown	41	33.0	416	6.0
Total	123		6,672	
Gender and Race/Ethnicity				
Male				
White	40	33.0	2,914	45.0
African-American	62	51.0	2,582	40.0
Hispanic	1	0.0	79	1.0
Other	1	0.0	19	0.0
Unknown	0	0	208	3.0
Female				
White	4	3.0	170	2.0
African-American	14	12.0	671	10.0
Hispanic	2	0.0	15	0.0
Other	0	0.0	13	0.0
Age				
12 and younger	0	0.0	53	1.0
13–19	5	4.0	160	2.4
20–29	39	32.0	1,644	25.2
30–39	30	24.0	2,799	43.0
40–49	41	33.0	1,332	20.4
50 and older	8	7.0	522	8.0
Unknown	0	0	162	2.0
<b>Total</b>	<b>123</b>		<b>6,672</b>	

SOURCE: St. Louis Metropolitan AIDS Program

Some CEWG representatives also reported available information on hepatitis B and C at the June 2004 CEWG meeting. Their findings are summarily presented in exhibit 2, together with information on the data sources, methods, and population covered by the data source. As can be deduced, reports and estimates of HBV and HCV infection among the populations studied are alarmingly high. New networks need to monitor these diseases as data become increasingly available.

**Exhibit 2. Data on HBV and HCV Reported by CEWG Representatives<sup>1</sup> from 7 Areas**

<b>Site/Data Source/Year</b>	<b>Method/Population</b>	<b>Major Findings</b>
<b>Hawaii:</b> State Department of Health, Hawaii, 2003	<b>Testing</b> 113–114 Syringe Exchange Program participants	69.3 percent tested HBV positive; 54.0 percent tested HCV positive
<b>Maryland:</b> Department of Health and Mental Hygiene, 2002	<b>Survey and testing</b> Persons entering Baltimore detention centers	30 percent tested HBV positive; 9 percent tested HCV positive
<b>Michigan:</b> Department of Community Health, Immunization and Communicable Disease Division, 2003	<b>Estimates</b> General population	179,000 in the general population are HCV infected
	Prison inmates (48,000)	18,000 inmates are HCV infected
<b>Minnesota:</b> Department of Health, 2003	<b>Estimates</b> Methadone maintenance patients	Up to 90 percent HCV infected
<b>San Francisco:</b> Urban Health Study, 2003  University of California at San Francisco, 2003	<b>Self-reports</b> IDUs	67 percent said they were infected with HCV
	<b>Estimates based on earlier testing</b> IDUs	90–95 percent are HCV positive
	<b>Research study</b> Homeless and marginally housed HIV-infected persons	73 percent were HCV and HIV “co-infected”
<b>Seattle:</b> Public Health-Seattle & King County, HIV-AIDS Epidemiology Program, 1994–2003  Local researchers	<b>Estimates</b> King County IDU population (based on a sample of more than 4,000 since 1994)	85 percent may be infected with HCV; 70 percent show markers of prior HBV infection
	<b>Local incidence studies</b> IDUs who were not HCV infected	21 percent acquire HCV each year
	IDUs who were not HBV infected	10 percent acquire HBV each year
<b>Texas:</b> Department of Health, 2003  Research study (NIDA Grant R21 DA014744, Maxwell and Spence 2004)	<b>Testing</b> 8,798 persons	18 percent were HCV positive (41 percent of positives were IDUs)
	<b>Self-report</b> Heroin addicts	48 percent said they were HCV infected

<sup>1</sup>Data were extracted from papers by D. William Wood, Ph.D. (Hawaii), Leigh Henderson, Ph.D. (Maryland), Phil Chvojka (Michigan), Carol Falkowski (Minnesota), John Newmeyer, Ph.D. (San Francisco), Caleb Banta-Green (Seattle), and Jane Maxwell, Ph.D. (Texas). SOURCE: NIDA 2005 (*Volume II* CEWG reports)

## 6. LAW ENFORCEMENT/CRIMINAL JUSTICE SYSTEM DATA

***There are many sources of law enforcement data that can provide useful information to network members.***

There are many sources of law enforcement data that can provide useful information to network members. They are subsumed in this chapter under the following broad headings:

- *Drug-Related Arrest Data.* Arrest and/or criminal file data can provide interesting information; however, data quality and availability vary by area.
- *Crime Laboratory Drug Data.* These data are available in most States; they provide considerable detail about specific drugs and require no analyses.
- *Drug Trafficking Data.* These data, if available, are in an easily usable format and provide an essential context to other drug indicator data.

Major contributions to portions of this chapter were provided by CEWG representative Erin Artigiani and her colleague Eric Wish, Ph.D., Center for Substance Abuse Research (CESAR), University of Maryland, who regularly monitor such data for the State of Maryland. Other contributions were made by Dr. Jane Maxwell and Caleb Banta-Green in their review of the material, and some data are extracted from recent papers of other CEWG representatives.

***...tips to persons requesting law enforcement data...***

Erin Artigiani and Dr. Eric Wish offer the following tips to persons requesting law enforcement data:

- Know the agency contact
- Identify existing data sets and review existing reports to ensure that the right person is approached at the right time
- Follow agency procedures for making data requests
- Ask for everything at once
- Be detailed and specific
- Be patient
- Build a rapport and express gratitude for the information

## Drug-Related Arrest Data

Local police and sheriffs' departments can often provide information on the number of arrests for different drugs, as well as data on the characteristics of arrestees.

*...source of information on drug-related arrests...*

Another source of information on arrestees is the Uniform Crime Report (UCR), maintained by the Federal Bureau of Investigation (FBI). The UCR provides information on drug-related arrests for several broad drug categories. UCR data, by State, can be found at <http://www.fbi.gov/ucr/ucr.htm>; local officials will need to be contacted for county-level data. In some areas, there are agencies that conduct urinalysis; such data provide especially valid information on the particular drugs used by arrestees and information on their demographic characteristics. Another data source on drug-abusing arrestees is the Treatment Accountability for Safer Communities (TASC) programs; a description of TASC can be found at [www.nationaltasc.org](http://www.nationaltasc.org). Still another potential data source is the drug courts (*see* <http://www.nadcp.org>). These and other data sources are covered in this section.

### **Police Department and Sheriff's Office Data**

Police departments generally assign someone the primary responsibility for the task of collecting, managing, and reporting arrest data. If a police department is relatively large, this responsibility is likely to be delegated to a particular division (e.g., narcotics unit).

*...police departments differ with regard to how drug-arrests are classified and recorded.*

While a particular police department may use a standard format to collect data on arrestees, the format is likely to vary across different towns and cities. Some departments may have only one category for drug-related offenses, and the types of drugs may not be specified. Others will have detailed information. Also, police departments differ with regard to how drug arrests are classified and recorded. For example, the Boston Police Department, Office of Planning and Research, categorizes drug arrests by class (see exhibit 2 below). Or, in some areas, if a person is arrested while driving under the influence (DUI) and drugs are found, the arrest report may include only the DUI (the greater of the two offenses). Some police departments may not consider an arrest for injection equipment as a major arrest and would not record it in the database. Some departments may test arrestees for drug use (e.g., by urinalysis). While testing is not a common practice, such data are particularly useful, since they provide a valid estimate of recent use of specific drugs.

Some police departments may make use of several types of law enforcement data/information to assess local drug abuse patterns and trends. A case in point is the Phoenix Police Department. Indicators used by the Phoenix Police Department include data on drug seizures, arrests, and bookings. For example, the Department's Drug Enforcement Bureau (DEB) made 1,384 drug-related

arrests in 2005 (see exhibit 1 below). From 2003 to 2005, there was a 69-percent increase (from 241 to 362) in methamphetamine-related arrests. Methamphetamine seizures increased from 42 in 2004 to 68 in 2005, despite the fact that the number of small clandestine methamphetamine labs decreased during this time period. According to the DEB, increasing amounts of methamphetamine were being transported into Phoenix from Mexico, and the purity of the Mexican methamphetamine was much higher than the methamphetamine that was produced in local labs (Vermeer in publication). Network members should inquire about the different types of drug-related information/data available from a police department or Sheriff's Office.

#### **Where to Start: Accessing Police/Sheriff's Office Arrest Data**

One very useful source of information is USACOPS. Through the USACOPS Web site, it is possible to access the names, addresses, and phone numbers for local law enforcement agencies. Relevant information on how to access data from the USACOPS Web site, and a minimal list of questions network members should ask of police informants, are shown in the box below. (See also *Appendix B*.)

#### ***Accessing USACOPS Web Site and Questions to Ask***

##### **A. Access online at <<http://www.usacops.com>>**

**First: On the map**, click on the State you want (e.g., Minnesota)

**Second: On the State map**, click on the county you want (e.g., Hennepin County)

**Third: Click on the county site** of interest (e.g., Minneapolis SO)

**Summary: (1) Minnesota (2) Hennepin County (3) Minneapolis SO**

##### **B. Accessing Data from the Law Enforcement Agency (e.g., Sheriff's Office, Police Department)**

###### **By phone or in person:**

1. Find the best "informant" (e.g., the officer who has information on drug arrests or the person in charge of data entry).
2. Ask the informant specific questions for a specific time period (e.g., year) on the number of arrests (cases) for each drug of interest; if data are available, request the number of cases for manufacture/sales versus possession for each drug of interest.

Inquire also and obtain any information available on seizures and trafficking of drugs of interest, and any other insights the informant may have on drug use in your community.

**...first check on how the local sheriff's office or police department maintains data on drug arrests...**

Network members should first check on how the local sheriff's office or police department maintains data on drug arrests, how arrests are recorded, and what types of changes (if any) have been made in how the data were recorded over, say, the past 5 years. If there have been major changes in how arrests are recorded, it would be advisable to collect the data only for the most recent years in which uniform data have been collected so that trend data will be comparable over time. If the information must be accessed from existing records (rather than online), it would be useful to develop a form for requesting or accessing the data before the task begins. It is also useful to find out whether there have been any changes in a policy, formal or informal, that have led to a changing focus on any specific populations, neighborhoods, or specific drugs.

### **What to Request**

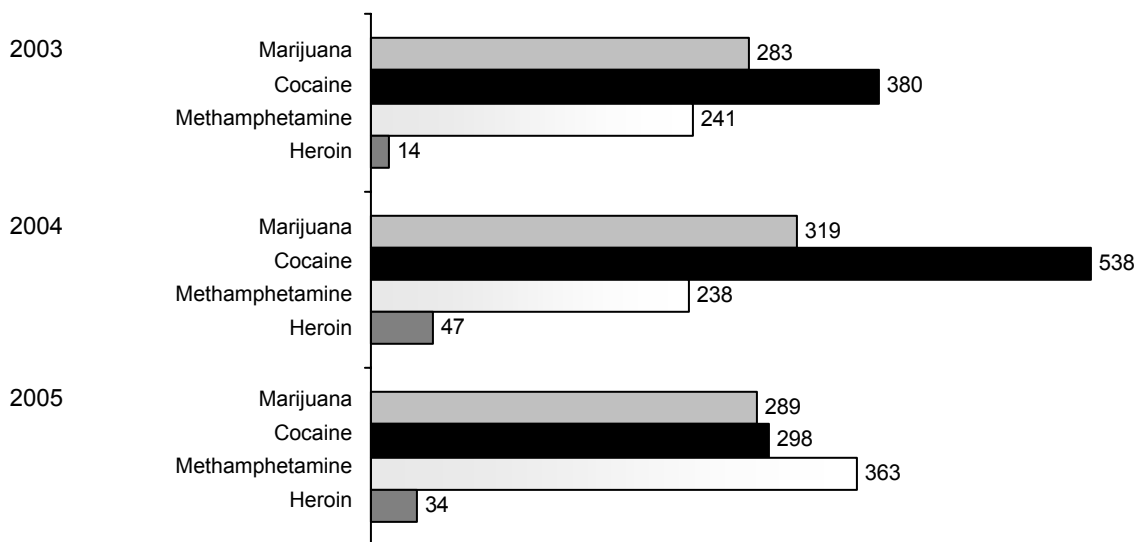
The types of information to be requested depend, of course, on the types of data the police department collects. If the data are available, focus on the following types of information:

- The total number of arrests for a specific time period
- The number of arrests for each type of drug (and for DUI, if the network chooses to include DUI data)
- The demographic characteristics of arrestees by type of drug and by type of arrest (e.g., possession, sales)
- Any testing data (e.g., urinalysis, hair testing, or testing of evidence)

### **Uses of Police/Arrest Data: Examples from the CEWG**

The Phoenix Police Department, Drug Enforcement Bureau, maintains information on arrests for various illicit drugs. Data show a sharp rise in cocaine arrests from 2003 to 2004, followed by a sharp decline in 2005. Arrests for methamphetamine show an opposite trend, that is, an increase in 2005 from 2003 and 2004 (Vermeer in publication).

**Exhibit 1. Number of Drug Arrests Made by the Drug Enforcement Bureau,<sup>1</sup> Phoenix Police Department: 2003–2005**



<sup>1</sup>These numbers do not include arrests made by patrol precincts or other bureaus.  
SOURCE: Phoenix Police Department

In Boston, drug arrests are categorized by “class.” These data are reported regularly in tabular form by CEWG representative Daniel Dooley (2006). Exhibit 2 shows the number of arrests and the percentage of the total for each class of drug from 1998 to 2004 (drugs included in each class are shown in footnotes). The predominance of Class B arrests reflects the high level of cocaine abuse in the Boston area.

**Exhibit 2. Boston Police Department Arrests for Possession, Distribution, Manufacturing, and Trafficking of Drugs, by Class of Drug and Percent: 1998–2004**

Drug Class	1998	1999	2000	2001	2002	2003	2004
A <sup>1</sup>	22.5	24.0	27.1	26.4	22.5	22.5	20.7
B <sup>2</sup>	47.1	45.1	40.6	41.7	41.9	41.6	43.3
D <sup>3</sup>	25.6	27.7	29.0	28.7	32.7	32.7	32.8
Other	4.8	3.3	3.3	3.2	3.0	3.2	3.2
<b>Total Drug Arrests (N)</b>	<b>(4,723)</b>	<b>(4,097)</b>	<b>(3,770)</b>	<b>(3,426)</b>	<b>(4,209)</b>	<b>(4,174)</b>	<b>(3,807)</b>
<b>Total Arrests (N)</b>	<b>(25,481)</b>	<b>(23,592)</b>	<b>(22,216)</b>	<b>(20,470)</b>	<b>(21,025)</b>	<b>(20,686)</b>	<b>(19,577)</b>
<b>Drug Percentage of Total</b>	<b>18.5</b>	<b>17.4</b>	<b>17.0</b>	<b>16.7</b>	<b>20.0</b>	<b>20.2</b>	<b>19.4</b>

<sup>1</sup>Heroin, morphine, gamma hydroxybutyrate, ketamine, and other opiate derivatives.

<sup>2</sup>Cocaine, “other opiates,” MDMA, lysergic acid diethylamide, phencyclidine, methadone, fentanyl, amphetamines, methamphetamine, methaqualone, and others.

<sup>3</sup>Marijuana, barbitol, butyl nitrite, and others.

SOURCE: Boston Police Department, Office of Planning and Research

## Uniform Crime Report Data

**...17,000 jurisdictions report UCR data to the FBI...**

UCR programs in States collect, evaluate, and process uniform statistical arrest data, and, in turn, report the data to the FBI; 17,000 jurisdictions report UCR data to the FBI in a given year. Because of computer problems, changes in record management systems, personnel shortages, or a number of other reasons, some agencies cannot provide data for publication in a given time period.

**UCR data are collected regularly and consistently...**

UCR data are collected regularly and consistently and provide State, county, and local measures of crime. State, county, and municipal law enforcement agencies are required by law to submit monthly Uniform Crime Reports on the number of offenses known to have occurred in their locality and the number of arrests made. Data are provided in a format that has remained unchanged since 1994. Annual statistical publications, such as the comprehensive *Crime in the United States*, are available.

There are a number of limitations in the UCR data. The UCR does not measure the prevalence of crime. Drug categories are not drug specific and are limited to four: (1) opium, cocaine, and derivatives; (2) marijuana; (3) synthetic narcotics; and (4) dangerous non-narcotics. Arrests for two major drugs, such as heroin and cocaine, cannot be separated for analysis. Rules on how methamphetamine should be coded are not specified. Only the most serious charge is recorded. The UCR is not a measure of drug use, since many persons committing other types of crime or not getting arrested at all use drugs. Nor does the UCR measure the number of different individuals arrested. The data reflect the level of law enforcement concentrated on the problem, not the magnitude of the crimes committed. Dr. Jane Maxwell, CEWG representative, has found that local UCR data may contain duplicates, because each assigned department is required to complete the UCR. For this reason, it may be preferable to obtain UCR data from the State agency and to request relevant data on specific drugs for the network's local area.

### Where to Start: Accessing UCR Data

**...see whether recent data are available either online or in hard copy.**

Statewide data are available through national reports prepared by the FBI and may be found at: <<http://www.fbi.gov/ucr/ucr.htm>>. (See also *Appendix B*.) Network members may also wish to confer with local law enforcement personnel to see whether recent data are available either online or in hard copy.

### What to Request

**...request data for the most recent year and for 3–5 prior years...**

Ideally, network members will request data for the most recent year and for 3–5 prior years, depending on the time span selected for trend analyses of different indicator data.



Requests can be made for Total Arrests and for (1) Possession and (2) Sales and Manufacturing of (a) Opium Cocaine/Derivatives, (b) Marijuana, (c) Synthetic Narcotics, and (d) Other Dangerous Non-Narcotics.

Members might also be interested in the demographic characteristics of persons arrested for particular drug charges. Data are available by gender, race/ethnicity, and age group.

**Uses of UCR Data: Baltimore City/Maryland Example**

Exhibit 3 shows the 2003 Maryland UCR data at one substate level—Baltimore City. As depicted in the exhibit, Baltimore City accounted for 53 percent of all drug possession arrests in the State and 69 percent of all sales and manufacturing arrests in 2003. Opium or cocaine and their derivatives accounted for 80 percent of the combined possession and sales/manufacturing violations for that drug category in Maryland in 2003.

**Exhibit 3. Number of UCR Drug-Related Arrests in Baltimore City, by Type of Violation and Drug, and Percentage of All Drug Arrests in Maryland: 2003**

Violation	Opium or Cocaine/ Derivatives	Marijuana	Other <sup>1</sup>	Total
<b>Baltimore City</b>				
Possession	15,544	4,710	38	20,292
Sales and Manufacturing	10,858	348	31	11,237
<i>Subtotal</i>	<i>26,402</i>	<i>5,058</i>	<i>69</i>	<i>31,529</i>
<b>Percentage of All Maryland Drug Violations</b>				
Possession	79	26	0.5	53
Sales and Manufacturing	81	<2	0.4	69
<i>All Drug Violations</i>	<i>80</i>	<i>25</i>	<i>0.4</i>	<i>58</i>

<sup>1</sup>Other includes “Synthetic Narcotics” and “Other Dangerous Non-Narcotics.”  
SOURCE: *Crime in Maryland: 2003 Uniform Crime Report*, Maryland State Police (2004)

**Network members may wish to convert UCR drug arrests into rates per 100,000 population...**

Network members may wish to convert UCR drug arrests into rates per 100,000 population for juveniles (persons under age 18) and adults (18 and older), based on the most recent census data, as has been done by the CESAR research team.

**Other Sources of Arrest Data**

**There are 203 TASC offices in 29 States and Puerto Rico.**

**TASC.** The Treatment Accountability for Safer Communities (formerly called Treatment Alternatives to Street Crime) has operated in many States since the early 1970s. Currently, the Bureau of Justice Assistance provides grants to the National TASC organization, which advocates to improve and expand services for offenders. There are 203 TASC offices located in 29 States and Puerto Rico. TASC is heavily represented in States such as Arizona,

Colorado, Florida, Illinois, North Carolina, New York, Ohio, and Pennsylvania. Funding is provided by a variety of sources, including State legislatures and State legislative initiatives, local earmarked funds, criminal justice system agencies, private organizations, and client fees. A more detailed description of this program can be found at <<http://www.nationaltasc.org>>.

Network members may find TASC data useful if there is a TASC program in their locality. However, programs may be quite complex in a given locality, operate under an organizational name other than TASC, and have ties to various service organizations. If a TASC-type program cannot be easily identified through the telephone directory, members could contact local law enforcement personnel or the county superior court to inquire whether a program exists in their community.

TASC staff work with arrestees and other criminal offenders to conduct assessments, place the arrestees into treatment, and monitor the progress of their clients. Some programs serve juveniles as well as adults. Some conduct urine toxicology screens to assess drug use among offenders. TASC also reports back to the referring criminal justice agency. TASC programs vary widely in terms of the services they provide, the characteristics of their target groups, and their niche in the criminal justice system.

***...inquire as to the type of information that can be obtained on drug use among offenders...***

If a TASC program is operating in your community, inquire as to the type of information that can be obtained on drug use among offenders and whether the information is available for both adults and juveniles. Urinalysis data would be especially useful.

The TASC program in Arizona, called Treatment Assessment Screening Center, provides a variety of services to criminal justice agencies and courts in Arizona, including intake management, evaluation/diagnosis, psychological evaluations, counseling, psychotropic medications, and education. TASC data are regularly reported by the Phoenix CEWG representative Ilene Dode, Ph.D. (see Dode 2006). TASC toxicology laboratories processed more than 4 million urinalysis tests of individuals in the criminal justice system in 2005. Data from the testing are used to assess the drug abuse patterns and trends of the criminal justice populations by geographic area and type of drug. For example, of the 34,408 positive drug screens reported for adults (e.g., in Deferred Prosecution, pretrial, drug courts, probation and the Department of Corrections) in Maricopa County, Arizona, in 2005, 51 percent were for methamphetamine/amphetamine. As shown in exhibit 4, the Arizona TASC data can be used to make comparisons by area and type of drug (Zugor in publication).

**Exhibit 4. Percentage of Positive Drug Tests for Adults in Criminal Justice Programs in Maricopa County, Pima County, and Arizona Rural Areas, by Percent: 2005**

Area	Number of Positive Tests	Amphetamines/ Methamphetamine	THC (Marijuana)	Cocaine	Opiates	Other <sup>1</sup>
Maricopa	34,408	41	33	16	7	3
Pima	7,672	20	34	36	8	2
Rural	2,753	51	31	3	10	5

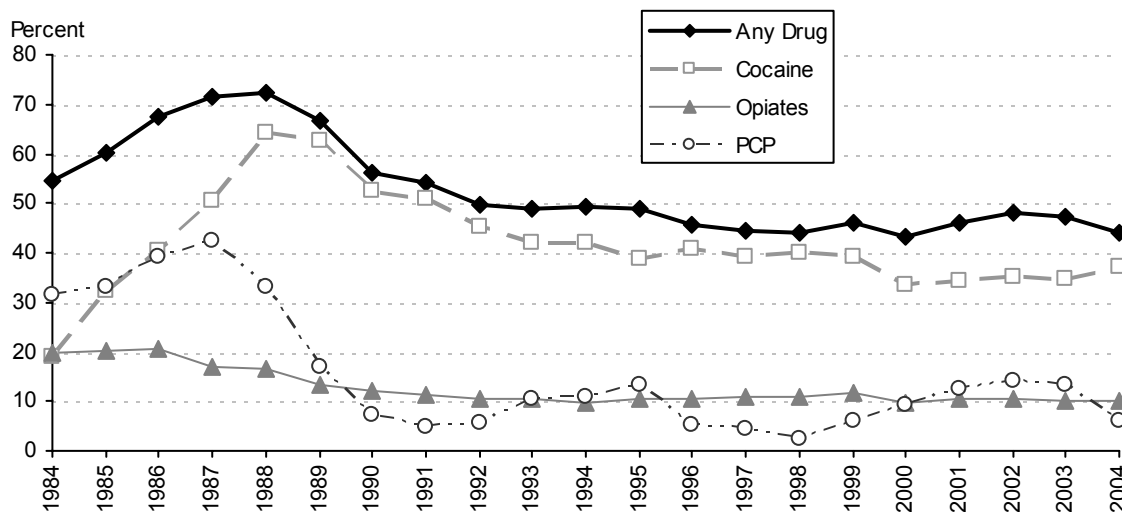
<sup>1</sup>Includes mostly alcohol but also benzodiazepines, barbiturates, lysergic acid diethylamide (LSD), phencyclidine (PCP), and methylenedioxyamphetamine (MDMA).

SOURCE: Treatment Assessment Screening Center, Arizona

**Most jurisdictions have an agency that provides pretrial services to persons charged with crimes.**

**Pretrial Services.** Most jurisdictions have an agency that provides pretrial services to persons charged with crimes. The Washington, DC, Pretrial Services Agency (PSA) is a “premiere example of this type of agency” (Artigiani, Hsu, and Wish 2006). PSA has conducted drug testing of adult and juvenile arrestees in the District of Columbia since 1984, operating as an independent entity within the Court Services and Offender Supervision Agency. More than 2,000 arrestees are tested each month. Network members can check in their area to see whether a similar service is provided. Exhibit 5 exemplifies the types of information provided by the PSA. As shown, around 45 percent of the adult arrestees in 2004 tested positive for a drug. Throughout the 21-year time period, cocaine dominated among the three drugs shown.

**Exhibit 5. Percentages of Adult Arrestees in Washington, DC, Testing Positive for Any Drug, Cocaine, PCP, and Opiates: 1984–2004**



SOURCE: Adapted by CESAR from data from the District of Columbia Pretrial Services Agency

**As of April 2006, there were 1,557 drug courts in the United States...**

**Drug Courts.** As of April 2006, there were 1,557 drug courts in the United States, and an additional 394 in the planning phases. Fifty States plus the District of Columbia, North Mariana Islands, Puerto Rico, Guam, and 136 tribal programs have drug courts in operation or planned. A few are some

combination of adult/juvenile/family/DUI courts (<<http://www.whitehouse.gov/enforce/drugcourt.html>>).

Title V of the Violent Crime Control and Law Enforcement Act of 1994 (P.L. 1-3-322) authorizes the U.S. Attorney General to make grants to States and local governments to establish drug courts. Drug courts started out as diversionary programs that dealt with less-serious offenders, typically those charged with simple drug possession or under the influence charges. As courts were proven effective in controlling both drug use and criminality among drug-using offenders (see, e.g., Belenko 1998), communities have successfully expanded drug courts to probationers, including drug-using offenders charged with non-drug offenses.

Drug courts are given responsibility to handle cases involving substance-abusing offenders through comprehensive supervision, drug testing, treatment services, and immediate sanctions and incentives. More information on drug courts can be found at the National Association of Drug Court Professionals Web site <<http://www.nadcp.org/>>.

Given the variation in drug courts, it can only be suggested here that network members inquire as to whether a court is operating in their community, and, if so, what type of population the court serves. For example, there is a special drug court in St. Louis that serves female drug abusers and dually diagnosed non-violent arrestees. In an analysis of a random sample of 50 of these women, it was possible to obtain information on their sociodemographic characteristics and their drug of choice (Sullivan 2004). A majority were African-American (64 percent), had less than a high school education (60 percent), were single (80 percent), and had children (80 percent). Crack cocaine was clearly the drug of choice among these women, either singly (24 percent) or as a first, second, or third drug of choice (70 percent). Network members whose community is served by a drug court should request these types of data, if they are available.

**Criminal Filings.** Data on criminal filings are often available for local jurisdictions. These are cases for which there is sufficient evidence to warrant the local prosecutor to bring charges against a person. There will be fewer cases than arrests; however, the data on the drugs actually involved will be more valid than arrest data. Many of the limitations of arrest data also apply to criminal filings data. Some States track superior court filings for all jurisdictions. Many prosecutors compile annual reports from which data can be readily extracted.

*...data on drugs actually involved will be more valid than arrest data.*

## Crime Laboratory Drug Data

***There are many forensic laboratories... making it likely that a network will be able to identify a laboratory in their community or State.***

Crime laboratories analyze drug items seized by law enforcement to chemically verify which drug or drugs are in the seized evidence. There are many forensic laboratories in the Nation, making it likely that a network will be able to identify a laboratory in its community or State. As with all law enforcement data, forensic laboratory information is subject to law enforcement procedures and priorities that may change over time, as well as available resources. These factors may result in some inconsistencies in the laboratory data from different time periods. Also, laboratory procedures may differ from community to community. Whether an item is analyzed by a lab may depend on the drug schedule category (e.g., some labs may have the time and resources to analyze only the highest schedule drugs). Networks that plan to compare their community data to forensic laboratory data from another community should first determine whether the data are truly comparable.

Two crime lab systems are described in this section: the National Forensic Laboratory Information System (NFLIS) and the Automation of Reports and Consolidated Orders System (ARCOS-2). Both are maintained by the Drug Enforcement Administration.

### **NFLIS Data**

Network members should determine whether forensic laboratories in their area report to the National Forensic Laboratory Information System. The first NFLIS annual report was published by DEA in 2000. As of November 2005, 258 of the Nation's approximately 300–315 State and local labs participated in NFLIS; these represent 41 State systems, 88 local or municipal laboratories, and 1 territorial laboratory. Plans are underway to enroll all local, State, and Federal labs in the NFLIS.

***...NFLIS systematically collects results from solid dosage drug analyses conducted by participating laboratories.***

The NFLIS systematically collects results from solid dosage drug analyses conducted by participating laboratories. The NFLIS database consists of case- and item/exhibit-level information. Data are reported by laboratories in a convenient format. An Interactive Data Site (IDS), a secure Web site, permits all NFLIS laboratories to run queries of their own data sets and calculate regional and national results. NFLIS findings are published in annual, semiannual, and special topic reports.

Within-State comparisons may be possible. For example, in Washington, data are available for the entire State, the Seattle-area lab, and for the State excluding Seattle (see exhibit 7 below).

The limitations of NFLIS are acknowledged. They include differing policies and procedures among laboratories, the fact that Federal laboratories are not yet in the system, and variations within and across areas that can result in differences in drug seizures and analyses (e.g., police priorities, types of arrests from which specimens are taken, and other criminal justice procedures). Local data are not adjusted for population size, and, thus, are not comparable across NFLIS sites. Additional information on NFLIS can be accessed at <http://www.deadiversion/usdoj.gov/nflis/index.html>. (See *Appendix B*.)

### **Where to Start: Accessing Forensic Laboratory Data**

As noted above, one potential source of forensic laboratory data is the NFLIS. Check the DEA Web site or obtain an NFLIS *Quarterly Report* or *Annual Report* to determine whether such data are available for your community. If not, check with local law enforcement agencies and inquire about forensic laboratory analyses that may be conducted in the network's locale. It may be necessary to inquire with a State agency; for example, in Texas, it is the Department of Public Safety that takes responsibility for forensic laboratory analyses in various areas of the State. It is important also to record the type of forensic labs that can provide data (e.g., police department, Sheriff's Office, State Police).

**...check with local law enforcement agencies and inquire about forensic laboratory analyses...**

### **What to Request**

It will be important to access the following for each laboratory included in a network's data collection effort:

- The total number of items reported to the laboratory
- The total number analyzed
- The total number of items by substance (e.g., cocaine, heroin, marijuana)
- The percentage that each substance represents of the total items analyzed

If the network is interested in changes in the types of items analyzed over a multiyear period, determine whether the data are comparable, and, if so, request data for each year of interest. It will be useful also to find out if, and why, any particular drug (e.g., marijuana) is not analyzed by the laboratory.

### **Uses of Forensic Laboratory Data: Some Examples**

The Drug Enforcement Administration uses NFLIS and similar data to monitor and assess drug abuse trafficking across the Nation, including the diversion of legally manufactured drugs into illegal markets. For example, in Atlanta in 2003 and 2004, major drug abuse indicators, such as treatment admissions, toxicology screening of adult male arrestees, and hospital emergency department data pointed to cocaine and marijuana (cannabis) as the major drugs of abuse in the area, and to the increasing abuse of methamphetamine. The Atlanta NFLIS data, as shown in exhibit 6, supported

the patterns found in the other drug abuse indicators, e.g., the increase in methamphetamine abuse in the city.

**Exhibit 6. Percentages of Drug Items Analyzed by Forensic Laboratory in Atlanta, Georgia: 2003–2004**

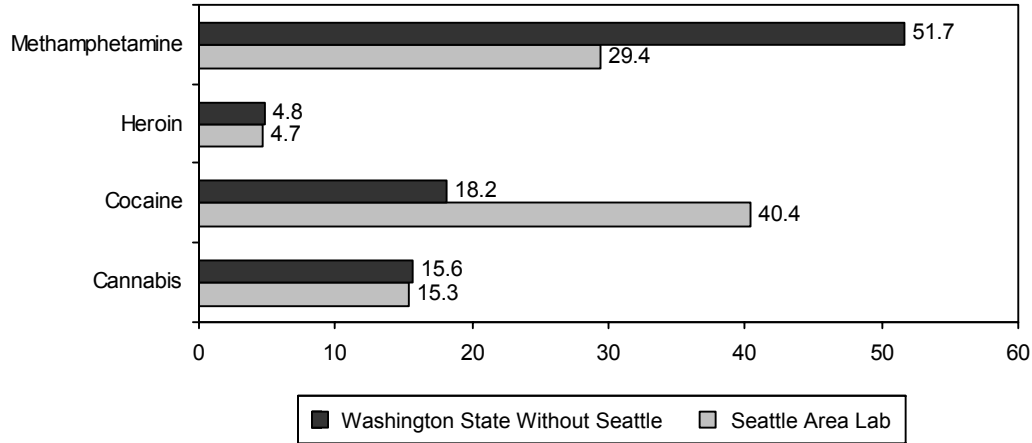
Substance	2003	2004
Cocaine	39.72	44.20
Methamphetamine	22.97	30.30
Cannabis	28.03	14.40
Alprazolam	1.63	2.12
3,4-Methylenedioxyamphetamine	1.51	2.00
Hydrocodone	1.24	1.76
Heroin	0.99	1.08
Oxycodone	0.94	0.89
Methadone	0.31	0.46
Carisoprodol	0.38	0.37
Amphetamine	0.37	0.37
3,4-Methylenedioxyamphetamine	0.16	0.37
Diazepam	0.43	0.36
Clonazepam	0.14	0.24
Psilocin	0.13	0.22
Codeine	0.11	0.13
Morphine	0.13	0.11
Ketamine	0.12	0.09
Non-controlled Non-narcotic drug	0.11	0.09
Methylphenidate	0.13	0.06
Lorazepam	0.06	0.05
Lysergic Acid Diethylamide	0.04	0.04
Benzocaine	0.07	0.03
Meperidine	0.07	0.02
Other Drugs <sup>1</sup>	0.06	1.50
<b>Total Analyzed</b>	<b>19,632</b>	<b>16,555</b>
<b>Total Items Reported</b>	<b>19,663</b>	<b>16,583</b>

<sup>1</sup>In 2004, included gamma hydroxybutyrate (GHB), hydromorphone, secobarbital, phentermine, benzphetamine, phencyclidine, and a few other drug items; in 2003, included propoxyphene.

SOURCE: National Forensic Laboratory Information System, Drug Enforcement Administration

Exhibit 7 illustrates how crime lab data from a major metropolitan area differ from that for the State overall (Banta-Green et al. 2005). The data clearly indicate the differences in cocaine and methamphetamine analyses, with the former being high in Seattle and the latter drug being high in the rest of the State (excluding Seattle).

**Exhibit 7. Test Results for Law Enforcement Seizures of 4 Drugs<sup>1</sup> in Seattle and the Rest of Washington State, by Percent: 2004**



<sup>1</sup>N=3,495 items in Seattle and 12,002 for the rest of the State. Another 8 drug items not shown above each accounted for small percentages of the reports, with no clear differences between Seattle and the rest of the State.  
SOURCE: National Forensic Laboratory Information System

## ARCOS Data

**ARCOS data are reported, by State, in PDF format and can be accessed at <[http://www.dea.diversion.usdoj.gov/arcos/retail\\_drug\\_summary](http://www.dea.diversion.usdoj.gov/arcos/retail_drug_summary)>.**

The Automation of Reports and Consolidated Orders System monitors the flow of DEA controlled substances from the point of manufacture through commercial distribution channels to the point of sale or distribution at the dispensing/retail levels. DEA uses the data, together with another DEA database, to identify the diversion of controlled substances into illicit channels of distribution. ARCOS data are reported, by State, in PDF format and can be accessed at <[http://www.dea.diversion.usdoj.gov/arcos/retail\\_drug\\_summary](http://www.dea.diversion.usdoj.gov/arcos/retail_drug_summary)>. (See also *Appendix B*.) A Site Map site can be used to access Field Office information, including the names of staff and phone numbers (go to <<http://www.dea.diversion.usdoj.gov/site.htm>> and click on *Offices and Directories*, then *Field Office Locations*).

Network members may find ARCOS data useful if there is an interest in the dispensing of controlled substances to the dispensary/retail level (e.g., pharmacies, hospitals, and practitioners) in their area or State. The data are available for several reporting periods, beginning with 1997. The controlled substances reported in ARCOS include codeine, fentanyl, hydrocodone, methadone, morphine, oxycodone, and propoxyphene.

Exhibit 8 shows ARCOS data on selected narcotic analgesics purchased by “registrant” pharmacies in Missouri in 2004. The data were accessed through the DEA Web site (see above) from “Report 5: Statistical Summary for Retail Drug Purchases”—State: Missouri. Data by drug are also available by Zip Code for each State, see “Report 1.”



**Exhibit 8. Retail Distribution of Narcotic Analgesic Drugs to Pharmacies in Missouri, Grams: 2004**

Drug	Registrant Pharmacies (Ps)	
	Number Ps Sold To	Total Grams Sold to Ps <sup>1</sup>
Oxycodone	1,147	1,114,260
Hydrocodone	1,158	432,435
Morphine	1,110	373,287
Codeine	1,152	326,392
Methadone	943	49,990
Meperidine (Pethidine)	947	45,605
Hydromorphone	755	7,692
Fentanyl Base	1,106	7,279

<sup>1</sup>Figures rounded.

SOURCE: Drug Enforcement Administration, ARCOS-2

## Drug Trafficking and Related Data

### ***Price and Purity Data—Illicit Drugs***

***...can provide insights into changes in patterns of drug abuse and consequences...***

Information on the price and purity of different illicit drugs can provide insights into changes in patterns of drug abuse and consequences, such as drug overdose. As a drug becomes increasingly expensive, users may switch to other drugs. Or, conversely, as a drug becomes inexpensive, especially if it is popular in the drug scene, use may escalate. Also, when heroin, for example, becomes purer and replaces low purity heroin, users may experience an overdose, which sometimes proves fatal. In summary, price and purity data may help the work group explain a particular drug pattern or trend.

Network members may find three sources of information on price of illicit drugs useful if they cover the network's community. One is DEA's Domestic Monitor Program (DMP), which provides information on the price and purity of different forms of heroin. Another is DEA Reports that may be available from local DEA field offices or field divisions; as shown later below, these reports may provide price data on several types of illicit drugs. Still another is the reports by the National Drug Intelligence Center (NDIC), Department of Justice, which covers the wholesale, midlevel, and retail price of major illicit drugs. If these systems do not cover your community, ask whether such information is available from local law enforcement personnel (e.g., an officer in the narcotics unit of the local police department).

### Domestic Monitor Program (DMP)

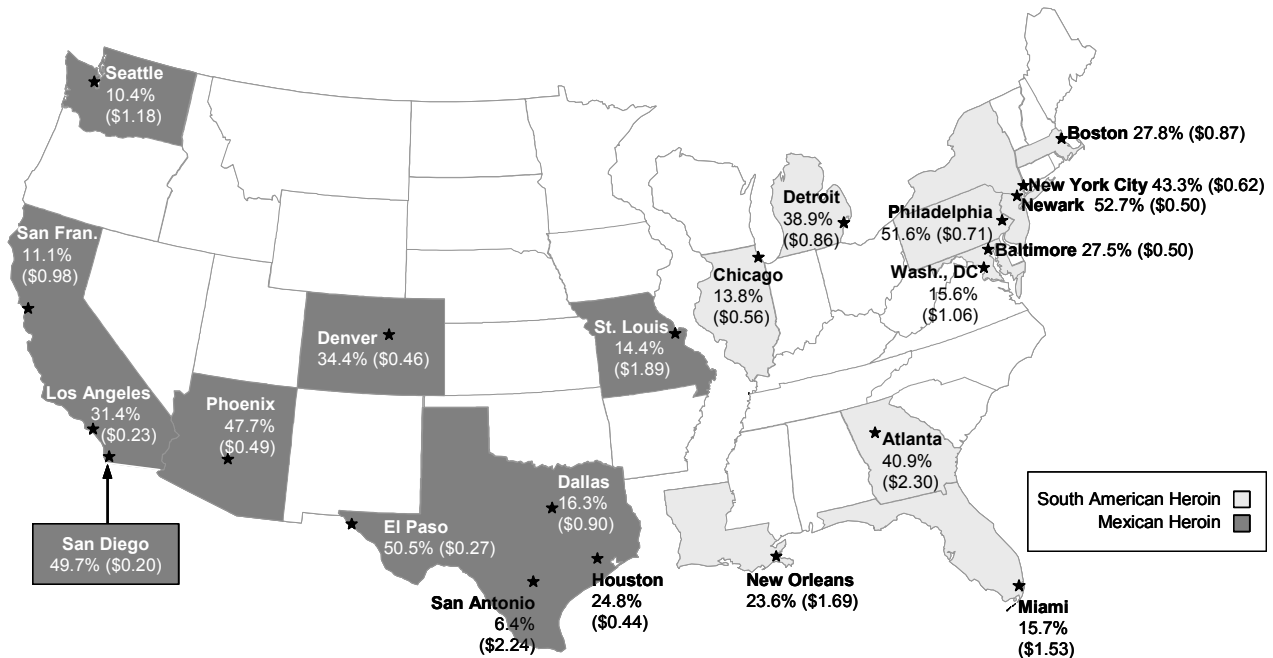
**...reports on the origin, types, cost, and purity of retail-level heroin available in the open-air drug markets...**

The DMP, under the auspices of the Intelligence Division of the Drug Enforcement Administration, reports on the origin, types, cost, and purity of retail-level heroin available in the open-air drug markets in major metropolitan areas of the United States as well as San Juan, Puerto Rico. Typically, there is a 1-year lag in reporting, although preliminary data for a particular period may be available. In 2005, DMP reported 2004 price and purity data for 25 metropolitan areas, including most CEWG metropolitan areas (with 4 being in Texas). Network members may wish to contact their local DEA field office to determine whether DMP data are available for their area, and, if so, how they can be accessed.

DMP data are based on actual undercover heroin purchases made by the DEA on the streets of the metropolitan areas. The heroin buys provide information on the type of heroin (Southeast Asian, Southwest Asian, Mexican, South American, or underdetermined) and the types of diluents and adulterants present in the drug. The reports indicate where the buy was made, the brand name (if any), the purity level, and the price per milligram pure. Price and purity for particular types of heroin can vary across the years, especially if the number of buys made in a particular area was small.

Exhibit 9 shows price and purity data across CEWG areas, as reported by DEA's DMP in late 2005.

**Exhibit 9. Domestic Monitor Program—Average Heroin Purity and Price Per Milligram Pure in CEWG Areas: 2004<sup>1</sup>**

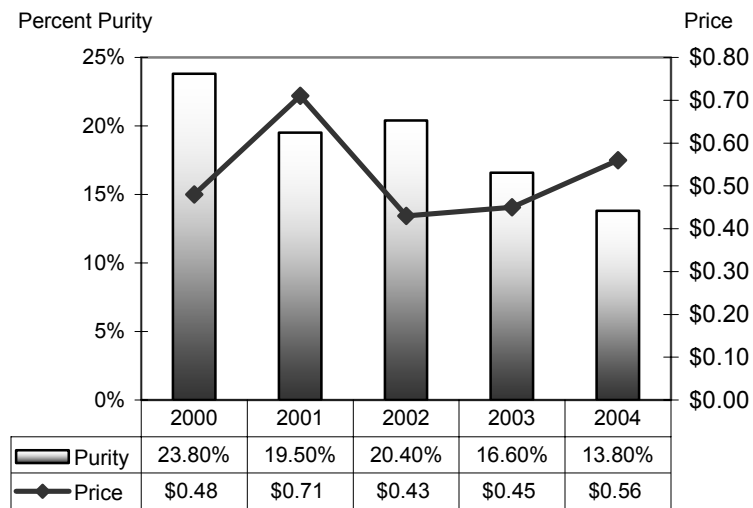


<sup>1</sup>Not included here are some types, e.g., Southeast and Southwest Asian heroin.  
SOURCE: DMP, DEA

Information on heroin purity is of special interest to the researchers in Chicago, since heroin abuse indicators continue at high levels in the area (Broz et al. 2005).

DMP annual price and purity data can be compared over time to determine whether there are any changes. An example from the most recent Chicago CEWG report is depicted below (Broz et al. in publication). As shown, the purity of heroin at the retail or street level in Chicago trended down from 23.80 percent in 2000 to 13.80 percent in 2004. During this time span, the price of heroin per milligram pure fluctuated. It is likely that the reduction in purity has had an impact on drug abuse patterns in Chicago among heroin addicts.

**Exhibit 10. Trends in South American Heroin Purity and Price Per Milligram Pure in Chicago: 2000–2004**



SOURCE: Domestic Monitor Program, Drug Enforcement Administration

### DEA Reports

Intelligence reports published by the Drug Enforcement Administration are another useful source of drug price data. For example, the DEA field office in New Mexico provided drug price and purity data for several illicit drugs at the New Mexico State Epidemiology Work Group (SEWG) meeting held in September 2004 (Selander and Monnette 2004). It was reported that...

- The price for an ounce of methamphetamine in New Mexico in 2004 ranged from around \$500 to \$800, while an “8 Ball” (1/8 of an ounce) cost \$100. The purity of the drug from local manufacturers was 70 to 91 percent pure.
- Cocaine sold for approximately \$800 to \$1,400 per ounce, \$100 per gram, and \$150 for an “8 Ball.” Crack sold for \$500 to \$1,000 an ounce.

- Black tar heroin cost about \$1,200 to \$2,900 an ounce and \$120 to \$180 per gram. Most of the heroin on the streets was 50 to 70 percent pure.

Network members may find it useful to contact their local DEA office or field division. Local DEA personnel are often a valuable resource for CEWG representatives.

### NDIC Data on Drug Prices

**...National Illicit Drug Prices—December 2005 compiles prices for the 6 most commonly available and abused illicit drugs in 126 cities and Puerto Rico.**

The NDIC Intelligence Bulletin *National Illicit Drug Prices—December 2005* compiles prices for the 6 most commonly available and abused illicit drugs in 126 cities and Puerto Rico. The cities, listed by State, constitute major drug markets that are situated along major transportation corridors, serve as regional economic centers, or have high population levels relative to their surrounding geographic areas. The cities were not selected randomly, nor can statistical comparisons be made between cities or to previously reported drug prices for a given city. The drug price data have other limitations. For example, while NDIC derives drug prices from undercover purchases, some reported prices are derived from informants who may have criminal histories and may not provide totally accurate information; the units of weights reported may not be exact; and the undercover purchases probably constitute only a small percentage of drug transactions within a city. An example of the information available in the bulletin referenced above is shown in exhibit 11 for one city, Detroit.

**Exhibit 11. Prices for 6 Illicit Drugs in Detroit: 2005**

Drug	Price in Dollars		
	Wholesale	Midlevel	Retail
Powder Cocaine	\$18,500–\$24,000/kg <sup>1</sup>	\$700–\$1,500/oz <sup>1</sup>	\$50–\$100/g <sup>1</sup>
Crack Cocaine	–	\$750–\$1,300/oz	\$10–\$20/rock
Heroin <sup>2</sup>	\$45,000/kg MBT \$55,000–\$80,000/kg SA, SWA	\$2,500/oz MBT \$5,000/oz SA, SWA \$150/oz CG	\$10/bag MBT \$15/bag SA, SWA \$20/g CG
Marijuana	\$1,600–\$5,000/lb <sup>1</sup> BC \$1,100–\$3,000/lb SN \$900–\$1,300/lb CG	–	–
Methamphetamine <sup>4</sup>	\$16,000/lb PM	\$1,200/oz	\$125/g
MDMA	\$3–\$15/du <sup>1</sup>	–	\$15–\$28/du

<sup>1</sup>du=dosage unit; kg=kilogram; oz=ounce; g=gram; lb=pound.

<sup>2</sup>MBT=Mexican Black Tar; SA=South American; SWA=Southwest Asian.

<sup>3</sup>BC=BC Bud (Canada); SN=sinsemilla; CG=commercial grade.

<sup>4</sup>PM=Powder methamphetamine.

SOURCE: National Drug Intelligence Center, NDIC Intelligence Bulletin *National Illicit Drug Prices—December 2005*, U.S. Department of Justice

NDIC publications are available on the Web at <<http://www.usdoj.gov/ndic>>.

NDIC's Field Program Specialists (FPSs) regularly conduct interviews with Federal, State, and local law enforcement officials and summarize anecdotal reporting in Intelligence Information Reports (IIRs); these reports often detail

trends related to the availability and short-term disruptions in drug prices for a region. These reports are available at the following Web sites: <ADNET: <http://ndicosa/index.htm>> and <<http://www.iir.com/riss/default.htm>>.

## **Drug Seizure Data**

### **High Intensity Drug Trafficking Area (HIDTA) Data**

Information on drug seizures at the local level may be available from law enforcement agencies. Network members may also extract useful information from the HIDTA data briefly described below.

**...a single source of information related to drug trafficking and abuse trends.**

The National Drug Intelligence Center synthesizes Federal, State, and local counterdrug reporting into a single source of information related to drug trafficking and abuse trends. NDIC publishes, for example, a *State Drug Threat Assessment Report* that provides detailed assessments of drug trends in a particular State and areas within a State or region.

**Twenty-eight HIDTAs have been established across the Nation.**

The Threat Assessment is an annual compilation of drug-related threats in a High Intensity Drug Trafficking Area. The purpose of the HIDTA is to disrupt the illegal drug market in the Nation by assisting Federal, State, and local law enforcement entities participating in the program to dismantle and disrupt drug trafficking organizations. Twenty-eight HIDTAs have been established across the Nation. A map and contact information for each is available through the Office of the National Drug Control Policy at <<http://www.whitehousedrugpolicy.gov/hidta/index.html>>. (See *Appendix B*.) Network members can also access National Threat Assessment reports and strategic (Drug Threat) assessments through the NDIC Web site <<http://www.usdoj.gov/ndic/topics/ndtas.htm>>.

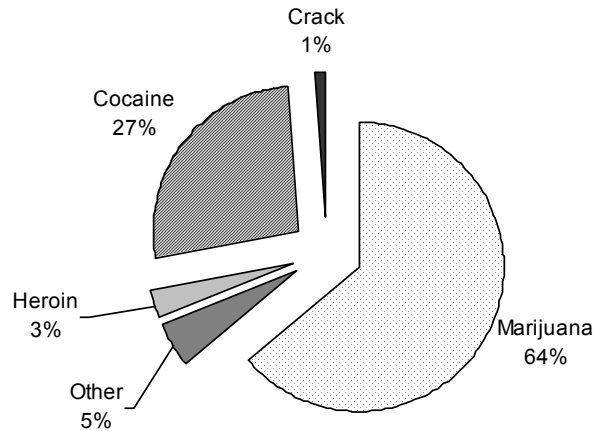
The HIDTA information that follows was provided by Erin Artigiani and Eric Wish, Ph.D., CESAR, for this guide, and represents 2003 data from the 2004 Threat Assessment for the Washington/Baltimore area.

The Washington/Baltimore HIDTA region covers two distinct population centers, Washington, DC, and Baltimore City, and includes 13 separate city and county jurisdictions in Maryland and Virginia. HIDTA data show that the three jurisdictions plagued with the most serious drug abuse, drug trafficking, and drug-related crime problems in the region are Baltimore City and Prince George's County, both in Maryland, and the District of Columbia. The *2004 Threat Assessment* identified marijuana, heroin, powder cocaine, crack cocaine, and ecstasy as major threats. Low cost heroin was reportedly available primarily in Baltimore City. Methamphetamine was beginning to be encountered in the region.

The report also indicated that more than 150 drug trafficking organizations (DTOs) were active in the region in 2003. A majority were in Baltimore City (60) and Southern Maryland (47), with 26 being in Washington, DC, and 20 being in Northern Virginia.

The data also show that marijuana accounted for nearly two-thirds of the seizures in 2003 (exhibit 12).

**Exhibit 12. Seizures of Drugs in the Washington/Baltimore Region, by Drug and Percent: 2003**



SOURCE: Artigiani and Wish, CESAR (based on NDIC's 2004 *Threat Assessment* for Washington/Baltimore)

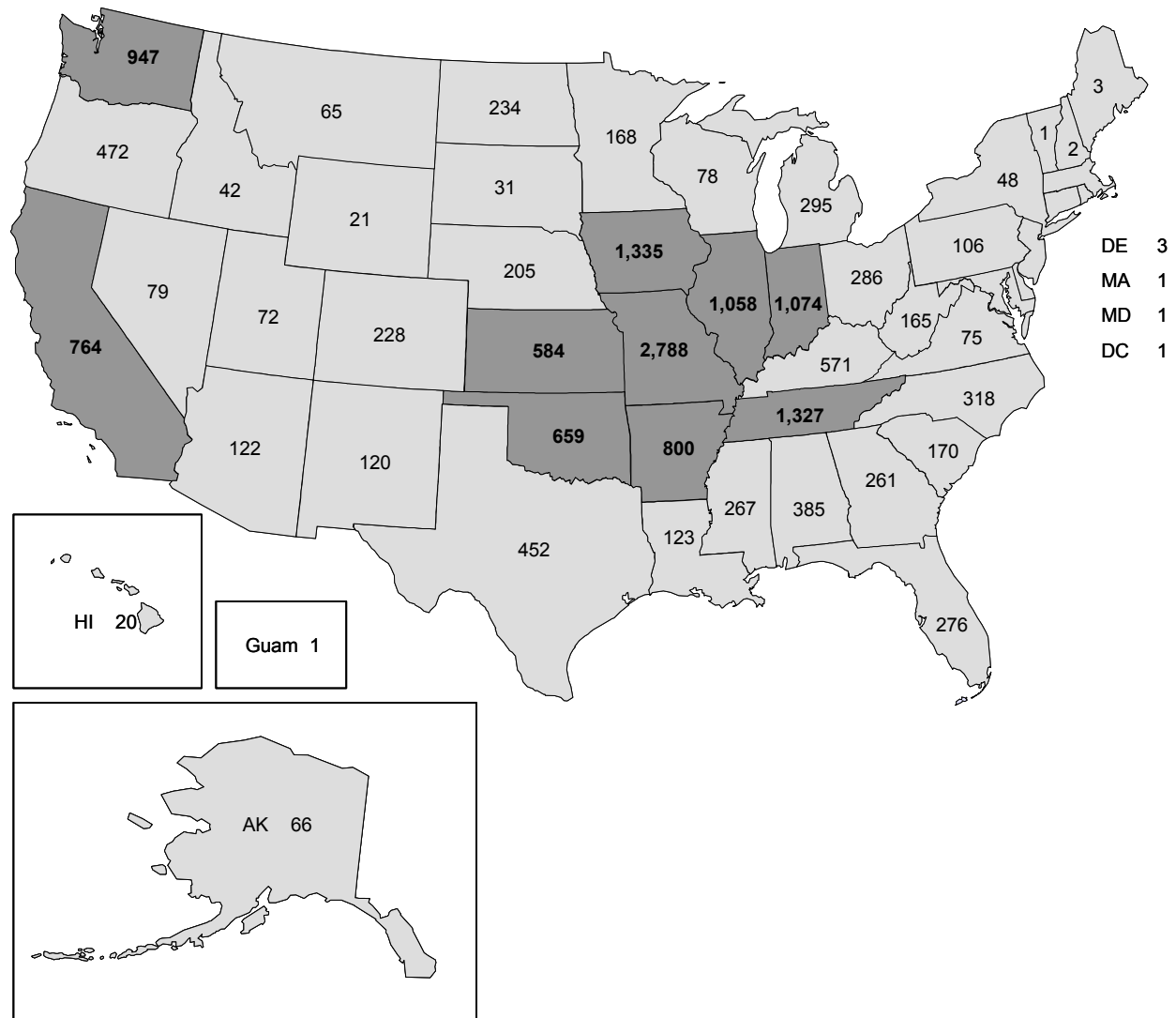
### National Clandestine Laboratory Seizure Database (NCLSD)

**The EPIC database serves as a clearinghouse for HIDTA Intelligence Centers...**

NCLSD was developed by the El Paso Intelligence Center (EPIC), Department of Justice, in an effort to stay abreast of changing drug trends. The EPIC database serves as a clearinghouse for HIDTA Intelligence Centers by gathering State and local law enforcement drug information and providing drug intelligence back to the HIDTA Intelligence Centers. The database is often used by the HIDTAs to track the number of clandestine laboratories in their region. EPIC data are often cited in the HIDTA reports. The data are also available through DEA reports and State factsheets. Additional information on drug seizures is available online at <[http://www.dea.gov/concern/map\\_lab\\_seizures.html](http://www.dea.gov/concern/map_lab_seizures.html)>.

Exhibit 13 depicts the number of methamphetamine laboratory, equipment, and dumpsite seizures in 47 reporting States, Guam, and the District of Columbia in 2004. As shown, the largest numbers of methamphetamine seizures were in Missouri (2,788) and Iowa (1,335).

**Exhibit 13. Number<sup>1</sup> of Seizures of Methamphetamine Laboratories, Equipment, and Dumpsites<sup>2</sup> in 47 States, Guam, and the District of Columbia: 2004**



<sup>1</sup>N=17,170. Data are for 2004, as reported by DEA; updated August 18, 2005.

<sup>2</sup>The States with the 10 highest numbers of statewide seizures are shown in dark gray.

SOURCE: DEA <[http://www.dea.gov/concern/map\\_lab\\_seizures.html](http://www.dea.gov/concern/map_lab_seizures.html)>

### Customs & Border Protection, U.S. Department of Homeland Security

Customs & Border Protection, U.S. Department of Homeland Security, has the responsibility of preventing the entry of terrorists and terrorist weapons into the Nation, apprehending contraband smugglers, and protecting the Nation from disease and disease carrying creatures. The agency's Web site is <<http://www.cbp.gov>>. The Press Release button on the left hand side of the homepage provides information of drug seizures in different areas on specific dates.

## 7. QUALITATIVE RESEARCH STUDIES

*...networks may want to incorporate qualitative data...*

Networks may find qualitative research a valuable supplement to indicator and other quantitative data sources described in earlier chapters. For example, indicator data sources may not address an emerging problem of seemingly critical concern in the community, either because the problem was not covered by the data source(s) or because the data are not current (e.g., data from large-scale surveys and databases such as TEDS may not be available for 1 to 2 years after the time the data are collected). Conversely, there may be one or more findings in the indicator data that pique the interest of network members because the findings seem particularly pertinent to the locale and suggest a need for more indepth information. In summary, there may be many reasons why networks may want to incorporate qualitative data into their surveillance efforts to provide more current assessments of drug abuse patterns and trends in their areas. Periodic contact with key informants, identification and use of existing local ethnographic studies, or the planning and implementation of small-scale focused qualitative studies can be used by networks to add an indepth understanding to indicator data or to examine specific drug trends in greater detail.

### Key Informants

Key informants are individuals who frequent, work, or live in network areas and who are knowledgeable about...

- The community, or specific neighborhoods in the area
- Drugs of abuse and drug abusers
- Different populations and their cultures

*Key informants can be valuable sources...*

Key informants can be valuable sources for helping to understand and interpret indicator data and may offer important observations on drug use patterns or consequences in local communities. The following section discusses some of the challenges in interpreting indicator data and provides some examples of how key informants can contribute significantly to epidemiology networks.

#### Key Informants: Interpreting Indicator Data

In assessing drug abuse information from different sources, it is important to know what the different indicators represent. Why do the numbers change from one period to another? Which factors influence the numbers and types of people who are identified through these sources?

The following examples demonstrate how interpretations are influenced by qualitative understanding of indicators. Consider, for example, that...



- Police departments change their tactics from time to time in the types of drugs, drug problems, and geographic areas they target.
- Lower income people are more likely than other populations to use emergency rooms for general medical care, while higher income people tend to use private health care facilities.
- The types of clients treated by drug abuse treatment programs vary by type of facility, and these patterns may change because of changes in health insurance regulations and government funding policies.

It is therefore important to obtain background information on each of the sources of indicator data to understand the limitations of the data and gain a better understanding of the results. The first step is to ask those who represent the sources from which the indicator data are produced to explain how the indicators reflect certain policies and populations. Ideally, a member of the network will be in a position to explain what the numbers mean or who can provide an explanation.

If members can not explain substantial changes in the data from one period to another, some members may be in a position to access information from key informants. For example, if the treatment data show that there was a significant increase in primary marijuana users admitted into drug abuse treatment programs during the prior 6 months, it might be useful to contact treatment providers to get their views. If one or more network members volunteered to get this information, they could prepare a brief supplementary report and communicate the information to the other members.

***...why indicator data change over time may be partially answered...***

The question of why indicator data change over time may be partially answered when additional information about the data sources is obtained. For example, an increase in heroin arrests may reflect special efforts made by the police department to “crack down” on heroin dealers during a particular time period. Future research is needed to explain the extent to which increased focus by the police or an increase in heroin use has resulted in more arrests.

Surveillance networks generally do not have the time or resources to conduct studies to determine how and why patterns of drug use are changing. That does not mean that insights into plausible explanations cannot be obtained. Network members may already know or suspect some of the reasons for the changes, especially members who come into direct contact with drug abuse clients. Anecdotal information can be valuable in helping to guide interpretations and future research.

Another method is to investigate the reason for changes by exploring the who, what, when, where, why, and how. One or more network members might assume a lead role. If time and resources permit, members could go into the community and talk to people close to or directly involved with the drug scene. In gathering this type of information, it might be possible to identify some of the possible causes for the changes.

### **Key Informants: Monitoring Local Drug Trends**

Another reason for using key informants is to address the question: How can network members broaden their perspective and identify new drug abuse patterns and trends before they emerge through indicator data?

*...establish a list of such people...*

Network members can never be sure (especially when beginning a local group) who might be in a position to contribute new information. Therefore, it is useful for a network to establish a list of such people over time. The people on this list may be able to serve as key informants.

To be helpful to a network, key informants should be...

- Interested in assisting the network in assessing drug abuse problems
- Invested in their community or neighborhood
- Reliable (i.e., proven credible over time)
- Reachable
- Capable

The following types of individuals may prove to be valuable key informants:

- Current or ex-drug abusers
- Non-drug-using peers or associates of drug abusers
- School counselors
- Representatives of different racial/ethnic populations
- Community leaders
- Outreach workers
- Treatment personnel (e.g., program directors, clinicians)
- Local police “on the beat” in selected neighborhoods
- Police narcotics unit staff
- Recreational workers (e.g., coaches)
- Other community services workers (e.g., bartenders, beauticians)

There can be several types of key informants who can be contacted in person, by telephone, by e-mail, or by other means...

- Those contacted by one or more network members on a regular basis
- Specific types of informants who have unique knowledge of or experience with a drug-abusing population
- Informants selected only for a specific purpose at a specific time

***...alert the network directly...***

Key informants who prove credible and knowledgeable over time can be requested and should feel free to alert the network directly at any time when something new or unique appears to be happening in the community or a particular neighborhood. Different network members may elect to have working ties with specific types of key informants. What is most important is to constantly tap the “pulse” of the community so the network can be alerted to new or escalating drug abuse problems in their area.

***...seek confirmation of the information...***

Key informants may have biases and may not always be objective. When what appears to be important information is provided by one or more key informants, the network needs to seek confirmation of the information, e.g., by expanding the informant sample to gather additional information or by seeking confirmation through existing record data or more indepth qualitative research. Ethnographic research provides one option for gathering more indepth qualitative data on a specific population or issue.

## **Ethnographic Research**

At some point, a network might decide that more detailed information is needed about some pattern of drug use or what seems to be an emerging trend, something more systematic than current knowledge, telephone calls, or conversations with knowledgeable people can provide.

***Ethnographic methods can be used...***

Ethnographic methods can be used to learn more about particular drugs of abuse and the people who use these drugs. These methods can be used to...

- Learn more about an emerging drug abuse problem when little is known about the use of a drug
- Gain insight about user groups and populations
- Answer questions that emerge from quantitative research studies
- Help researchers plan quantitative studies

Questions may focus on...

- Why are particular drugs being used?
- How are they being used?
- What are the consequences of using the drug(s)?

***...talking with drug abusers in their natural settings...***

Ethnography goes beyond objective analytic description to include analysis of the knowledge and beliefs that underlie behavior. Ethnographic methods include observation and formal and informal interviews. Information is often gathered by talking with drug abusers in their natural settings, getting to know them and their language and culture, gaining their trust, and engaging them in

conversation. Interviews are often taped with the prior consent of the interviewees, so the researchers have a good record of the interview and can conduct content analysis of the transcripts.

Ethnographers in their studies of drug abusers generally collect the following routine information:

- Demographic information
- Drugs used
- Combinations of substances used
- Frequency of use
- Modes of administration
- Social setting in which drugs are used
- Ages and circumstances for initiation to drugs
- Reasons for using drugs
- Drug effects
- Adverse reactions to drugs
- Consequences of drug use over time

***...assess the constant and variable patterns...***

Ethnographers can obtain data from a variety of sources and systematically assess the constant and variable patterns that range across the data collected. In addition to observation and interviews, archives, memoranda, newsletters, and other documents can be used for analysis.

***...guide members in interpreting findings...***

Network members should optimize existing data where possible, including findings from local ethnographic studies. Ethnographic research can provide contextual and behavioral data/information to guide members in interpreting findings from quantitative data and drug abuse indicators. Network members should check with local colleges, universities, and other agencies and organizations to determine whether ethnographic studies involving drugs or drug-abusing populations have been or are being conducted, including quantitative studies that may have qualitative components. Network members might also check studies funded through grants by NIH to determine whether any studies are underway or have been recently completed in their area(s) (see the CRISP link <<http://crisp.cit.nih.gov/>> on the NIDA Web site).

Network members may also find it beneficial to collaborate with local ethnographers in planning local studies. In selecting an ethnographer, it is important to review the person's training, type of degree, publications, professional organization, and affiliation. Also, obtain and review the individual's recently published ethnographic research, especially if it involves drug abuse. Ethnographers often work as faculty in university anthropology or sociology departments, two disciplines with strong traditions in cultural and behavioral patterns in different populations and in qualitative research.

Examples of how qualitative research methods can be used to monitor drug abuse trends and explore emerging problems are briefly described below.

### **Los Angeles**

CEWG representative Beth Finnerty (2005b), together with colleagues, used key informants to verify and supplement information obtained from focus groups on the use and abuse of phencyclidine in the Los Angeles area. This effort was initiated in 2003 in response to concern that indicator data pointed to a rise in PCP arrests and treatment admissions, suggesting an increasing problem of PCP abuse in the population. In this small study, treatment data were used to identify geographic areas in Los Angeles where the majority of PCP treatment admissions were concentrated. Key informants were drawn from a pool of existing professional colleagues and referrals and were selected to represent a range of perspectives, including law enforcement and treatment counselors. Study findings helped to clarify patterns of use and effects of PCP and factors influencing manufacture and distribution.

### **Colorado**

In an exploratory study of clonazepam abuse among treatment admissions in Colorado, Bruce Mendelson used treatment data to identify the geographic areas in the State where clonazepam clients were admitted to treatment. Thirteen clinicians served as key informants and provided information on the primary reasons clients were using clonazepam; the desired effects of the drug; how the drug is obtained; and the street cost of the drug (Mendelson 2005).

### **New York City**

The Street Studies Unit (SSU), Division of the Ethnography and Trends Analysis Section of the Treatment Services Bureau, New York State Office of Alcoholism and Substance Abuse Services, has been using ethnographic methods for more than 20 years.

The Field Researchers in the SSU are former substance abusers who have been trained in ethnographic techniques to observe and record information about drug dealing and abuse on the streets of New York City. Information from the SSU studies is regularly reported to the CEWG by Rozeanne Marel, Ph.D., and appears in CEWG reports (see, e.g., Marel et al. 2005).

### **Ohio**

Ohio's Substance Abuse Monitoring System (OSAM) Network uses archival data, ethnographic methods, and other qualitative methods (e.g., focus groups) to monitor drug abuse patterns and trends. Informants are located throughout the State and provide information for the semiannual monitoring of substance abuse trends. Findings are disseminated through reports and through the 1-page *OSAM-O-GRAM* (see *Addendum A* for an example).

**Maryland**

Researchers at CESAR, University of Maryland, used ethnographic and other qualitative methods to obtain up-to-date information on how and why PCP was being used in Prince George's County, Maryland, where PCP indicators had shown increases in abuse of the drug (*see Addendum B*).

**Connecticut**

Researchers at the Institute for Community Research (ICR), in partnership with the Hispanic Health Council, conducted a study of drug use among youth and young adults in 1999–2002 through a NIDA grant (R01DA11421). In a second NIDA-funded grant (R01DA4863), ICR is focusing on use of club drugs. In both studies, the researchers have used a combination of ethnographic field observations, key informant interviews, semistructured interviews, and survey methods. Data from the first study were presented at the CEWG PCP Panel in December 2003, providing insights into why and how PCP was being used and the consequences of its use (Schensul 2004).

## Addendum A. Ohio Substance Abuse Monitoring (OSAM) Network



### OSAM-O-GRAM

DATE: June 2004  
DATELINE: Ohio

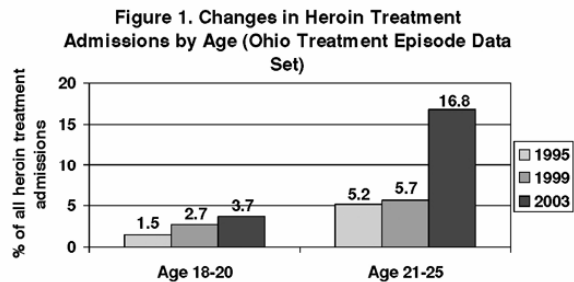


Wright State University  
The University of Akron

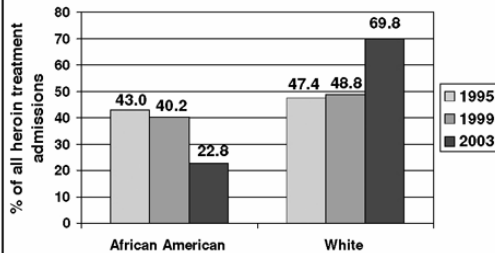
#### Increases in Heroin-Related Overdose Incidents Reported Among White, College-Age Youth in the Toledo Area

In the spring of 2004, focus group interviews conducted with **Toledo** area emergency room personnel revealed increasing rates of heroin-related overdose cases among young adults (18-24-year-olds). These reports echo a previously reported increase in heroin-related overdose incidents in **Marietta/Washington** County.

The OSAM Network has been reporting increasing heroin abuse among white, suburban youth and young adults since early 2000. Treatment Episode Data Set\* (Office of Applied Studies, Substance Abuse and Mental Health Services Administration) also suggests significant changes among heroin users in Ohio (Figures 1-2) in treatment. In 1999, about 5.2% of all heroin treatment admissions were individuals between the ages of 21 and 25; in 2003, this percentage increased to 16.8% (Figure 1). Changes occurred in terms of ethnic composition of the user population as well—in 1999 about 48.8% of all heroin treatment admissions consisted of whites; in 2003, whites comprised 69.8% of all heroin treatment admissions in Ohio



**Figure 2. Changes in Heroin Treatment Admissions by Ethnicity (Ohio Treatment Episode Data Set)**



(Figure 2). Reported increases in heroin-related overdose cases among white, college-age youth in **Toledo** and **Marietta** is a reflection of significant changes in the demographic composition of the user population. It appears that heroin abuse is no longer predominantly an inner-city phenomenon. New heroin users are coming from social environments that have relatively little exposure, experience, and “generational” knowledge about heroin use, which places these new users at even greater risk for heroin-related overdose.

\*Note: Within each state, treatment providers that receive any state agency funding are expected to provide TEDS data for all clients admitted to treatment. The TEDS data collection effort began in 1989. TEDS is one of the three components of SAMHSA’s Drug and Alcohol Services Information System (DASIS).

OSAM-O-GRAMS report key findings of the Ohio Substance Abuse Monitoring (OSAM) Network. Informants located throughout the state use qualitative and quantitative data to provide semiannual monitoring of substance abuse trends. The OSAM Network is funded by the Ohio Department of Alcohol and Drug Addiction Services by contract to Wright State University and by subcontract to the University of Akron. This OSAM-O-GRAM is based on the June 2004 OSAM Network meeting.

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## Addendum B. The Center For Substance Abuse Research (CESAR)

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# CESAR *FAX* →

May 3, 2004  
Vol. 13, Issue 18  
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**A Weekly FAX from the Center for Substance Abuse Research**

University of Maryland, College Park

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### *New Maryland Drug Early Warning System (DEWS) Research Series Investigates Increase in PCP Use and Availability in Prince George's County*

Several indicators monitored by DEWS staff suggest that the use and availability of PCP are on the rise in several Maryland counties, including Prince George's County. For example, PCP-related treatment admissions reached a five-year high among Prince George's County residents in 2003. As part of an innovative research series, *DEWS Investigates*, DEWS staff are conducting rapid "mini-studies" to investigate specific trends or questions identified by the monitoring of quantitative indicators. The first of these studies consisted of two sets of in-depth interviews with 16 juvenile offenders and 20 adult arrestees in Prince George's County to investigate perceptions of PCP use. Following are highlights of these interviews.

- Adults and juveniles report that PCP has increased in popularity, particularly the use of "dippers," which are tobacco cigarettes or marijuana joints or blunts dipped in a liquid substance containing PCP. "Boat"—marijuana or parsley laced with PCP and rolled into a joint or blunt—was reported as a less common way of using PCP.
- Many of the juveniles interviewed did not think that dippers were made with PCP. Instead, youths often cited embalming fluid as the primary ingredient and stated that it is cut with other ingredients, such as starter fluid or baby oil. In fact, most of the juveniles interviewed "maintained that dippers are easy to obtain, whereas PCP is not widely available" (p. 2).
- In contrast, most adult arrestees interviewed reported that PCP is the primary ingredient in the fluid used to make dippers. They also identified similar secondary ingredients as those mentioned by juveniles, such as embalming fluid and a variety of animal tranquilizers. In addition, some adult arrestees reported that dealers are putting pills of ecstasy into liquid vials of PCP.

DEWS researchers were unable to determine what proportion of dippers, if any, were made with embalming fluid instead of PCP. The confusing connection between PCP and embalming fluid, which has been reported in other studies in Texas<sup>1</sup> and Washington, D.C.,<sup>2</sup> is complicated by the fact that the term "embalming fluid" is also a slang term referring to liquid PCP. Hence, many people who use dippers—especially youth—do not know exactly what they are consuming. The researchers recommend that drug seizures suspected of containing PCP be tested to identify all the component ingredients. In addition, they conclude that "the findings suggest a need for focused educational interventions warning youth that dippers contain PCP and are harmful" (p. 4).

<sup>1</sup>Elwood, W.N. "Fry: A Study of Adolescents' Use of Embalming Fluid with Marijuana and Tobacco," Texas Commission on Alcohol and Drug Abuse, 1998.

<sup>2</sup>Wish, E.D., Artigiani, E., Brown, J., Canham, S., Gray, T., & Mattheson, C. "PCP Use and Trends in Washington, D.C.: Two Rapid Methods for Investigating Leads from Indicator Data." Presentation at the Community Epidemiology Work Group Meeting, Atlanta, December 2003.

SOURCE: Drug Early Warning System (DEWS), Center for Substance Abuse Research (CESAR), "DEWS Investigates: What Is Behind the Increase in PCP in Prince George's County?" February 2004. Available online at [www.dewsonline.org](http://www.dewsonline.org). For more information, contact Erin Artigiani at [erin@cesar.umd.edu](mailto:erin@cesar.umd.edu).

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## 8. OTHER USEFUL DATA SOURCES

Several other data sources can provide useful information for epidemiologic networks: the U.S. Census Bureau, university researchers, and community-level sources. These are briefly covered in this chapter.

### Census Data

***Census data can be useful to networks in a number of ways...***

Census data are collected and reported by the U.S. Census Bureau every 10 years, and estimated changes in populations are projected between each decennial census. Census data can be useful to networks in a number of ways, including the following:

- To describe the population living in the network's geographic area, including the population's...
  - Demographic characteristics (e.g., gender, age, race/ethnicity)
  - Socioeconomic status (e.g., median family income, percentage of families living below the poverty level)
  - Marital status
  - School enrollment and educational attainment
  - Housing (e.g., value of home or monthly rent paid, number of rooms and bedrooms, plumbing and kitchen facilities)
- To learn more about populations in areas where particular types of drug use are prevalent or drug use and trafficking are high
- To determine whether a particular population group is underrepresented or overrepresented in a specific drug-abuser group documented in indicator data<sup>1</sup>
- As the basis for determining rates, e.g., per 100,000 population of a specific subpopulation (e.g., among female methamphetamine abusers in treatment)

***The Census Bureau data are available for many types of geographic areas.***

The Census Bureau data are available for many types of geographic areas. Detailed results of the Census 2000 are contained in a series of five files that can be accessed through the Internet and on CD-ROM or DVD. Profiles are

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<sup>1</sup>For example, treatment indicator data may show that White primary methamphetamine abusers represent 55 percent of the total treatment admissions in a given year, but that Whites represent 73 percent of the area population. Conversely, African-American primary heroin admissions may represent 25 percent of all treatment admissions, but only 16 percent of the area population. In the former case, the White admissions group would be underrepresented in treatment, while in the latter case, the African-American admissions group would be overrepresented.

provided for most geographic areas; Quick Tables allow users to choose from approximately 50 table shells and then specify the geographic area and the universe or population subgroup (e.g., the African-American population). There are also approximately 30 Geographic Comparison Tables that allow users to compare key data items across geographic areas. A series of three reports are available in Portable Document Format (PDF) on the Internet. For easy access to all Census 2000 information, click on American FactFinder™ on the Census Bureau's Home Page <[www.census.gov](http://www.census.gov)>.

***The Census Bureau has established "census tracts" as units for the study of small statistical subdivisions...***

The Census Bureau has established "census tracts" as units for the study of small statistical subdivisions (averaging about 4,000 people) of counties, as well as "counties and equivalent areas" (the primary divisions of most States). These two types of census areas may be of most interest to networks that are not focused on "metropolitan areas" with large populations.

In intervening years between the censuses, your State Census Data Center can provide information on updated census estimates by county. In some instances, the State center makes the estimate, while in other instances, another State agency makes the official State and county population estimates for these years.

## University Researchers

***...faculty members... may be conducting very relevant research...[and] often have students who want to become engaged in projects.***

Often there are local university or college faculty, especially in health, social science, and science departments, who are interested in alcohol and drug abuse issues or have expertise in research methods that can be used by epidemiologic networks. The network and these faculty members, who may be conducting very relevant research, may be unaware of each other's efforts. In addition to their research interests, faculty often have students who want to become engaged in projects. These students can be useful in collecting information and analyzing data, especially since they have access to computers and statistical software programs that can be used in data searches and data analysis.

To find interested faculty, contact academic departments in public health, pharmacy, sociology, anthropology, social work, psychology, criminal justice, nursing, health sciences, and education. Research centers for special ethnic studies also may house researchers who are interested in substance abuse issues.

## Community-Level Sources

It is sometimes difficult to identify sources of information at the community level. Find out what types of information are available from these sources, and establish procedures to obtain relevant information initially, and perhaps on a regularly scheduled basis. It must be kept in mind that information about drug abuse is likely to be confidential. The people responsible for collecting and reporting information about drugs are usually very busy and are likely to have reservations about sharing information.

***...there are two ways to start the process of identifying sources...***

If a network does not already have connections with community data sources through its members, there are two ways to start the process of identifying sources that can be done concurrently. The first way is to get local telephone numbers of criminal justice, health, and treatment agencies so that calls can be made to identify potential data sources. The mayor's office, chamber of commerce, or a similar source may have a directory of human resource organizations. Community or local telephone books generally specify in the front pages telephone numbers of local police and sheriff departments. The regular telephone directories may list police and sheriff departments under Government Listings and hospital and treatment programs in yellow pages or the business section (by name). Support staff at network-backed agencies may be helpful in this task. In many towns and cities, such information is likely to be found on the Internet.

The second way to start to identify potential information sources at the community level is to start at the top and work down. In attempting to identify sources of treatment data, begin by calling individuals at your State Substance Abuse Agency who can identify and provide a list of the substance abuse treatment programs that are located within or serve particular communities. For arrest data, call the State Police Department and the UCR office to find out who their contacts are at the local level. In trying to identify individuals and departments within hospitals, contact representatives of the State health department to find out what and whom they know.

## **PART III. NETWORKING AND REPORTING**

### **9. ESTABLISHING AND DEVELOPING RELATIONSHIPS WITH INFORMATION SOURCES**

#### **Public Versus Private Information Sources**

***...data may not be readily available, and potential data providers will be most responsive to polite inquiries rather than demands.***

In establishing a network and in accessing data, it should be kept in mind that most public organizations are obligated to release data/information. For example, arrest data collected by police departments fall under the category of public information as long as individuals cannot be identified. These data are generally reported to another level of authority, e.g., the city and county police departments report to regional Drug Enforcement Administration offices, the Federal Bureau of Investigation (Uniform Crime Report), and to their State Police Department. On the other hand, private hospitals are not obligated to give information to outside sources other than those to which they are accountable for documenting services provided and costs associated with providing services. That said, data may not be readily available, and potential data providers will be most responsive to polite inquiries rather than demands. They may give you the minimum dataset they have, which may be of no value, while a more politic approach may yield much richer data and vital context.

Private facilities, while not obligated to provide data, may still be willing to share information. Given that there are often numerous private agencies, it is important to prioritize those that serve populations of particular interest. It may also prove useful to select those large agencies or those that are part of a multisite agency that maintains data from all affiliated sites.

#### **Preparation/Making Contact**

***Prior to contacting..., be well prepared...***

Prior to contacting representatives of agencies and departments about the availability of data/information, it is important to be well prepared by...

- Specifying whom you represent, the reason for pursuing the information, and how the information will be used and reported

- Specifying clearly that the network is involved in a public health project and that you do not want the names and identities of individuals who used drugs, but only data that have been aggregated and do not contain such personal identifiers
- Inviting individuals who have access to data/information to attend or participate in a network meeting
- Following up a telephone contact with a letter or e-mail reiterating whom you represent, confirming your understanding about the availability of data and how it might be obtained, and perhaps formally inviting the individual to the next network meeting
- Sending each individual information about the network, and, if available, a copy of a network meeting report or summary, or an outline of a project being planned

## Developing Relationships

***...continued two-way information sharing can lead to long-term data access.***

It is important to maintain good relationships with representatives of community agencies, schools, and organizations that have access to current and potential data sources. As indicated earlier, it is difficult to identify sources of information at the community level; however, once relationships are established, continued two-way information sharing can lead to long-term data access.

Several steps can be taken to develop working relationships with data sources, including the following:

- Inviting representatives to network meetings
- Meeting with representatives so they get to know you personally (e.g., invite them to your office or visit them)
- Visiting a contact; this can provide unanticipated benefits by allowing network members to see the facility and the computer applications with which staff work, as well as meet other people at the agency who may be interested in the network
- Sending them information, including any documents developed by the network. If they are willing to review reports prior to dissemination and make any corrections or provide important context, this will be of great benefit to the network.

## 10. REPORTING

**...a standardized format will make it easier to review data...**

Networks will find it useful to have a standardized format for reporting findings. This can be useful, as in the following ways:

- As the network evolves over time and produces several reports, a standardized format will make it easier to review data from different reporting periods to develop and access trends across different time periods.
- For networks that cover more than one geographic area, a standardized format will make it easier to summarize data across different areas, and also make it easier for readers to make their own comparisons across reporting areas.
- For networks that plan to distribute reports to policymakers, practitioners, and other interested parties, it is advisable to have a standard format with a concise table of contents to guide readers and facilitate their review of the report; over time, readers will become accustomed to the format and find the reports easier to review.

It is important to recognize that your network is not likely to have all the sources of data described in earlier chapters of this guide as it begins its surveillance work. Yet, much can be learned in initial efforts. For example, when the Louisiana State Epidemiology Work Group (SEWG) began in September 1997, only seven parishes reported indicator data from their jurisdictions. A year later, 11 parishes reported the type of indicator data. By 2002, this work group was reporting data by administrative region, with data on some or all of the parishes included in the 10 regions. These SEWG reports have been prepared in a standard format, with each regional or parish paper containing an *Abstract* of key findings and section on *Drug Abuse Patterns and Trends* by drug or data source. Tabular and graphic data appear at the conclusion of each paper.

The Community Epidemiology Work Group has used a similar format over the years, always reporting patterns and trends by drug of abuse. The CEWG area reports are published semiannually in a series entitled *Epidemiologic Trends in Drug Abuse, Volume II*, and can be viewed on the NIDA Web site <<http://www.nida.nih.gov>> (see *Appendix B*).

Once a network has become established, members may opt to disseminate findings in a brief one-page fax or e-mail, such as the examples provided in the addenda to *Chapter 7*.

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# **APPENDIX A. CURRENT CEWG REPRESENTATIVES, BY LOCATION**

## **Atlanta**

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## **APPENDIX B. WEB SITES<sup>1</sup> CONTAINING DATA AND INFORMATION DISCUSSED IN THIS PUBLICATION**

1. National Institute on Drug Abuse (NIDA)



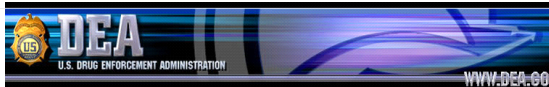
2. The Office of National Drug Control Policy (ONDCP)



3. Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA)



4. Drug Enforcement Administration  
➤ Intelligence Division  
➤ Diversion Control Division



5. National Drug Intelligence Center (NDIC)



6. Federal Bureau of Investigation, Uniform Crime Reports



7. Centers for Disease Control and Prevention (CDC)  
➤ National Center for Chronic Disease Prevention and Health Promotion  
➤ National Center for HIV, STD, and TB Prevention



8. American Association of Poison Control Centers (AAPCC)



9. Other Web Sites:  
➤ USACops  
➤ U.S. Customs and Border Protection  
➤ U.S. Census Bureau



<sup>1</sup>All Web addresses given in this appendix are current as of November 2005.



## National Institute on Drug Abuse (NIDA)

**Web address:** <http://www.nida.nih.gov>

NIDA supports intramural and extramural research on all aspects of drug abuse and addiction. The extramural program supports scientists in universities and research centers around the country and abroad in conducting a wide range of basic, clinical, and epidemiologic studies to increase understanding of drug addiction and improve methods of preventing and treating it.

Soon after its inception in 1974, NIDA launched the Community Epidemiology Work Group (CEWG) and the Monitoring the Future (MTF) surveys to assess drug abuse patterns and track nationwide trends.

This Web site provides access to data/information produced by five ongoing NIDA drug abuse data sources (CEWG and MTF) and links to data sources supported by other agencies and institutions. These other data sources include Computer Retrieval of Information on Science Projects (CRISP), a searchable database of federally funded biomedical research projects being conducted at universities, hospitals, and other research institutions. This database includes NIDA grantees who are conducting drug abuse research.

**Monitoring the Future** (MTF) Survey is conducted by the University of Michigan's Institute for Social Research (ISR) and funded by NIDA. MTF has tracked 12th graders' illicit drug use and attitudes towards drugs since 1975. In 1991, 8th and 10th graders were added to the study. The 2004 study surveyed 49,500 students in 406 schools across the Nation about their lifetime use, past-year use, past-month use, and daily use of drugs, alcohol, and cigarettes and smokeless tobacco.

Additional information about the MTF survey, related publications, and press releases, as well as links to other ISR research projects can be found at [www.monitoringthefuture.org](http://www.monitoringthefuture.org).

NIDA sponsors and conducts epidemiologic research to monitor and assess the complex and constantly changing phenomenon of drug abuse. **The Community Epidemiology Work Group**, established by NIDA in 1976, provides ongoing community-level surveillance of drug abuse through the collection and analysis of epidemiologic and ethnographic data. The CEWG meets semiannually to review epidemiologic and ethnographic data from 20 U.S. metropolitan areas and the State of Texas.

CEWG members representing the areas rely on multiple sources of information, including the types listed below:

- Survey findings
- Drug abuse treatment admissions and discharges
- Drug-related deaths
- Emergency department drug abuse episodes
- Public health data
- AIDS cases associated with injection drug use
- Drug-related arrests
- Forensic laboratory analyses
- Price and purity levels (of illicit drugs)
- Ethnographic research
- Qualitative information

Each data source is a potential drug abuse indicator. By comparing and assessing data from different sources concurrently, members obtain a more comprehensive view of drug abuse patterns and trends. One source can complement and support another. Each data source may also represent different populations of users and the agencies that serve their needs. Interpretation of indicator data, therefore, requires an understanding of the strengths and weaknesses of each data source and variables within each database.

**CEWG Meeting Reports** are based on data/information reported at biannual meetings. At the meetings, CEWG members present data on drug abuse from a variety of city, State, Federal, and other sources. These data are enhanced with information gathered through qualitative methods. From each meeting stem the following publications:

- [Epidemiologic Trends in Drug Abuse – Advance Report](#)
- [Volume I: Highlights and Executive Summary](#)
- [Volume II: Proceedings of the Epidemiology Work Group on Drug Abuse](#)

These reports are available online at [www.nida.nih.gov/about/organization/cewg/Reports.html](http://www.nida.nih.gov/about/organization/cewg/Reports.html).

**The Computer Retrieval of Information on Scientific Projects** (CRISP) is a searchable database of federally funded biomedical research projects conducted at universities, hospitals, and other research institutions. The database, maintained by the Office of Extramural Research at the National Institutes of Health, includes projects funded not only by NIDA but also by the National Institutes of Health (NIH), Substance Abuse and Mental Health Services Administration (SAMHSA), Health Resources and Services Administration (HRSA), Food and Drug Administration (FDA), Centers for Disease Control and Prevention (CDC), Agency for Health Care Research and Quality (AHRQ), and Office of Assistant Secretary of Health (OASH). Users, including the public, can use the CRISP interface to search for emerging trends and techniques or to identify specific projects and/or investigators. CRISP can be viewed at <http://crisp.cit.nih.gov>.

**Related Links** with other NIDA constituent organizations, grantees, and government sites of interest are also available.





## The Office of National Drug Control Policy (ONDCP)

**Web address:** <http://www.whitehousedrugpolicy.gov>

ONDCP is a component of the White House resources under the Office of the President. Initiated in 1988 by the Anti-Drug Abuse Act, ONDCP establishes policies, priorities, and objectives to reduce the illicit use, manufacturing, trafficking, crime, and health consequences directly related to the abuse of drugs. The ONDCP Web site provides the public with an array of data/information on substance abuse.

**Drug Facts** provides data and information on specific drugs and drug-abusing populations, and the subcategories of specific drugs.

Information is also provided on a wide range of topics, including the extent of drug use, health effects, treatment, arrest and sentencing, production and trafficking, legislation, street terms, and other links.

### ONDCP Major Cities Initiative

The **Major Cities Initiative** develops and supports the leadership in 25 targeted cities—particularly in the areas of drug prevention, drug treatment, and public safety—to enhance cooperation and accomplish significant improvement in key measures of drug use in each city. A State-of-the-City Profile for each targeted city can be accessed by selecting a city from the map or the drop down menu.

### High-Intensity Drug-Trafficking Areas (HIDTA)

The HIDTA program provides Federal resources to areas within the United States that exhibit serious drug trafficking problems. The **HIDTA** link directs one to a map showing HIDTA sites and to individual HIDTA summaries for each site.

### State and Local Profiles, Contacts, and Resources

The **State and Local** link on the Home Page allows the user to access each State's profile, contact information, and various other resources with respect to drug policy information. The drop box (like the HIDTA page's drop box) transfers the user to the specific State information page, which consists of links to the information.

**Science and Technology** is a link to **Research**, which is a link to the comprehensive list of Research, Science, and Technology resources.

**Related Links** to other sites offers a listing of other Web pages that provides drug abuse data/information. These links take the user to completely different Web pages that are not created or maintained by the Office of National Drug Control Policy.



## Office of Applied Studies (OAS), Substance Abuse and Mental Health Services Administration (SAMHSA)

Web site: <http://www.oas.samhsa.gov>

SAMHSA is the lead Federal agency within the Department of Health and Human Services for improving access to quality substance abuse prevention, addiction treatment, and mental health services in the United States. OAS, an office within SAMHSA, is the primary source of national data on the prevalence, treatment, and consequences of substance abuse. Data are collected on the Nation's treatment systems and outcomes. These data are intended to serve as statistical indicators of progress in the field and to provide a better understanding of the nature and extent of substance abuse in order to improve prevention and treatment services and reduce substance abuse in this country. Data from the OAS data systems are available to the public, researchers, and other interested persons through published and Web site reports. OAS produces several publication series that provide national and State data on alcohol, tobacco, and illegal drug use and their correlates and consequences. In addition, persons may do their own data analysis using the **Substance Abuse and Mental Health Data Archives (SAMHDA)** system that provides for data analysis either online or by downloading public use tapes. Additional information about SAMHDA and how it can be used is provided in a section below.

Data/information can be obtained from the following OAS sources on the Web site:

**Latest Data** This link provides access to recently released reports, by data system and time period (e.g., year).

**National Survey on Drug Use and Health (NSDUH)** Previously called the National Household Survey on Drug Abuse, NSDUH reports on the prevalence patterns and consequences of drug and alcohol use and abuse in the general U.S. civilian noninstitutionalized population age 12 and older. Data are collected on the use of illicit drugs, nonmedical use of licit drugs, and use of alcohol and tobacco products. The survey is conducted annually and is designed to produce drug and alcohol use incidence and prevalence estimates. Data are also collected periodically on special topics, such as criminal behavior, treatment, mental health, and attitudes about drugs. Incidence data describe emerging patterns of substance abuse, particularly among young people. Incidence estimates are based on retrospective reports of age of first use of particular substances by respondents interviewed. Incidence rates are reported as the number of new users per 1,000 potential (persons who have not yet used the substance) users. Data are reported nationally, and findings on selected variables are reported by State and periodically by substate areas.

**Drug and Alcohol Services Information System (DASIS)**, the primary source of national data on substance abuse treatment, has three components:

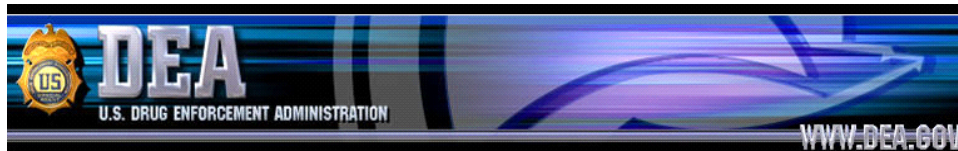
- **Substance Abuse Treatment Facility Locator** provides names/addresses of local providers and of Single State Agencies. Facility Locator information is available at <http://findtreatment.samhsa.gov>.
- **National Survey of Substance Abuse Treatment Services (N-SSATS)** Treatment data are collected on location, patient characteristics, services offered, and numbers of clients in public and private alcohol and drug abuse treatment in the 50 States, the District of Columbia, and other U.S. jurisdictions. N-SSATS is a point-prevalence survey collecting data collected on and for a particular (reference) date. See also <http://www.drugabusestatistics.samhsa.gov>.
- **Treatment Episode Data Set (TEDS)** is minimum data set that includes demographic and substance abuse characteristics of admissions to substance abuse treatment. These data are routinely collected by State administrative systems and submitted to SAMHSA in a standard format. Some States also report discharge status data. The most recent data reported by States, the District of Columbia, and Puerto Rico are presented by primary substance of abuse, according to gender, age, and race/ethnicity. See <http://www.drugabusestatistics.samhsa.gov>.

**Drug Abuse Warning Network (DAWN)** is a public health surveillance system that collects and reports data on:

- Drug-related hospital emergency department cases
- Drug-related deaths reported by medical examiners

DAWN data are both local (metropolitan area) and national in scope. A scientific sample of hospitals, by geographic area, participates in DAWN. Eligible hospitals include non-Federal, short-term, general hospitals that operate 24-hour emergency departments. Types of drugs covered in DAWN include illegal drugs, prescription and over-the-counter medications, dietary supplements, non-pharmaceutical inhalants, and alcohol. Data are collected through a retrospective review of patient medical records and decedent case files. OAS publishes national and metropolitan area estimates of drug-related emergency department visits each year. Mortality data are published annually for each participating jurisdiction. SAMHSA is required to collect DAWN data under Section 505 of the Public Health Service Act (42 U.S.C. 290aa-4). Both DAWN systems were redesigned in 2003, and data from 2002 and before cannot be compared with those from 2003 and subsequent years. See <http://DAWNinfo.samhsa.gov>.

**Substance Abuse and Mental Health Data Archive (SAMHDA)** provides ready access to substance abuse and mental health research data and promotes the sharing of these data among researchers, academics, policymakers, service providers, and others. The online analysis system allows one to run both simple and complex analyses, recode and compute new variables, subset variables, or cases for downloading, and run Quick Tables. One objective is to increase the use of the data in understanding and assessing substance abuse and mental health problems and the impact of related treatment systems. The data archive is also intended to expand the variety of media on which data are available and to make the data available in a user-friendly format. The Web site features a data analysis system (DAS) that allows users to conduct analyses on selected datasets within the archive. SAMHDA also provides user support through e-mail and a toll-free helpline.



## Drug Enforcement Administration (DEA)

### Intelligence Division

**Web address:** <http://www.usdoj.gov/dea/programs/intelligence.htm>

In coordination with Federal, State, local, and foreign law enforcement organizations, the DEA collects, analyzes, and disseminates drug-related intelligence. The DEA Intelligence Program gathers information that leads to drug seizures and arrests and provides policymakers with drug and drug trend information upon which program decisions can be made. The DEA's intelligence missions are to:

- Collect and produce intelligence in support of the Administrator and other Federal, State, and local agencies
- Establish and maintain close working relationships with all agencies that produce or use narcotics intelligence
- Increase the efficiency in the reporting, analysis, storage, retrieval, and exchange of such information
- Continue review of the narcotics intelligence effort to identify and correct deficiencies

The DEA Intelligence System includes domestic field divisions; district, resident, and foreign officers; the El Paso Intelligence Center; and the Intelligence Division at DEA Headquarters.

**Stats and Facts** is the link to State Fact Sheets for the 50 States and Washington, DC. Fact Sheets include the most recent information about the general drug situation (e.g., trafficking, availability, and abuse of particular drugs) and more detailed information about specific drugs (e.g., seizures) in each area.

**Drug Information** provides descriptions and up-to-date information (including reports) on more than 50 drugs.

## Diversions Control Program (DEA)

Web address: <http://www.deadiversion.usdoj.gov>

The DEA Office of Diversion Control (ODC) is responsible for assessing and addressing the diversion of controlled pharmaceuticals and controlled chemicals. ODC staff include diversion investigators, special agents, chemists, pharmacologists, and program analysts. The activities of this office include field management oversight; coordination of major investigations; drafting and promulgating of regulations; legal control of drugs and chemicals not previously under Federal control; control of imports and exports of drugs and chemicals; computerized monitoring and tracking; the distribution of certain controlled substances; and providing distribution intelligence to the States. Data/information on drugs and drug distribution are collected and reported on the Web site.

**Publications** through which diversion data/information are reported include **Informational Brochures**, **Manuals**, **Newsletters**, **Press Releases**, and **Program Reports**.

**Drugs/Chemicals of Concern** provides data/information on a variety of prescription and over-the-counter drugs including fentanyl, hydrocodone, hydromorphone, ketamine, oxycodone, salvia divinorum, and tramadol.

**ARCOS** is the link for the Automation of Reports and Consolidated Orders System that monitors the flow of DEA controlled substances from their point of manufacture, through commercial distribution channels, to point of sale or distribution at the dispensing/retail levels. The information is used to identify the diversion of controlled substances into illicit channels of distribution. ARCOS retail drug distribution data are reported (PDF format) by Zip Code and State. These data can be accessed directly at **retail drug summary**.

**NFLIS** is the link for the National Forensic Laboratory Information System that systematically collects results from solid dosage drug analyses conducted by State and local forensic laboratories across the country. These data are used to monitor and assess drug abuse and trafficking in the U.S., including the diversion of legally manufactured drugs into illegal markets. NFLIS laboratory results, validated by chemical analysis, have a degree of validity. Approximately 300 State and local forensic laboratories perform nearly 2 million drug analyses each year.

## DEA Field Offices

To obtain drug intelligence data for your area, first contact the appropriate DEA division office. You will then be directed to an agent covering your community.



<p><b>Atlanta Division</b> (404) 893-7000 <b>Offices</b> Augusta, GA Columbus, GA Macon, GA Rome, GA Savannah, GA Asheville, NC Charlotte, NC Greensboro, NC Raleigh, NC Wilmington, NC Beaufort, SC Charleston, SC Columbia, SC Florence, SC Greenville, SC Chattanooga, TN Jackson, TN Johnson City, TN Knoxville, TN Memphis, TN Nashville, TN</p>	<p><b>Boston Division</b> (617) 557-2100 <b>Offices</b> Bridgeport, CT Hartford, CT New Haven, CT New Bedford, MA Springfield, MA Bangor, ME Portland, ME Manchester, NH Portsmouth, NH Providence, RI Burlington, VT</p>	<p><b>Caribbean Division</b> (787) 775-1815 <b>Offices</b> Bridgetown, Barbados Santo-Domingo, D.R. Port-au-Prince, Haiti Kingston, Jamaica Curacao, Neth. Ant. Ponce, Puerto Rico Port of Spain, Trinidad &amp; Tobago St. Thomas, VI St. Croix, VI</p>	<p><b>Chicago Division</b> (312) 353-7875 <b>Offices</b> Rockford, IL Springfield, IL Evansville, IN Ft. Wayne, IN Indianapolis, IN Merrillville, IN Minneapolis/St. Paul, MN Bismarck, ND Fargo, ND Green Bay, WI Madison, WI Milwaukee, WI</p>	<p><b>Dallas Division</b> (214) 366-6900 <b>Offices</b> McAlester, OK Oklahoma City, OK Tulsa, OK Amarillo, TX Ft. Worth, TX Lubbock, TX Tyler, TX</p>
<p><b>Denver Division</b> (303) 705-7300 <b>Offices</b> Colorado Springs, CO Glenwood Springs, CO Grand Junction, CO Steamboat Springs, CO Billings, MT Missoula, MT Salt Lake City, UT St. George, UT Casper, WY Cheyenne, WY</p>	<p><b>Detroit Division</b> (313) 234-4000 <b>Offices</b> Kalamazoo, MI Lexington, KY London, KY Louisville, KY Madisonville, KY Lansing, MI Grand Rapids, MI Saginaw, MI Cincinnati, OH Cleveland, OH Columbus, OH Dayton, OH Toledo, OH Youngstown, OH</p>	<p><b>El Paso Division</b> (915) 832-6000 <b>Offices</b> Albuquerque, NM Las Cruces, NM Alpine, TX Midland, TX</p>	<p><b>Houston Division</b> (713) 693-3000 <b>Offices</b> Austin, TX Beaumont, TX Brownsville, TX Corpus Christi, TX Del Rio, TX Eagle Pass, TX Galveston, TX Laredo, TX McAllen, TX San Antonio, TX Waco, TX</p>	<p><b>Los Angeles Division</b> (213) 621-6700 <b>Offices</b> Riverside, CA Santa Ana, CA Ventura, CA Guam Hilo, HI Honolulu, HI Maui, HI Lake Tahoe, NV Las Vegas, NV Reno, NV</p>
<p><b>Miami Division</b> (305) 994-4870 <b>Offices</b> Freeport, Bahamas Nassau, Bahamas Ft. Lauderdale, FL Ft. Myers, FL Gainesville, FL Jacksonville, FL Key Largo, FL Key West, FL Orlando, FL Panama City, FL Pensacola, FL Port St. Lucie, FL Tallahassee, FL Tampa, FL Titusville, FL W. Palm Beach, FL</p>	<p><b>New Jersey Division</b> (973) 776-1100 <b>Offices</b> Atlantic City, NJ Camden, NJ Paterson, NJ</p>	<p><b>New Orleans Division</b> (504) 840-1100 <b>Offices</b> Birmingham, AL Huntsville, AL Mobile, AL Montgomery, AL Fayetteville, AR Ft. Smith, AR Little Rock, AR Baton Rouge, LA Lafayette, LA Monroe, LA Shreveport, LA Gulfport, MS Jackson, MS Oxford, MS</p>	<p><b>New York Division</b> (212) 337-3900 <b>Offices</b> Albany, NY Buffalo, NY Long Island, NY Plattsburgh, NY Rochester, NY Syracuse, NY Westchester Cty, NY</p>	<p><b>Philadelphia Division</b> (215) 861-3474 <b>Offices</b> Dover, DE Wilmington, DE Allentown, PA Harrisburg, PA Pittsburgh, PA Scranton, PA</p>

<p><b>Phoenix Division</b> (602) 664-5600 <b>Offices</b> Flagstaff, AZ Lake Havasu City, AZ Nogales, AZ Sierra Vista, AZ Tucson, AZ Yuma, AZ</p> <p><b>San Diego Division</b> (858) 616-4100 <b>Offices</b> Carlsbad, CA Imperial County, CA San Ysidro, CA</p>	<p><b>San Francisco Division</b> (415) 436-7900 <b>Offices</b> Bakersfield, CA Fresno, CA Modesto, CA Oakland, CA Redding, CA Sacramento, CA San Jose, CA Santa Rosa, CA</p>	<p><b>Seattle Division</b> (206) 553-5443 <b>Offices</b> Anchorage, AK Fairbanks, AK Boise, ID Bend, OR Eugene, OR Medford, OR Portland, OR Salem, OR Blaine, WA Spokane, WA Tacoma, WA Tri-Cities, WA Yakima, WA</p>	<p><b>St. Louis Division</b> (314) 538-4600 <b>Offices</b> Cedar Rapids, IA Des Moines, IA Sioux City, IA Carbondale, IL Fairview Hts., IL Quad Cities, IL Garden City, KS Kansas City, KS Topeka, KS Wichita, KS Cape Girardeau, MO Jefferson City, MO Springfield, MO North Platte, NE Omaha, NE Rapid City, SD Sioux Falls, SD</p>	<p><b>Washington, DC Division</b> (202) 305-8500 <b>Offices</b> Baltimore, MD Hagerstown, MD Salisbury, MD Bristol, VA Hampton, VA Norfolk, VA Richmond, VA Roanoke, VA Winchester, VA Charleston, WV Clarksburg, WV Wheeling, WV</p>
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## National Drug Intelligence Center (NDIC)

**Web address:** <http://www.usdoj.gov/ndic/index.htm>

NDIC was established in 1993 as a component of the U.S. Department of Justice (DOJ) to be a focal point for counter-drug intelligence. It gathers intelligence on drug production and drug use and assesses the threat of illicit substances by geographic area.

National and State threat assessment reports can be found under **Publications.**

The **National Drug Threat Assessment** is an annual NDIC report on national drug trafficking and abuse trends within the United States. The report identifies “drug threats,” monitors fluctuations in drug consumption levels, and tracks drug availability by geographic market. It includes current quantitative and qualitative information on availability, demand, production, cultivation, transportation, and distribution, as well as the effects of particular drugs.

**State Drug Threat Assessment** reports provide detailed threat assessments of drug patterns and trends in a particular State. Each report identifies the primary drug threats in the State and gives a detailed overview of the most current trends by drug type. State reports are periodically updated.

**Bulletins and Briefs** are responses to new trends or high-priority drug issues. They are quickly transmitted to law enforcement and intelligence officials to warn them of emerging drug, drug patterns, and trends.





## Federal Bureau of Investigation (FBI) Uniform Crime Reports (UCR)

**Web address:** <http://www.fbi.gov/ucr/ucr.htm/>

The FBI compiles crime data collected from more than 17,000 law enforcement agencies annually to form the data set known as the Uniform Crime Report (UCR).

These data include arrests for drug abuse violations by State and county and also the demographics for arrestees (i.e., age, sex, and race).

Data pertaining to drug abuse violation arrests are collected in specific drug categories by type of arrest (i.e., *Sales and Manufacturing or Possession*). The drug categories include Opium or Cocaine and Derivatives, Marijuana, Synthetic Narcotics, and Other Dangerous Narcotic Drugs.

UCR Reports available on the FBI Web site include data by State but not by county. To obtain the most recent reports that include county data, one should contact the State law enforcement agency responsible for reporting UCR data to the FBI. Generally, hard copies of the most recent State UCR report can be obtained from the State agency.



## Centers for Disease Control and Prevention (CDC)

### National Center for Chronic Disease Prevention and Health Promotion

**Web address:** <http://www.cdc.gov/HealthyYouth/YRBS/>

CDC, a component of the Department of Health and Human Services, is the lead Federal agency for protecting the health and safety of people, providing credible information to enhance health decisions, and promoting health through partnerships. It carries out this role through disease prevention and control, environmental health, and health promotion and education activities.

#### **Youth Risk Behavior Surveillance System (YRBSS)**

The YRBSS, developed in 1990, monitors health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth and young adults in the United States. These behaviors include *tobacco use, alcohol use, and other drug use*.

The YRBSS is designed to:

- Determine the prevalence of health risk behaviors
- Assess whether health risk behaviors increase, decrease, or stay the same over time
- Examine the co-occurrence of health risk behaviors
- Provide comparable national, State, and local data
- Provide comparable data among subpopulations of youth
- Monitor progress toward achieving the Healthy People 2010 objectives and other program indicators

The YRBSS includes national, State, and local school-based surveys of representative samples of 9th through 12th grade students. The Youth Risk Behavior Survey (YRBS) is conducted every 2 years, usually during the spring semester. The national survey, conducted by CDC, provides data representative of high school students in public and private schools in the United States. The State and local surveys, conducted by departments of health and education, provide data representative of the State or local school district.

At-A-Glance Report: **Assessing Health Risk Behaviors Among Young People: Youth Risk Behavior Surveillance System, 2004**

## National Center for HIV, STD, and TB Prevention

Web address: <http://www.cdc.gov/hiv/stats/haslink.htm>  
<http://www.cdc.gov/hiv/stats/hasr1402/website.htm>

The CDC Web sites include HIV/AIDS data by region but not by State, county, or city. State and territorial health departments use local HIV/AIDS surveillance programs to report surveillance data to CDC. These are the best sources of local HIV/AIDS, hepatitis B, and hepatitis C data.

The **Morbidity and Mortality Weekly Report (MMWR)** series includes provisional weekly data based on reports to CDC by State health departments. Data are provisional because of delayed reporting and the ongoing revision of information.

The **HIV/AIDS Surveillance Supplemental Report** is an annual report on persons with diagnoses of HIV infection and AIDS, persons living with a diagnosis of HIV infection or AIDS, reported cases of HIV/AIDS and AIDS, and deaths among persons with AIDS, by race/ethnicity, in the United States  
<http://www.cdc.gov/hiv/stats/haslink.htm>.

**Estimated Numbers of Persons Living with HIV** infection (not AIDS) by exposure category and year and by race/ethnicity and age.

HIV/AIDS exposure categories by gender include:

- Injection drug use
- Male-to-male sexual contact and injection drug use
- Heterosexual contact

**Acute Hepatitis** <http://www.cdc.gov/ncidod/diseases/hepatitis/resource/index.htm> (Hepatitis Surveillance Report). This recent report is largely national data, however, Figure 12 shows the Incidence of Acute Hepatitis B by Region (Northwest, Northeast, etc.) and Figure 13 shows the same by county.





## American Association of Poison Control Centers (AAPCC)

**Web site:** <http://www.aapcc.org/>

AAPCC is a nationwide association of Poison Control Centers in the United States. It collects, analyzes, and reports on poisoning data submitted by centers.

**Find Your Poison Center** Local centers can be identified by clicking on a **map** of States, by entering a **zip code** or by **directory**.

**Poisoning Data** can be accessed directly.

**Poison Center Survey Results** are through annual reports.

## Other Web Sites



## USACOPS

**Web address:** <http://www.usacops.com/>

USACOPS, a national directory of law enforcement agencies in the United States, is supported by donations. Contact information (person in charge, address, and telephone numbers) can be accessed for local (county/city) police departments and sheriffs' offices.

It is possible to obtain information on drug arrests (cases) for particular drugs (trafficking, production, availability, and cost).



## U.S. Customs and Border Protection (CBP) U.S. Department of Homeland Security

**Web address:** <http://www.cbp.gov/> (Formerly, U.S. Customs site); click on News Releases.

This Web site contains CBP news releases by date.

## U.S. Census Bureau

### U.S. Census Bureau

**Web address:** <http://www.census.gov/>; click on **American FactFinder™**

This Web site contains census data by geographic area on population size and sociodemographic population characteristics.

