

*Multiple Indicator Analysis (MIA) is a method developed by the Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Substance Abuse Treatment (CSAT) to assist planners and administrators in assessing the nature and extent of substance abuse in selected geographic areas. Analyses from secondary data, including substance abuse treatment administrative data, arrest and criminal justice data, mortality and morbidity data, poison control data, survey data, and census data allow organizations to improve their capacity to implement planning activities, especially for high-risk populations. This fact sheet describes mortality, morbidity, and poison control data, and provides Web sites for accessing some of these data sources. These data sources are important for increasing awareness of emerging trends in substance use and provide a context for a broader understanding of the extent of substance abuse. Copies of the MIA can be obtained through the National Clearinghouse for Alcohol and Drug Information at 1-800-729-6686 (NCADI publication number BKD418).*

## **Background**

Multiple Indicator Analysis (MIA) is a method that can be used by planners and administrators to assess the nature and extent of substance abuse in selected geographic areas by using existing multiple data sources. MIA was developed by the Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Substance Abuse Treatment (CSAT) to address substance abuse-related questions and issues critical to planners, policymakers, and service providers at the state, county, city, and community levels.

The MIA methodology provides a vehicle for substance abuse treatment analysts to accomplish a key goal, namely the ability to synthesize data from multiple data sets (i.e., “families” of studies), and thereby answer analytic questions that cannot be addressed by single evaluation data sources.

No single data source contains comprehensive information on populations abusing substances. Through the use of descriptive statistics, the MIA approach can be especially useful for assessing underreported illicit drug abuse, particularly cocaine powder, crack cocaine, heroin, and methamphetamine, as well as prescription drug abuse. By accessing and using multiple data sources, it is possible to obtain a better estimate of drug abuse prevalence, incidence, patterns, and trends. Some of the most useful data sources for assessing the nature and extent of substance abuse include:

- Substance abuse treatment administrative data
- Arrest and criminal justice data
- Mortality data
- Morbidity data
- Poison control center data
- Survey data
- Census data.

This fact sheet focuses on three types of data sources for examining illicit drug use: mortality, morbidity and Poison Control Center data. Fact Sheet 107 provides an overview of the MIA method, the usefulness of the method for different audiences, and the strengths and limitations of the method. Fact Sheet 108 describes sources of substance abuse treatment and criminal justice data, while Fact Sheet 110 describes survey and census data and data sources.

## **Mortality Data**

Data on deaths in which drugs and/or alcohol were involved can be obtained from state medical examiners or county/city coroners. Death investigation methods and the coding of mortality data may vary considerably between jurisdictions (e.g., state, county, city). Some states, for example, only use mortality codes that reflect direct overdoses, while other states employ coding practices that reflect the indirect effects of drug and/or alcohol use, such as drowning and fires.

Data can also be obtained from death certificates that are reported to vital statistics units within state health departments by the attending physician, medical examiner, or justice of the peace. The available data include sociodemographic information, as well as the cause of death (e.g., overdose) and the types of drugs involved.

In many jurisdictions, the coroners or medical examiners have the most current and detailed information on each drug and/or alcohol overdose death. In some cases, this information is automated, while in other cases it might be necessary to review the actual files on the decedent to get demographic information and types of substances involved in the overdose.

Mortality data can be also be obtained from death certificates from vital statistics units within state health departments. Typically, the medical examiner, justice of the peace, or the attending physician reports this information. The data include sociodemographic information as well as the cause of death (e.g., overdose) and the types of substances used.

The Drug Abuse Warning Network (DAWN) medical examiner database is an ongoing drug abuse data collection system administered by SAMHSA's Office of Applied Studies. An episode report is submitted by the medical examiner for each substance use death known to have occurred. Each report includes demographic information about the decedent and information about the circumstances surrounding the death.

## **Morbidity Data**

There are many useful data sources related to drug and/or alcohol-related morbidity, including:

- Hospitals
- The DAWN system
- Centers for Disease Control and Prevention.

# The Use of Health and Poison Control Center Data for Estimating Substance Abuse

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Most hospitals collect information, maintain records, and report on the types of drug and/or alcohol-related problems and the specific substances used by patients. Aggregation of this data is difficult, however, because there is a lack of uniformity among public, private, and not-for-profit hospital databases.

Hospital emergency room data can be useful because many underreported illicit drug users do not have health insurance or the money required to pay for health care services. For this reason they are likely to use the hospital emergency rooms as their primary source of medical care. Therefore, hospital emergency rooms are a potentially valuable source of data about users of illicit drugs, their medical problems, the particular drugs they use, and new drugs of abuse.

The DAWN system also collects information about episodes of illegal substance use or nonmedical use of legal substances among persons seen in selected emergency departments in 21 metropolitan areas. In each episode a person may mention more than one drug, and each mention is counted in a discrete substance use category.

The Centers for Disease Control (CDC) disseminates information from the "Morbidity and Mortality Weekly Report" (MMWR) series.

## Poison Control Center Data

Poison Control Centers (PCCs) are another potential source of information on individuals who have used drugs and/or alcohol. Each PCC provides specific services to a designated region, including:

- Poison information and telephone management advice about toxic exposures
- Hazard surveillance to achieve hazard elimination
- Professional and public education on poison prevention, diagnosis, and treatment.

PCCs usually collect data on gender, age, location, exposure reasons (including intentional misuse and abuse), medical outcome, and substances mentioned. PCC statistics also serve as an early warning system for identifying new drugs of abuse.

PCCs report data in a standardized format to the American Association of Poison Control Centers Toxic Exposure Surveillance System (TESS). Substances reported to TESS include street drugs such as cocaine powder, crack cocaine, heroin, and methamphetamine, as well as drugs of more recent popularity, such as ecstasy, gamma hydroxybutyrate, and oxycortin. Other drugs reported to TESS include fentanyl, hydrocodone, oxycodone, methadone, and benzodiazepenes.

## On-Line Sources of Data Information

The on-line sources listed provide information for mortality, morbidity and PCC data. Many of these Web sites include public-use data files which can be used for the purposes of secondary data analysis on substance abuse.

The DAWN includes drug-related emergency room visits for 21 metropolitan areas and drug-related deaths reported by medical examiners and coroners in 40 metropolitan areas. The DAWN reports and data on mortality and morbidity can be accessed through the Web at <http://www.samhsa.gov>. At the bottom right of the Web page, click on Office of Applied Studies (OAS) link. That will take you to another Web page with data sets and information listed on the left hand side. The DAWN data and other data sources are noted on the left hand side of the page.

Information on mortality and morbidity data from the CDC can be obtained at <http://www.cdc.gov> and at <http://wonder.cdc.gov>.

Information from PCCs can be found at <http://www.aapcc.org>. This Web site provides information on fatal exposures to different substances, as well as nationwide demographic profiles of exposure cases by substances and products used.

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**We welcome feedback, comments, and suggestions. For more information, please contact us at (703) 385-3200, or visit the NEDS Web site at <http://neds.calib.com>. The NEDS Web site may also be accessed through the SAMHSA Web site at <http://www.samhsa.gov/CSAT> (Click on Data Resources).**

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