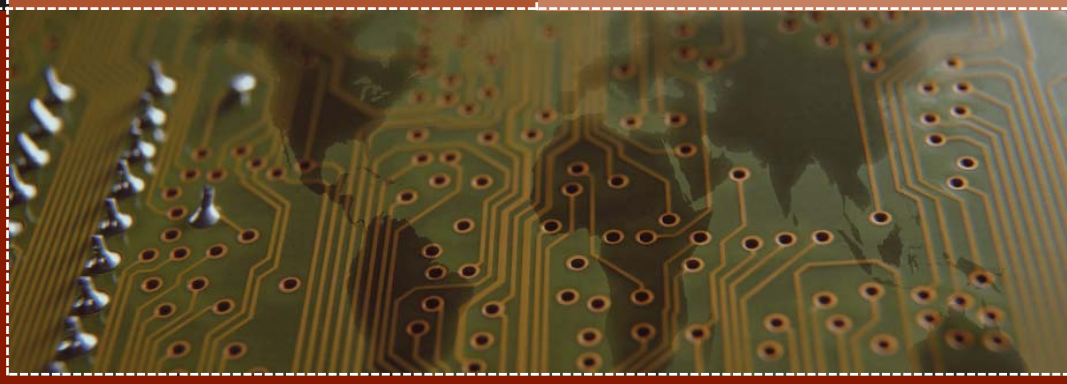
Global Assessment Programme on Drug Abuse (GAP)

Toolkit Module 1



Developing an Integrated Drug Information System

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Developing an Integrated Drug Information System

Global Assessment Programme
on Drug Abuse

Toolkit Module I

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The Office for Drug Control and Crime Prevention became the Office on Drugs and Crime on 1 October 2002.

The contents of the GAP Toolkit Module 1 was produced by the United Nations International Drug Control Programme as part of the activities conducted under the Global Assessment Programme on Drug Abuse (GAP).

For further information, visit the GAP web site at *www.undcp.org*, email *gap@undcp.org*, or contact the Demand Reduction Section, UNDCP, P.O. Box 500, A-1400 Vienna, Austria.

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GAP
Global Assessment Programme on Drug Abuse

Preface

GAP Toolkit Module 1 was prepared with the support of the United Nations International Drug Control Programme under the Global Assessment Programme on Drug Abuse (GAP). The main objective of GAP is to assist countries in collecting reliable and internationally comparable drug abuse data, in building capacity at the local level to collect data that can guide demand reduction activities, and in improving cross-national, regional and global reporting on drug trends. To support that process, the GAP Toolkit Module 1 has been produced to assist States Members of the United Nations in developing culturally appropriate systems, relevant to the countries concerned, for collecting drug information, to support existing drug information systems by promoting their conformity with internationally recognized standards of good practice, and to focus on harmonization of drug abuse indicators.

Module 1 of the GAP toolkit forms one component of a compendium of methodological guides that have been developed to support data collection activities. Other modules currently under development provide support in the following areas: school surveys; indirect prevalence estimation techniques; data interpretation and management for policy formation; and basic data manipulation using a statistical software package for the social sciences (SPSS).

Other GAP activities include the provision of technical and financial assistance in the establishment of drug information systems and support for and coordination of global data collection activities. For further information on GAP toolkit modules, contact gap@undcp.org or visit the GAP web site at www.undcp.org.

The purpose of the toolkit is to provide a practical and accessible guide to implementing data collection in core areas. The toolkit modules are designed to provide a starting point for the development of specific activities, referring the reader to more detailed information sources on specific issues, rather than being an end resource itself. GAP toolkits are based on principles of data collection that have been agreed upon by an international panel of experts and endorsed by States Members of the United Nations. Although the models presented are based on existing working models that have been found effective, a key principle is that approaches have to be adapted to meet local needs and conditions. Module 1 of the toolkit therefore provides specific examples to guide the reader through the process of adapting general principles and models to specific contexts, and is not intended to reflect the complete range or diversity of current drug information systems or data collection methods.

For further information, visit the GAP web site at www.undcp.org, email gap@undcp.org, or contact the Demand Reduction Section, UNDCP, P.O. Box 500, A-1400 Vienna, Austria.

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The contents of the GAP Toolkit Module 1 was produced by the United Nations International Drug Control Programme as part of the activities conducted under the Global Assessment Programme on Drug Abuse. Particular thanks are due to Zili Sloboda, who prepared the material presented in module 1 of the toolkit in liaison with the GAP Senior Epidemiologist Paul Griffiths and the Regional Epidemiological Adviser for Eastern and Southern Africa, Rebecca McKetin. The module was piloted in the region of Southern and Eastern Africa in conjunction with GAP activities, while revision of the module was based on inputs from participants in the East African Drug Information System, and on feedback and specific inputs from the GAP Regional Epidemiological Advisers in Africa, the Caribbean and Central Asia (Jennifer Hillebrand, Matthew Warner-Smith and Kamran Niaz).

UNDCP would like to acknowledge the support of many national counterparts in providing feedback on the draft version of the present GAP toolkit module, as well as the support of institutions and individuals in providing examples of data collection forms and mechanisms and other related material. In particular, thanks go to the Community Epidemiology Work Group, the Pompidou Group of the Council of Europe, the European Monitoring Centre for Drugs and Drug Addiction, the Southern African Community Epidemiology Network on Drug Use, the East African Drug Information System and the Caribbean Drug Information Network.

Contents

Introduction

Background

Although there are countries that can claim successes in controlling the demand for illicit drugs, abuse throughout the world continues to grow. In particular, illicit drug abuse in some developing countries has increased dramatically. However, knowledge of the scale of illicit drug use is still inadequate, and understanding of the patterns and trends limited.

To provide effective policies to reduce drug abuse, Governments need data about when, where and why people use illicit drugs. Patterns of drug use transcend national borders as users in all regions of the world get access to a greater variety of drugs, and as social trends, in particular among young people, spread more rapidly than before through better communications. The globalization of drug abuse means that demand reduction policies also have to be global, as must the information system on which they rely.

In 1998, the General Assembly, at its twentieth special session, devoted to countering the world drug problem together, adopted a Political Declaration (resolution S-20/2, annex) calling for the elimination or significant reduction of the supply of and demand for illicit drugs by the year 2008. That was the first time that the international community had agreed on such specific drug control objectives. However, the systematic data needed to monitor and evaluate progress towards those goals are not yet available. For that reason, the General Assembly requested the United Nations International Drug Control Programme (UNDCP) to provide Member States with the assistance needed to compile comparable data. UNDCP was asked to collect and analyse the data and report thereon to the Commission on Narcotic Drugs. In response to those requests, UNDCP launched the Global Assessment Programme on Drug Abuse (GAP). GAP has been designed to:

(a) Support Member States in building the systems needed to collect reliable data to inform policy and action;

(b) Encourage regional partnerships to share experiences and technical developments;

(c) Facilitate a better understanding of global patterns and trends in drug abuse by encouraging the adoption of sound methods of collecting comparable data.

Those aims reflect the challenge posed in the Declaration on the Guiding Principles of Drug Demand Reduction adopted by the General Assembly at its twentieth special session (resolution S-20/3, annex), which states the following:

> "Demand reduction programmes should be based on a regular assessment of the nature and magnitude of drug use and drug-related problems in the population ... Assessments should be undertaken by States in a comprehensive, systematic and periodic manner, drawing on results of relevant studies, allowing for geographical considerations and using similar definitions, indicators and procedures to assess the drug situation."

The main objective of GAP is to assist Member States in building the capacity to collect internationally comparable drug abuse data and to assess the magnitude and patterns of drug abuse at country, regional and global levels. The development of national and regional information systems should not only contribute to the building of capacity at the local level to collect data that can guide demand reduction activities, but also improve cross-national, regional and global reporting on drug trends. To support that process, the GAP Toolkit Module 1 has been produced to assist Member States in developing culturally appropriate systems, relevant to each country, for collecting drug information, to support existing drug information systems by promoting their conformity with internationally recognized standards of good practice, and to focus on harmonization of drug abuse indicators. Standardization of indicators and the wider adoption of sound methods for data collection will result in an enhanced analysis of trends in drug abuse in both developed and developing countries. For more information on GAP, visit the GAP web site at www.undcp.org, email gap@undcp.org, or contact the Demand Reduction Section, UNDCP, P.O. Box 500, A-1400 Vienna, Austria.

Principles and core indicators of data collection: the Lisbon consensus

Integral to efforts to improve international data on drug consumption is harmonization of data collection methods and activities. An important first step in achieving harmonization was taken in January 2000 with a joint meeting of representatives from international bodies and regional drug information networks and other relevant technical experts. The purpose of the international expert forum was to discuss the principles, structures and indicators necessary for effective drug information systems. The meeting was hosted in Lisbon by the European Monitoring Centre on Drugs and Drug Addiction (EMCDDA) and supported by UNDCP through GAP. Particular consideration was given by the international expert forum to the development of a set of core epidemiological demand indicators against which Member States could report on their respective situations. The indicators were chosen to the extent that they addressed areas in which routine data collection was considered possible at least for some countries. They are not intended to provide a com-

prehensive information base for all policy questions, as areas that require dedicated research exercises are not suitable for inclusion in an ongoing information system. The identified core indicators and a discussion of their application are set forth below:

Drug consumption among the general population

Drug consumption among the general population pertains to estimates of the prevalence and incidence of drug consumption among the general population (those aged between 15 and 64). Understanding the level of drug consumption in any population is often the starting point for policy discussions. Generating estimates of general population prevalence and incidence is therefore a key task of most drug information systems. Attention is often focused on estimating prevalence. However, levels of incidence (new cases) are likely to be equally important for policy formation. With respect to the estimation of both prevalence and incidence, it should be noted that this area does not lend itself to any single methodological solution. While surveys provide one method for achieving estimates in this area, other estimation methods also exist, such as data from sentinel surveillance systems and indirect statistical estimation techniques. In many countries, conducting national prevalence surveys may be currently not possible for reasons of cost, or because of methodological or practical difficulties.

Drug consumption among the youth population

Drug consumption among the youth population refers to estimates of the prevalence and incidence of drug consumption among youth (those aged between 15 and 24). Because drug consumption among young people is often a particular concern of policy makers, and because age cohorts of young people make a convenient sampling unit, estimates of drug consumption among the youth population form an important part of many drug information systems. School surveys have been used extensively to generate estimates in this area. However, because school attendance patterns vary between countries, and because surveys may exclude important sections of the youth population, other approaches may also be necessary.

High-risk drug abuse

High-risk drug abuse pertains to estimates of the number of drug injectors and of the proportion engaging in high-risk behaviours and to estimates of the number of daily users and of regular or dependent abusers. Some drug-taking behaviours are particularly associated with severe problems and as such merit attention. The most common data collected in this area are the number of drug injectors and of the dependent or very frequent users of drugs. Specific methods are needed to gain information on behaviours such as injection, as their hidden nature and low prevalence usually mean that they are poorly covered by general population estimates. With respect to drug injection and the transmission of infectious agents, it is also necessary to collect information on rates of high risk injecting behaviours (equipment-sharing).

Service utilization for drug problems

Service utilization refers to the number of individuals seeking help for a drug problem. Drug treatment registers are often used as a proxy indicator of treatment demand. This information is useful for analysis of service utilization and can be used as an indicator of trends in prevalence and patterns of high-risk drug consumption. The drug treatment registries may not be appropriate where general health and social services are the main providers of help. It should be remembered that the scale, structure and nature of services for those with drug problems vary greatly across countries. Therefore, definitional clarity is particularly important reporting in service utilization, as is an understanding of the methodological and analytical issues pertinent to drawing conclusions from service populations and applying them to drug problems among the general population.

Drug-related morbidity

Drug-related morbidity pertains to cases of disease directly or proportionally attributable to drug consumption, and in this context refers principally to infection rates of the human immunodeficiency virus (HIV), hepatitis B virus and hepatitis C virus among drug injectors. Health costs are of obvious importance in informing policy development with regard to illicit drug consumption. Common measures include drug-related infections such as HIV, hepatitis B, hepatitis C and behavioural risk factors among drug injectors. Conceptual problems do exist in this area and further development work is required. In particular, problems exist in estimating the contribution that drug consumption has made to cases of disease in which there are other attributed causes, and in calculating the proportion of cases in which drug use is the sole attributed cause when a number of possible causes exist.

Drug-related mortality

Drug-related mortality refers to the data on the deaths directly attributable to drug consumption. While potentially useful and clearly important, reliable data on this area are usually not widely available. Diagnostic criteria do exist to distinguish between psychiatric morbidity attributed to drug consumption and other psychiatric morbidity. However, this level of detail is often unavailable. There is also considerable debate about the potential of some illicit substances to cause psychiatric problems, as well as the role of pre-existing psychiatric conditions in the development of drug problems. Regardless of the nature of the relationship between drug consumption and mental health problems, co-morbidity remains a major concern as elevated levels of drug consumption are often found among those with mental health problems. This area is currently poorly understood and requires further research.

Principles for data collection

In addition to gaining consensus on the core indicators of drug consumption, there was agreement on the principles that should underpin data collection activities. The collection of meaningful data on drug consumption should be guided by the following broad principles:

(a) Data should be timely and relevant to the needs of policy makers and service providers;

(b) While not sufficient in themselves for a comprehensive understanding of patterns of drug consumption, efforts to improve the comparability and quality of data at international level should focus on a limited number of indicators and a manageable priority core data set;

(c) Simple indicators of drug consumption must be subject to appropriate analysis before strategic conclusions can be drawn. Analysis and interpretation of basic statistical data is greatly enhanced when combined with research, both qualitative and quantitative, and with broader information on context;

(d) Multi-method and multi-source approaches are of particular benefit in the collection and analysis of data on drug consumption and its consequences;

(e) Data should be collected in accordance with sound scientific methodological principles to ensure reliability and validity;

(f) Methods need to be adaptable and sensitive to the different cultures and contexts in which they are to be employed;

(g) Data collection, analysis and reporting should be as consistent and comparable as possible in order to facilitate meaningful discussions of changes, similarities and differences in the drug phenomenon;

(h) Methods and sources of information should be clearly stated and open to review;

(i) Data collection and reporting should be in accordance with recognized standards of research ethics;

(j) Data collection should be feasible and cost-effective in the terms of the national context in which it occurs.

Human networks and organizational structures

It is recognized that the identification of good methods alone is not sufficient for improving data collection capacity. It is also necessary to develop appropriate networks and organizational structures to provide the infrastructure necessary to support data collection. To this end, there is a need for improved capacity to analyse and interpret information on drug consumption, and this depends on the application of good methods, human resources and the availability of appropriate resources. That will require training and technical support, ongoing political support and investment to ensure sustainability and success of data collection systems. Throughout the present guide, reference is made to some of the regional and national systems that have been developed in this area. Those systems and networks allow for a dialogue between scientists and policy makers that can ensure that data collection meets the needs of policy formation. While expenditure on data collection has to be cost-effective, given the resources available within a country, it also needs to be accepted that investment in data collection activities is both necessary and resource-efficient, in that it improves the development, targeting and evaluation of other demand reduction investments. In many countries, there is now a recognition by policy makers of the value of sound information as well as an appreciation of the infrastructure needed to provide this information. It is part of the purpose of the present toolkit to summarize the lessons that have been learned in this development process to assist countries that wish to adopt a strategic approach to developing their information resources.

The discussion paper arising from the 'Lisbon Consensus' meeting (E/CN.7/2000/CRP.3) was endorsed by States Members at the forty-third session of the Commission on Narcotic Drugs, held in March 2000, and can be found on the GAP web site (http://www.undcp.org/pdf/drug_demand_gap_lisbon_consensus.pdf).

Global mechanisms for data collection

Drawing a comprehensive picture of the global patterns and trends in illicit drug consumption is not an easy task. At a global level, one mechanism exists that is designed to assemble an overview of the world drug abuse situation–the annual reports questionnaire. The annual reports questionnaire is the mechanism used by Member States to meet the obligations of the international drug control treaties to report on various aspects of the illicit drug problem to the Commission on Narcotic Drugs. Further information can be found at www.undcp.org. Most pertinent to monitoring global patterns and trends in drug consumption is part II of the annual reports questionnaire, which can be found in the supporting material of the present toolkit module. Part II of the questionnaire has been adopted in a revised form from January 2002 to reflect the agreed core indicators of drug consumption (see above overview of indicators under section "Principles of data collection" or go to http://www.undcp.org/pdf/drug_demand_gap_lisbon_consensus.pdf) and be sufficiently versatile to allow countries at different levels of data collection capacity to report. Specifically, the revised questionnaire provides for global data collection on an agreed set of core drug consumption indicators using three levels of reporting: summary expert opinion; unstandardized or partial quantitative data; and standardized quantitative data. While the questionnaire is only intended as a summary data set, it does provide a useful vehicle for encouraging the adoption of multisource data collection methods and harmonized core indicators. The annual reports questionnaire is not intended to be sufficient for all the needs of policy makers, but can provide a basic structure for data collection efforts. Countries that adopt the core measures found in the form also ensure that data collection exercises result in information that is compatible with international standards.

Currently, a picture of the global drug situation is built upon data from the annual reports questionnaire in conjunction with other published material on drug consumption, and relies heavily on data provided by national and regional drug information systems. A copy of the most recent report on the world drug abuse situation can be found at http://undcp.org/cnd_session_45.html.

Summary

Reliable, accurate and up-to-date data on drug consumption are needed to guide the implementation of demand reduction activities; however, such data are lacking in many countries. Available data often vary in quality and methods of collection and are difficult to compare across countries and regions. Therefore, there is a pressing need in many countries to foster ongoing political commitment for the collection of data on drug consump-

tion and its consequences; to support the development of technical expertise for the sound collection and analysis of data; and to establish and support human networks for the collection, analysis and dissemination of data on drug consumption. The present toolkit is a forerunner to the development of sound data collection activities, by supporting the development of human networks around which specific data collection activities can grow, while maximizing the utilization of existing information, local knowledge and available infrastructure. The toolkit is based on the principles for data collection that were identified in the Lisbon consensus. The areas identified for inclusion in an ongoing routine data collection system reflect the core indicators of the annual reports questionnaire.

WHY COLLECT DRUG ABUSE INFORMATION?

Data on drug use and abuse answer key questions that enable an appropriate public health response from policy makers. It has been pointed out on numerous occasions that for conscientious policy makers dealing with drug problems accurate data ought to be a fundamental element of sensible decision-making.

Policy-making decisions are all too often determined without consideration of epidemiological data. Such data are not only useful to show that a nation or a region experiences a drug problem, but the value of data related to drug use and abuse consists in the assistance that the data provide at all levels at which relevant health decisions have to be made.

At various levels, records from clients may justify the plea for financial aid to establish or improve a service. For example, records of the type of drugs used, the type and frequency of sexual risk behaviour and the number of self-discharges in comparison to the previous year can provide in-depth information about the functioning of treatment services and systems. In addition they can pinpoint areas for improvement of the service.

At the community level, data may help to identify trends within communities and enable policy makers to identify shortcomings at an early stage and be able to take appropriate counter measures. The early detection of crack cocaine consumption or of new methods of use in a community where only marijuana use was known is highly relevant. Such information provides a background for local strategies for prevention, treatment and control.

At the national level, strategies are increasingly focused on demand reduction, which must be based on reliable and valid epidemiological data. Furthermore, countries where national data are regularly collected are able to participate better in international discussions on drug issues. The regular assessment of the status of drug use and abuse can also serve as an early warning system that will alert other countries, as new trends in drug abuse have the tendency to cross national borders and spread to neighbouring countries.

Finally, at the global level, drug use data help to develop new global drug control policies. A global information system can facilitate the building of political resolve and a spirit of cooperation between developed and developing countries in combating the spread of illicit drug use and in strengthening the common and shared responsibility to implement and evaluate global demand reduction strategies.

For further discussion of issues around drug epidemiology and policy, refer to the Bulletin on Narcotics, vol. LIV, No. 1 (2002), while further guidance on the interpretation of data for policy is provided under the GAP toolkit (http://www.undcp.org/drug_demand_gap_m-toolkit.html).

Drug abuse information is collected in order to inform current policies regarding interdiction, prevention and treatment by:

- Identifying existing drug use patterns-types of drugs available and types of drugs used by whom and in what ways
- Detecting new drugs being used or new methods of using existing drugs
- Monitoring changing trends in drug using patterns over time, over geographic area and across population groups

PART ONE

Development of an Integrated Drug Information System

Description of an integrated drug information system

Chapter I

Background

Drug abuse has become a global problem requiring more comprehensive international cooperation to reduce the availability of and demand for drugs. Although drug abuse is becoming an increasing problem for many countries, it is largely the more affluent developed countries that have acquired the most experience in addressing the problem. Probably the most important lesson learned by those countries is that to understand their drug abuse problems and to be more efficient in addressing those problems, a multisource integrated drug information system is essential. Such a system, if well designed, not only will provide information on the types of drugs being used and the characteristics of those using them, but also will generate questions for other more focused studies to provide information that would serve to plan effective prevention and treatment programmes.

In many parts of the world, those responsible for responding to drug problems, at both at the city and the national level, do not have access to centralized data systems that provide information regarding drug-using patterns. The present toolkit has been designed to assist researchers and administrators who wish to develop such data systems so that key questions about drug use in their countries can be addressed and appropriate decisions about programming interventions can be made. The challenge to those who wish to undertake the creation of a centralized data system to assess drug abuse or misuse is that in most countries the use of drugs is highly stigmatized. There may be laws against the possession and use of drugs making those who use them lawbreakers, and the general public may hold negative social attitudes towards those who use drugs. In such contexts, drug users often wish to hide their behaviours. In addition, the very nature of drug use, that is, the variability in the types and qualities of drugs available, is dynamic and amorphous, requiring timely assessments on a regular basis. Such conditions have made the assessment of drug use highly complex and multiple methods to collect information on drug use have been developed. To make information available that captures the drug use situation at any particular time as accurately as possible requires a number of data-gathering

activities. These may range from key informant interviews or conducting focus groups with drug users and professionals such as law enforcement officers or drug use treatment providers to large household surveys. Those researchers who conduct such studies describe their activities as the tiles within the true mosaic portrait of the drug-using population. Each activity or tile provides a bit of information that describes drug use.

NOTE:

Drug use is a difficult and complex topic to monitor. All information sources have limitations and reflect only one aspect of the behaviour. Therefore, for a comprehensive understanding, it is necessary to develop a multisource or multi-indicator system that can provide insight into the different aspects of the problem.

The approach that is recommended in the toolkit is the development of an integrated drug information system. Such a system includes an accumulation of a database made up of information from a variety of both "passive" sources such as existing reports or other databases and "active" sources such as population surveys. The data are reviewed by a group of drug abuse experts who are familiar with and interested in the local drug problem. The experts discuss the data that have been collected to interpret what the data suggest and what questions can be answered using the data. The experts also specify gaps in the database, set priorities as to which gaps need to be closed and develop specifics about how to address those gaps. A summary of the data and the outcome of the discussions are prepared in a report that is disseminated to policy makers, programme planners and practitioners and other researchers. The focus of the present toolkit is on local systems, that is, information systems that consist of data for a city or country. When several cities within a country, or several countries within a region want to form a larger system, such a system or network would consist of one representative from each of the local systems or networks. Each representative would present the findings from his or her network.

The toolkit is written to help those interested in developing an integrated drug information system at a local level. It is organized as a guide to a process of self-assessment and planning. It begins with a description of an ideal integrated drug information system. This description is followed by a self-assessment process, called an "information, needs and resources analysis", that can be completed by an individual or, preferably, a group of individuals with an interest in drug use. The assessment is designed to determine what resources are available within the defined geopolitical area that can be incorporated into a data system and what missing resources are needed in order to put a complete system in place, and undertakes a strategic analysis of this information to formulate a strategic development plan. The next process outlined in the toolkit assists in setting priorities among the gaps identified. Finally, the toolkit offers step-by-step procedures to help address those gaps identified as being important. The toolkit can be used by individuals or groups to conduct their own assessments or can be used in a formal training programme. It is recognized that developing a comprehensive information system on patterns

and trends in drug abuse will be a long-term endeavour. This module of the toolkit is designed to assist in the formulation of a development strategy, based on an analysis of existing resources, which is informed by local priorities and identifies realistic and short-, medium- and long-term goals.

Further guidelines on carrying out drug abuse epidemiology can be found on the GAP web site, http://undcp.org/drug_demand_gap.html, and in the World Health Organization Guide to Drug Abuse Epidemiology (Geneva, 2000) (http://www.who.int/substance_abuse/pubs_psychoactive_drugs.htm).

BUILDING A LOCAL SYSTEM REQUIRES:

- A coordinator, someone with a strong interest in developing the system who is ideally knowledgeable about existing data sources and knows other drug abuse professionals (for example, drug abuse treatment providers, researchers and prevention specialists) and drug-abuse-related professionals (for example, mental health specialists, university researchers, law enforcement officers or data persons and medical examiners or coroners);
- An interactive network of drug abuse and drug-abuse-related professionals with access to existing data and who are committed to meeting at least once a year for a full day to discuss their data. This network is extremely important, in particular, when it is not sure what information is available or where to look for data;
- Clarification of the objectives of the network as follows:

  (a) Identifying existing drug abuse patterns within the defined geographic areas and periods of times covered by the data to be decided upon by the group;
  (b) Identifying changes in drug abuse patterns over defined periods of time, including types of drugs, modes of administration and characteristics of drug users;
  (c) Monitoring the changes to determine if they represent emergent drug problems;
  (d) Disseminating information to community agencies and interested professional groups.

- Development of a standardized way of reporting information at the meeting;
- Stimulation of discussion of findings to address the objectives of the network;
- Development of a final report format;
- Development of a dissemination plan that includes a mailing list.

Drug abuse epidemiology and information systems

Key to knowing what data sources could be included in an information system is an understanding of the epidemiology of drug abuse. In general, epidemiology is an approach to organizing information regarding a health condition to identify what is the cause of the condition and how to reduce or eliminate its impact on the morbidity (involving those get-

ting ill) and mortality (involving those dying) of both those affected by the condition and those vulnerable to becoming affected.

Epidemiologists will accept that a certain percentage of the population will experience some health conditions, for instance some children will not be inoculated for measles and therefore will contract measles, or some children will be genetically predisposed to diabetes. However, when the percentages increase, or if affected groups evidence differing characteristics, epidemiologists become concerned. They then conduct analyses of existing data to generate hypotheses to explain the increases or changing characteristics. Those hypotheses form the core of epidemiological research. The findings from the studies addressing the hypotheses then become the basis for prevention interventions and research. Therefore, epidemiological studies include those that are referred to as descriptive, from which hypotheses are generated, and those that are analytic, which address specific hypotheses. The present toolkit focuses on the first type of study, descriptive epidemiology.

Descriptive epidemiology serves to answer the "what" and "who" questions such as:

(a) What is the nature of the drug use problem in the population (what drugs are being used; how are they used; how frequently are they used)?

(b) To what extent is the general population using the drugs (what is the rate of new use within the past year; how many persons have been using drugs for more than one year)?

(c) Who are the persons using the drugs (what are their characteristics; are both males and females using drugs; are youth using drugs)?

(d) What are the social, psychological and health problems associated with the use of the drugs and are they acute or short-term problems or are they chronic or long-term (do people who use drugs have more family problems, do they have difficulties keeping jobs, do they drop out of school)?

Because the field of epidemiology evolved from studies of persons with infectious diseases, epidemiologists are interested in percentages of people who have the condition within defined populations within specific periods of time. Any changes in those percentages over time would suggest a renewed epidemic. Therefore, it is important to be specific about the population base and the time period covered by the data being studied. Are the data from one locale or are they from the whole country? Are the data available for only one year or are they collected every year? Answers to those questions begin to specify the drug-using problem. Systematic collection and review of data provides better evidence to support prevention and treatment efforts. This is the basis for an integrated drug information system.

Networks are usually geographically based, that is, by city, county, province, state, nation or region. Often this geographic base is hierarchical, with city-based systems being combined to form a state or national system, and combined at a country level to form a regional system, and so forth.

Monitoring of drug trends within a network is often conducted by the sentinel method. That is, selected areas of a geographic region (for example, a city) and categories of the drug-using population (for example, injectors and treatment attendees) are monitored through the systematic collection of data on key issues that warrant surveillance. For instance, in the United States of America, the community epidemiology work group consists of cities from across the country including the north-east, south-east, central, north-west, south-west and western regions and Hawaii. Although certain drug patterns are consistent across cities, there are preferences that are unique also. Methamphetamine use is more prevalent in San Diego, California, and the west, while crack cocaine is more prevalent in the north-east. Yet with changing drug trafficking patterns, the use of methamphetamine is increasing in the central and north-east areas and crack cocaine is becoming a problem in the west in certain populations. Sentinel systems for a region allow monitoring of such changing trends. While a sentinel system does not provide data representative of the entire population of drug users, it allows one to keep a watchful eye on trends in problematic drug use, or other pertinent drug use issues, in a cost-effective and convenient way.

Selected examples of drug information systems at the regional and national level are provided below, while descriptions of different drug information systems and related issues can be found in the proceedings of the Global Workshop on Drug Information Systems: Methods, Activities and Future Opportunities, held in Vienna from 3 to 5 December 2001 (see http://undcp.org/drug_demand_gap.html).

EXAMPLES OF DRUG INFORMATION SYSTEMS

Regional systems/networks

The Pompidou Group of the Council of Europe
(http://www.coe.int/pompidou)

European Monitoring Centre for Drugs and Drug Addiction
(http://www.emcdda.org)

Inter-American Drug Abuse Control Commission and the

Inter-American Uniform Drug Use Data System
(http://www.cicad.oas.org/en/Observatory/Main.htm)

Caribbean Drug Information Network
(http://www.carec.org/projects/caridin_daess/caridin_daess.htm)

Southern African Development Community Epidemiology Network on Drug Use
(http://www.sadc.int/index.htm)

National systems

Community Epidemiological Work Group
(http://165.112.78.61/CEWG/CEWGHome.html)

Illicit drug reporting system
(http://ndarc.med.unsw.edu.au/ndarc.nsf/website/IDRS)

South African Community Epidemiology Network on Drug Use
(http://www.sahealthinfo.org/admodule/sacendu.htm)

Canadian Community Epidemiology Network on Drug Use
(http://www.ccsa.ca/ccendu/index.htm)

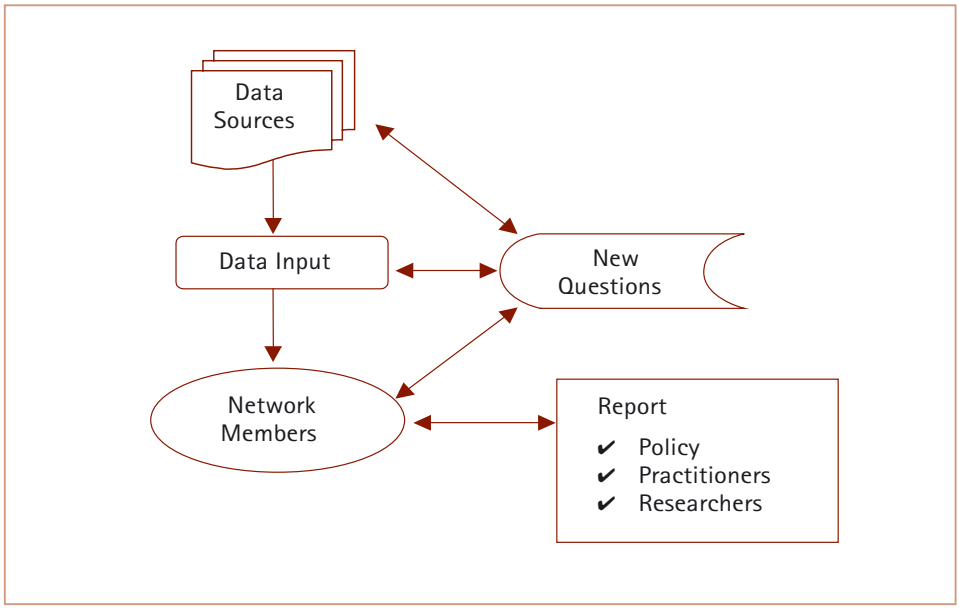
Drug information report system in Mexico

Composition of an integrated drug information system

Any integrated drug information system should consist of three components: input, interpretation and output.

An integrated drug information system consists of: data or input relative to measures of drug use within a population within a specified period of time; a review and interpretation of the data by local experts who know some aspect of the drug use problem; and a mechanism for reporting the findings of the reviews and interpretations to other researchers, prevention and treatment providers and policy makers. The present section will describe the structure and operation of an ideal system drawing on the experience of successful systems. Figure I provides selected examples of drug information systems and their internet contact details. For a review of these and other systems, refer to the proceedings of the Global Workshop on Drug Information Systems: Activities Methods and Future Opportunities (see http://www.undcp.org/drug_demand_gap_datacollection.html#core).

Figure I. Structure of an integrated drug information system



Input: data sources

An integrated information system can have the ability to address a number of important questions regarding drug-using patterns and the characteristics of users that would assist prevention and treatment programming. The extent to which those questions are adequately addressed depends on the types of data sources that are available.

The stigma associated with the use of drugs makes the development of an information system challenging. Although such a stigma is not usually attached to other health condi-

tions, collecting health information from the public is still quite difficult, for in most cases a diagnosis is required. Therefore, typical data sources in the area of health are medical files or population surveys. Persons who have health problems are likely to show up at a hospital, emergency department or the offices of a medical practitioner. Their complaints are reviewed, tests are run so that a diagnosis can be made, and treatment is initiated. Sometimes the diagnoses and the characteristics of the patients are reported to some central file such as a registry or insurance billing offices; sometimes, if a serious infection is noted, reports are made to the local health department.

In population surveys, symptom lists are used to determine who in the survey may have certain health conditions. Information then is gathered as to whether the person sought medical care and received a diagnosis and was treated.

In many ways, similar approaches are used to compile information regarding drug use. An understanding of problems associated with drug use assists in determining where and what kinds of information are available. In the present section, the four major sources of data for drug use will be discussed: existing data, population surveys, key informant interviews and other ethnographic approaches.

Data from existing databases and surveys are considered quantitative. As existing data generally are not direct measures of a problem, many people label them as being more qualitative. However, qualitative or ethnographic data more accurately reflect the context in which a behaviour takes place. Although a tension exists between the quantitative and qualitative researchers, the nature of drug abuse epidemiology is such that both approaches are extremely important. Recognition of the significant contributions of qualitative research is underscored by the recent publication by the EMCDDA Scientific Monograph No. 4, Understanding and Responding to Drug Use: the Role of Qualitative Research (Lisbon, July 2000).

SUMMARY OF METHODS OF DATA COMPILATION

METHOD	ADVANTAGES	LIMITATIONS
General surveys	Broad coverage	Validity and representativeness
	Trend data, if repeated	Expensive and training needed
	Precision	May miss users of some drugs
	Scientific standardized methods	May miss some hidden groups
Special population surveys	Targeted coverage	Validity and representativeness
	Information on users of specific drugs	Expensive and training needed
	Information on hidden populations	Sampling difficult
Existing data	Readily available	Validity and representativeness

SUMMARY OF METHODS OF DATA COMPILATION *(continued)*

	Inexpensive	Subject to collection bias
	Can look at changes over time	Known users only
Rapid assessment methodology	Rapid, inexpensive and multi-method	Validity and representativeness
	Relevance to interventions	Training needed
Key informant interviews, focus groups	Inexpensive	Validity and representativeness
	Hidden populations	Training needed and access can be difficult

Existing data

To determine where to look for data on drug users, the natural history of drug use must be considered. Each drug is known to have a physiological effect on the user. Sometimes this effect is severe, sometimes it is mild. Many existing sources of data are based on records relating to the negative consequences of drug abuse (for example, hospital admissions). It must be remembered that many more people experiment with drugs than go on to use them on a regular basis, and that this former group of experimental drug users is less likely to appear in these type of data sets. It is also the case that different drug types and consumption patterns are differently associated with the likelihood of the individual experiencing problems. Most drugs are not used in their pure form and may be mixed with substances that are harmful. In addition, the way the drug is used can have health effects. For instance, injecting drugs particularly with unclean needles can cause emboli or clots, sepsis and other infections, such as transmission of HIV. Sometimes, the user will overdose on the drug and die. It is also known that as users become more dependent on certain drugs, they develop a tolerance for the drug and require higher and greater dosages to achieve the desired effects and to ward off withdrawal symptoms. Some of these individuals will seek treatment either by their own volition or through their families, employers or the judicial system. Finally, drug users may violate local drug laws or get involved in illegal activities to support themselves and their drug use.

The review of the natural history of drug use suggests six potential sources for information on drug users: hospital admissions and emergency department logs; public health reports on infectious diseases, including HIV and hepatitis B and C; poison control reports; medical examiners', coroners' or other death records; drug use treatment admissions; and arrest reports.

TYPES OF EXISTING DATA

- Hospital admissions and emergency department logs
- Public health reports on infectious diseases, including HIV and hepatitis B and C
- Poison control reports
- Medical examiners', coroners' or other death records
- Drug use treatment admissions
- Arrest reports

Other existing data sources

Other types of data that networks have utilized from law enforcement include drug seizure information such as the amount and type of drugs seized over a specific period of time. In addition, information on the street price of drugs and the quality or purity of street drugs has been collected. There are obvious limitations as to how to use or interpret this information, but, surprisingly, the price and quality of street drugs can take on significance over time, particularly when used with other information gathered from more reliable sources.

Limitations

Existing data sources are good sources of information but each also has certain limitations. Probably the greatest limitations to these sources are as follows:

(a) They can include persons who may have used drugs only once;

(b) They are not population-based, that is, prevalence and incidence rates of drug use for the general population cannot be directly calculated from these numbers;

(c) As a drug user could appear in one or all of the records, each record cannot be considered independently of the others;

(d) The records are sensitive to administrative and policy changes. For example, if a city official, in response to public opinion, orders a crackdown on drug users, the numbers of arrests will increase; or the type of treatment available to drug users will influence the number that find it attractive;

(e) The records usually have not been prepared with the needs of a drug epidemiologist in mind, and therefore may not contain the necessary information or be coded in a way that allows tracking of patterns of drug consumption.

Surveys

Two types of survey data are considered: general population surveys and surveys of special populations. What distinguishes surveys from existing data is that the former is an active data collection effort while the latter is more passive, including data that are collected for

other purposes such as documenting arrests, people coming into the emergency department for care, or deaths.

SURVEY POPULATIONS

- General population surveys use standard survey and sampling techniques to assess drug use in the population as a whole.
- School surveys access drug abuse within a particular age band or school grade.
- Special surveys:

  (a) Focused surveys to assess drug use within a particular sub-population with a high risk of drug use, such as the homeless, sex workers, street children, or children excluded from school.

  (b) Surveys of drug users within the community who are usually not in touch with treatment or other services, which are used to explore the behaviour of current drug users.

Population surveys

General population surveys, if done well, can provide a great deal of information regarding the rate of existing drug use (prevalence rates) and the rate of new drug use (incidence rates) for commonly used drug types. That said, the high cost and technical resources required for a national household survey (for example, large sample-size requirements, the need for an appropriate sampling framework, and ensuring data confidentiality and the quality of self-report data on illicit activities) make implementation cumbersome in resource poor settings.

The procedures used to select potential respondents to the survey will also determine how representative the responses are to the survey and the denominator for the rates that will be calculated from the data that are collected.

When conducted in a standard way over time, population surveys are able to provide not only prevalence and incidence rates, but also patterns of use, trends in patterns of use and characteristics of users, and correlates and consequences of drug use. Population surveys therefore can be valuable epidemiological tools.

Population surveys can be administered to a general population of residents within an area or of school students. Two examples of the application of general population surveys can be found at http://www.emcdda.org/situation/themes/drug_use_general_population.shtml and http://www.samhsa.gov/oas/oas.html, while school surveys are discussed in the following section.

There are three major methods for conducting surveys, as follows:

(a) Face-to-face with an interviewer reading the questions and completing the answer sheet or being present when the respondent completes the answer sheet (self-administration);

(b) Over the telephone, with either a live person asking the questions and completing the answer sheet or having a computer asking the questions and having the respondent indicate the response using the telephone pad numbers and letters;

(c) Through the mail, with the respondent completing the surveys and returning them through the post.

The third method has not been widely used, since the rates of returned survey forms are generally very low. Studies have found that telephone interviews produce lower reported rates of drug use, but the costs associated with telephone interviews are lower than the face-to-face approaches. Most surveys of drug use are administered face-to-face within a household or within a school. In schools, the surveys are generally self-administered to whole classes within the classroom under the supervision of a trained research staff member.

It should be noted that, while general population surveys at the national level can provide valuable information on the prevalence and incidence of commonly used drugs, they perform poorly in respect to the more problematic and stigmatized patterns of drug abuse, such drug injecting. Problematic drug use patterns tend to be missed by general population surveys because problematic drug users tend to concentrate in geographic clusters or regions, are less likely to reside in conventional living settings (a proportion may be homeless, in hospitals etc.), or may underreport their illicit activities. Moreover, the low number of problematic drug users detected through household surveys and the lack of any detail obtained on their behaviour means that targeted surveys of problematic drug users are necessary to understand problematic drug-using behaviour. With regard to estimating the size of problematic drug-using populations, indirect methods of estimation are often preferred, the implementation of these methods being covered in module II of the GAP toolkit (http://www.undcp.org/drug_demand_gap_m-toolkit.html) and discussed in the European Monitoring Centre for Drugs and Drug Addiction Scientific Monograph Series No. 1, *Estimating the Prevalence of Problem Drug Use in Europe* (Lisbon, December 1997).

Household versus school surveys for adolescents

In countries where both household or general population and school surveys are conducted, it has been shown that youngsters aged 12 to 17 tend to report lower rates of drug use when interviewed within the household than they do when surveyed in school. It is suggested that the difference is the greater anonymity that the classroom presents compared to the home, where parents or guardians have a presence even if not proximal. However, the problem associated with school surveys is that young drug users are more often truant than their non-drug using peers and may be absent at the time the survey is conducted. There are always trade-offs when conducting this type of research.

Further information on school surveys can be obtained from the Monitoring the Future project (http://monitoringthefuture.org) and from Hibell and others, *1999 European School Survey Project on Alcohol and Other Drugs Report* (Stockholm, Swedish Council for Information on Alcohol and Other Drugs, 2000).

Other population surveys

Other groups that may be surveyed are the homeless and street youth. Sampling techniques have been developed to ascertain an approximation of the total number of homeless and street youth (the denominator) so that both prevalence and incidence rates can be estimated. In addition, it is possible to conduct surveys in those institutions from which existing data are also available. For instance, staff could interview incoming arrestees or emergency department patients. Again, sampling procedures can be applied to ensure representation of the universe of arrestees or patients.

Surveys of drug users themselves are a subset of population surveys, but they provide different information and rouse different methodological challenges due to the difficulty defining the parameters of the illicit drug-using population. Surveys of drug users can provide in-depth information about low prevalence behaviours that are likely to be underrepresented in household or school surveys. While these surveys cannot in themselves be used to estimate prevalence, they can provide some of the information necessary for the estimation of prevalence using indirect methods. They are also often used in conjunction with a combination of other methods in rapid assessment methodology. As with household surveys, special population surveys can use face-to-face, telephone or mailed interviews. However, the often itinerant or chaotic nature of some drug-using populations generally precludes the use of the latter two techniques, as they tend to result in very low response rates. Due to the hidden nature of illicit drug-using populations, special consideration also has to be given to the sampling methods used. The challenges presented by sampling a hidden population are often outweighed by the information provided by these surveys, as even small-scale surveys of drug users can produce valuable results that would be difficult to generate by other means. For example, if heroin were being used by one per cent of the population, even a very large sample of the general population, for example 10,000 people, would only generate a small sample of heroin users (that is, 100, assuming that heroin users were adequately captured by the survey and prepared to take part), which may not be sufficient for a meaningful analysis to be conducted. Therefore, it is usually more cost-effective and practical to try to directly sample populations of problematic drug users through specialized surveys of community drug users.

For further information on specialized surveys of drug-using populations and their application to drug information systems, refer to http://www.undcp.org/drug_demand_gap_mtoolkit.html, Medina-Mora and others, *WHO Guide to Drug Abuse Epidemiology* (Geneva, 2000); the EMCCDA Scientific Monograph Series No. 1, *Estimating the Prevalence of Problem Drug Use*, Group of Epidemiology Experts in Drug Problems of the Pompidou Group, *Handbook on Snowball Sampling* (Strasbourg, Council of Europe, 1997); Hando and others, "The development of an early warning system to detect trends in illicit drug use in Australia: the Illicit Drug Reporting System", *Addiction Research*, vol. 6 (1998), pp. 97-113; and United Nations Office on Drugs and Crime, *Guidelines on Drug Abuse Rapid Situation Assessments and Responses* (Vienna, 1999) .

Key informant and other ethnographic methods

When to use qualitative data

Given the multiple roles of qualitative approaches, the following three situations in the development of an information system would benefit greatly from key informant interviews or other ethnographic studies:

(a) When there are no existing data or very limited data available;

(b) When there is a need to augment data that are available;

(c) When there is a need to interpret collected information.

For more detailed information on qualitative data collection, refer to the EMCDDA Scientific Monograph, No. 4, *Understanding and Responding to Drug Use ...* .

ROLES OF QUALITATIVE DATA COLLECTION

The use of key informant information and ethnographic studies are essential to understanding drug abuse patterns in any area and in any population. Rhodes ("The multiple roles of qualitative research in understanding and responding to illicit drug use", in *Understanding and Responding to Drug Use: the Role of Qualitative Research*, EMCDDA Monograph No. 4 (Lisbon, EMCDDA, 2000)) points out that there are several important roles that ethnographic studies can play:

(a) Reaching and researching hidden populations by using qualitative sampling methods such as snowball sampling that employ field workers and informants from the target population or others who have easy access;

(b) Understanding the experience and meaning of drug use by exploring the social meanings that drug users attach to their use of drugs and the social processes by which these meanings are created and reinforced. For example, sharing injecting equipment is not just a behaviour associated with the transmission of HIV or other viruses, but it is also a social behaviour that makes human connections and symbolizes trust and reciprocity;

(c) Understanding the social contexts of drug use by specifying the interaction and interdependence of physical and social environment and drug-using behaviours. For example, the rules of a shooting gallery regarding the sale and rental of injecting equipment affect behaviours that place injectors at risk of infection;

(d) Informing quantitative research by elaborating or "putting flesh" on quantitative information, in order, for example, to understand the many processes or steps in sharing injecting equipment, such as the difference between 'front-loading' and 'back-loading';

(e) Complementing and questioning quantitative research. Like the above, qualitative approaches remind the researcher that it is the experiences of the drug users that he or she is attempting to understand in order to reach them, without being blinded by his or her own perspectives;

(f) Developing effective intervention and policy responses by identifying processes and relevant contexts for reaching and engaging drug users in interventions that strive to address the needs and experiences of drug users.

ROLES OF QUALITATIVE DATA COLLECTION *(continued)*

Caution must be taken when using the above-mentioned approaches. Too often the interviewing of key informants, the use of focus groups, or going into a group and making observations seems far easier than collecting existing data or conducting a survey. However, qualitative research is science-based and also requires training to make the information gathered meaningful and valid. All those approaches are active, requiring data collection that is standardized but open-ended.

Key informants

Key informants can serve to provide information when data are sparse, to better characterize existing data and to interpret the results of data analyses. Interviews with key informants and "gatekeepers" to the data and the populations of interest should be a part of the integrated drug information system. These interviews describe the nature of the drug abuse problem within an area, responding to the following:

(a) What types of drugs are available;

(b) How they are used;

(c) What populations are using them;

(d) What are the significant consequences of their use.

They can also provide the context in which the existing data are collected, describing biases in the data as well as whether upward trends represent increased use or administrative changes in the data collection itself. In addition, asking for the key informants' interpretation of the data collected provides further understanding of the meaning of the findings.

As it was recommended to seek a variety of existing databases to reflect the natural history of drug abuse within a community, it is also important to select key informants representing those perspectives, and also to include drug users themselves. Interviews can be conducted individually or in a group, as is done with focus groups.

SUGGESTED KEY INFORMANT

- Treatment providers and/or treatment counsellors
- Outreach workers and/or other people who work with substance abusers on the streets and who make poison control reports
- General health workers, youth workers or community workers
- Law enforcement officers, customs officials
- Emergency/ambulance teams, hospital staff, emergency department staff
- Infectious disease officers
- Active drug users representing diverse subpopulations defined by age, gender, socioeconomic status, ethnic groups or preferred drugs

Focus groups

Focus groups are another group approach to collecting information. These are composed of small group of individuals who have been recruited because of their knowledge about some aspect of the drug scene. Focus groups are sometime conducted with current drug users, recovering addicts, young people, or professional groups, like those working in drug treatment. Groups can be heterogeneous or homogeneous and must feel comfortable to freely discuss the topic of interest. The advantage of this technique is that a considerable insight into the topic in question can be gained quickly and cheaply. However, the quality of the information is critically dependent on having a good facilitator who will ask an open-ended question or make a statement to open the discussion. The facilitator does not lead but guides the discussion, making sure that all group members participate. Such facilitation requires a great deal of skill and training. The information from focus groups also has to be interpreted with caution, as it cannot be necessarily assumed to be generalizable beyond the membership of the group.

Other ethnographic approaches

Other ethnographic approaches can be used to collect information as well. These include contextual mapping used to characterize an area describing ethnic neighbourhoods, placement of churches, dealing areas, the site of social or health agencies, locations of bars, pubs or taverns. The information is organized in various ways, such as free listing, pile sorts, network analyses, narration or sequencing of events or projective assessment techniques. All of these approaches provide the context of drug abuse patterns in an area.

NOTE:

Each approach is useful when an emergent drug abuse pattern is noted in an area. The question is whether this emergent pattern is real or is an artifact of the data collection agency or methodology. Digging into how the pattern emerged, what consequences should be expected, and whether it will grow and expand can be successfully explored with key informants and focus groups.

Further information on data collection methods

Additional details regarding the data collection methods are included in the following section.

When to use the methods, the advantages and disadvantages associated with each and ways of overcoming the disadvantages are also presented.

NOTE:

When starting an information system in a country where existing data sources are not developed, key informants can still provide unstructured reports from their own experience. For example, in some African countries, the initial network meeting received reports from treatment specialists, doctors and community workers on the nature of the drug problem in their particular area. This provided a valuable starting point for discussing more structured data collection exercises.

Interpretation: networks and communication

Integrated drug information systems require as their core, a network of community-based agency representatives with an interest in public health and drug abuse, which form a communication network. The network members share a common goal, the elimination or reduction of drug abuse and its health and social consequences, and recognize that effective strategies need to be built on a sound evidence base. The role of the network is to provide this information and engage in a dialogue with policy makers on its implications for programming. In most cases, network members are those who have access to information or know where such information is available. The network members meet periodically, usually once or twice a year, and bring their data or information to the meeting to be reviewed, compared and discussed by the other members of the network. Members considered for the network include researchers as well as representatives of agencies that work with drug abusers, such as public health and other medical agencies and institutions, law enforcement agencies, drug abuse treatment programmes, and sometimes local schools. Such networks have many advantages, including the following:

(a) They are practical;
(b) They are not costly;
(c) They make good use of existing data and other information;
(d) They have been used around the world quite effectively;
(e) They provide immediate feedback;
(f) They take advantage of many levels of expertise;
(g) They provide comprehensive information that addresses the missions of multiple agencies;
(h) They bring together professionals who would normally not interact;
(i) They build an infrastructure to support further research.

Organization of a network and its communication

Sponsorship of the network

The sponsorship of a network by an agency is advantageous as it puts that agency at the forefront of the issue and provides up-to-date information on the problem, particularly any emergent drug problem. Such sponsorship also has public relations opportunities to keep

the public abreast of the problem and what actions the agency is taking to respond. Furthermore, once an emerging drug problem is identified, the sponsoring agency can take the lead in a community response to the problem.

National focal points

Most regional drug epidemiological networks, such those in Southern Africa, the European Union, the Americas and the Caribbean operate through a focal point system. One agency performs the role of a focal point for data collection for the country as a whole and is usually responsible for preparing a national report and presenting this in the regional forum. For national systems, nominating a focal point is highly recommended. It is also important to check that a focal point does not already exist for this kind of activity.

Who should form part of the network?

Initially at least, networks are best when they are small and the meetings are well planned. Size is important, since everyone in the network should have sufficient time to present their data and to take full part in the discussion. As indicated above, network members should be recruited from several different types of agencies so that multiple perspectives—legal, medical and social—are represented. If multiple geographic areas are represented, then time needs to be spent on making cross-area comparisons.

Involving heads of agency

Although networks do not usually include agency directors or department heads, the successful networks begin by getting the support of those officials. A meeting with agency officials or their representatives to talk about the network group would provide similar information and gain their cooperation. In this meeting, the purposes and advantages of the network and network membership, including knowledge, skills and agency commitment in terms of manpower and accessing information, could be discussed.

Hold an initial planning meeting

One of the outcomes of a meeting with heads of agency would be the structuring of a planning meeting. The planning meeting would bring together the agency representatives who may or may not become members of the network. The planning meeting would establish a common understanding of what the network purposes are, what agencies have data and therefore should have places in the network and what other groups should be included in the network, and a plan would be made for sending out invitations to the next network meeting. The time and place for the first meeting and a meeting agenda also should be developed, and plans for at least one subsequent meeting would be useful.

The first network meeting

The first meeting of the network is very important as it establishes whether there will be further such meetings. Clarifying the purpose of the network and each person's role

should be emphasized during the course of the meeting. The first meeting should identify known or potential sources of data and information. It would be useful if the network had reports from other similar networks, even from other countries, for additional ideas. For those network members who brought information, time should be made for their presentation with a follow-up discussion. Plans for follow-up activities such as accessing other data or making contacts with others and even inviting others to join the network must be well documented and assignments made to network members. The network coordinators will contact network members with assignments to determine progress or whether they need to give assistance. At the first meeting, it will be important to decide how the information presented at the network meeting will be recorded, reported and disseminated. Finally, dates, times and places for subsequent meetings must be decided. Early on in the life of the network, it will be important for the group to decide on a standardized format for presentations and reporting.

Output: reporting

Successful information systems and networks are those that reach out to decision makers and programme planners within their regions. What to report and in what format the report is made are significant to the life of an information system. Network reports should reflect issues that are of importance to network members. In general there are three reports that should be considered:

(a) Reports made during the network meeting;
(b) Reports on drug patterns;
(c) Reports on drug patterns by geographic area.

Standardized network reporting

The importance of standardized reporting formats for the network members was mentioned above. Time given to each member presenting their information should be sufficient, but not so long that any one person will dominate the meeting. Usually reports will mention how many individuals are represented by the data and what their characteristics are, including, at a minimum, age group, sex, ethnicity, if relevant, and what drugs are used.

With standardization, comparisons can be made across data sets (for example, comparing characteristics of arrestees to new admissions to drug abuse treatment) and across time. The latter is important for determining if there are changes or trends in the drug-using population. For example, in the early 1990s, reports from drug abuse treatment programmes in some cities in the United States mentioned increased numbers of new admissions who were using heroin by snorting or inhaling. This observation presaged an upsurge in the use of heroin that reached into school-aged populations.

In addition, networks that include representatives from a number of different communities will find that having standardized reporting makes comparisons across geographic

areas easier to do. Finally, standardized reporting and reports can be easily used by policy makers and others who have little time to review information. Standardization can be facilitated by the use of report data forms.

Reports on drug patterns

Disseminating the data to policy makers, programme planners, practitioners, researchers and the public is very important. One approach is to summarize by drug category, for instance, along the following lines:

> "Indicators of methylenedioxymethamphetamine (MDMA or Ecstasy) are increasing in the smalltown area. Use of the drug is spreading from raves and dance parties to high schools, colleges, and other social settings frequented by youth and young adults."

> "Cocaine indicators have trended downward or stabilized in the past few years, as the negative consequences of crack use generated an awareness of its risks among potential users. Recent data show that indicators were stable or mixed in 12 areas, decreased in 6, and increased in 3".

More detailed information by drug category regarding the source of the information and the characteristics of the users can also be added. For examples, see reports such as:

Community Epidemiology Work Group, *Epidemiologic Trends in Drug Abuse*, vol. 1 (Baltimore, Maryland; National Institutes of Health, June 2000)

EMCDDA, "Extended annual report on the state of the drugs problem in the European Union" (Lisbon, 1999)

National Drug and Alcohol Research Centre Monograph No. 47, *Australian Drug Trends 2000. Findings from the Illicit Drug Reporting System* (Sydney, University of New South Wales)

Monitoring of Alcohol and Drug Abuse Trends in South Africa, proceedings of the South African Community Epidemiology Network on Drug Use (March 2000)

TYPES OF REPORTS AND TARGET AUDIENCES

Type of report	Content	Audience
Meeting reports	Details of presentations	Network members and sponsors
Policy reports	Executive summary and recommendations	Legislative members, programme planners, fiscal managers

TYPES OF REPORTS AND TARGET AUDIENCES *(continued)*

Mass media	Key findings	General public and community, in addition to public health and safety practitioners
Publications	Research findings	Professionals in administration and research

Reports on drug use patterns by geographic area

If data are available by geographic areas, for instance within a city or between cities, a report with sections focused simply on those geographic areas would be useful. Comparisons across geographic areas are appropriate, particularly if similar data are collected and when sufficient data are available over time. Caution should be used, however, in interpreting these comparisons, since the reasons for any differences or similarities found would require further investigation.

There are many ways to present data for geographic areas. The most useful organization for such presentation would be first to summarize the types of drugs used and by whom they are used, including source of data (for example, cocaine use among women arrestees has risen over the last two years).

Both programme planners and policy makers need a brief summary of the findings in the report, the interpretation of what the findings mean and a translation of how the findings make an impact on interdiction and prevention and treatment practices. Therefore, no matter which reporting format is used, having an executive summary is extremely important.

Summary

Chapter I of the GAP toolkit module, part one, has provided an overview of the importance of having an integrated drug information system and a description of the components of such a system. The following chapter II provides guidelines on how to develop a drug information system. Before embarking on development of a drug information system, an audit of existing information and resources should be undertaken. This process is designed to help the user of the toolkit to assess the availability of data for his or her region and, and on the basis of that assessment, begin to plan the development of an integrated drug information system. This process will ensure maximum utilization of existing resources and information, and therefore a more effective and efficient drug information system. A guide to undertaking such an initial assessment is contained in the GAP toolkit module 1, part two, “Information, Needs and Resources Analysis”. On the basis of the findings of that analysis, chapter II below provides guidelines on how to: establish a local network and communication system; develop data sources and a database; develop reporting formats and distribution systems.

Development of an integrated drug information system

Chapter II

The present chapter of the toolkit presents guidelines on how to establish a network, identify data sources and establish databases, and write reports. In addition, when databases are discussed, the advantages and disadvantages of each data element and approach are presented. Establishment of a drug information system should be guided by an initial assessment of what information is available, what human resources and infrastructure can be used to support the system, and some planning as to the purpose, nature, scope and structure of the initial network. A guide to undertaking such an initial assessment is presented in the GAP toolkit module 1, part two, "Information, Needs and Resources Analysis". The findings of the analysis will guide the reader in determining the baseline information and resources available for his or her information system.

Establishing a network

There are a number of steps that can be taken to establish a network, which should have the following key features:

(a) It should be comprehensive: including diversity with the representation of a number of perspectives, such as treatment, law enforcement, health, policy and research;

(b) It should be small enough to allow presentation of information and discussion of findings;

(c) It should be flexible enough to allow the inclusion of additional expertise;

(d) It should be led by a coordinator who will organize meetings, agendas and reporting. Leadership could be rotated among the network membership;

(e) It should be committed to meeting on a regular basis at least once a year, preferably twice a year depending on the dynamic nature of the drug abuse problem.

To prepare an inventory of resources, an ad hoc group of drug abuse experts would be established to assist in reviewing the availability of relevant data to be included in the new integrated drug information system. In

the course of the review, the group would probably identify additional members to include in the network. At some point in the process, it will be important for the network to examine what each current network member brings to the network in terms of skills and data, and to determine what components are missing. Both skills and data should be taken into account in the deliberations. In the skills area, the focus might be on research capabilities, public relations or communications expertise and political connections. When thinking about data, it is important to think not only about what may exist but also about data that will be needed in the future.

The first meeting is an extremely important one. It is at this meeting that decisions will be set as to how the network will function. The following material is taken from pages 7 and 8 of the United States National Institute on Drug Abuse publication *Assessing Drug Abuse Within and Across Communities* (see references).

The first meeting is critical 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:

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. In particular:

- Have clear, attainable objectives for the meeting. Avoid trying to overachieve at the beginning;
- Establish the agenda in coordination with other participants, so that they feel invested from the beginning;
- Give each participant a role to play and a contribution to make.

The first meeting should be organized to accomplish several objectives:

- 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 epidemiological networks to determine if they might be obtainable 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 activities (after the meeting) 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 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 reports from the meeting. 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 such as: What drugs are currently being used? Who is using them? Are drug use patterns changing from year to year? If so, how?

Network parameters

There are four essential parameters of a successful network: size and breadth; short meetings; an energetic coordinator; and the meeting procedures report.

Size and breadth

Although broad representation is desired, it is also important that networks be small enough to allow discussion. Members should ideally include representatives from a variety of organizations with different perspectives on drug abuse in each area. The following areas and types of expertise are commonly represented in network meetings: drug abuse treatment; medical examiner or coroner; public health department biostatistician and planner; university researcher or groups with access to survey data; any outreach worker group that works with drug abusers on the street; and law enforcement.

Short meetings

The members of the network group more than likely will be very busy people; the meetings should therefore be kept as short as possible. Sufficient time should be allowed for:

(a) Every participant with data and a data report to present his or her findings;
(b) After each presentation or group of presentations, discussion of what the data show;
(c) Follow-up on issues that may have been raised at earlier meetings;
(d) Discussion of the agenda, date, time, and place of next meeting.

An energetic coordinator

Almost all successful networks have had an energetic coordinator who was thoroughly committed to the network process. Although once the networks are established they do not require a great deal of work, establishing the network does involve time devoted to contacting individuals, making up the agendas for meetings, keeping the meetings on time but still allowing participants to play their roles, and overseeing the preparation of proceeding reports for dissemination. Anyone beginning a network must recognize, first, that the initial time that he or she will devote to the network may be significant, but, secondly, that much of the work, once established, can be designated and less time will be needed.

Meeting procedures report

Many networks fail because there are no meeting reports prepared. When this happens, participants have nothing to show their superiors, the network losses credibility, and interest in the network declines. The meeting reports do not have to be elaborate. They can consist of an executive summary, which is extremely important, and an annex that includes all of the reports and tables submitted by network members. Their reports should follow the same format, including an executive summary or narrative and tables.

CONTRIBUTIONS OF PARTICIPANTS

The present section has highlighted the importance of having an integrated drug information system and described the components of such a system. The main contributions of the participants are as follows:

(a) Knowledge about their domain, including health, research methods, treatment of drug abusers, crime and seizures;
(b) Familiarity with others interested in drug abuse through their own or related agencies and organizations;
(c) Skills-academic or research, political, policy, programmatic, planning and front-lines or on-the-street experiences;
(d) Access to data sources and understanding their limitations and strengths.

It is very important to note that networks are confronted by common problems that need to be addressed, including those outlined below:

(a) It should be recognized that network members have their own interests, different training and different orientations. As such, they may not understand what is expected of them. It is therefore important that a specific format for their presentation at the network meetings be sent to all members of the network prior to the meeting;
(b) Everyone gets excited about his or her own area of expertise; therefore, when presenting data about those areas, each presenter should remain focused on the topic and keep to the schedule. All presenters should therefore be told in advance just

how much time they will have for their presentation. It will be difficult at first to keep presenters to their time allotment, but the chair of the network must develop a system to let the presenters know how much time they have remaining, and when their time is up to go on to introduce the next presenter;

(c) Turnover of network participants is often a problem. Finding interested members to take their places is sometimes a greater problem. Whoever coordinates the network should realize that recruitment is an ongoing task. That again is why providing a report that is useful to the member agencies is important. If an agency finds that the network has worth, it will assign someone to work with the network. Keeping in contact with agency directors on a regular basis to thank them for their involvement with the network is also extremely helpful;

(d) Government and political support is also very important in many countries and having the support of the drug coordinator (if one exists) or a representative from the health ministry can be useful. However, it must also be remembered that the network should be a technical rather than a political forum and should be led by its technical members. This issue will vary greatly across countries. The key point is for the network to be able to speak to a policy audience while remaining a technical body. Having participation from the university and academic sectors is often very useful in ensuring the appropriate balance.

DEVELOPMENTAL STAGES OF A DRUG INFORMATION SYSTEM

Systems usually start small, building on a couple of existing data sets that are easy to access and analyse. From there, other elements can be added to make the system stronger. If there is absolutely no data available to start with, getting in touch with the right people who have contact with drug users and who know about the drug-using situation is a good starting point. Once a broad understanding of the situation is developed, other potential methods for collecting data or obtaining existing data will probably become clear. For example, such people can very easily form a key informant network that can provide updates on the drug situation. Below are some general examples of possible different stages during the development of a network and the different components and activities that may occur during the developmental stages.

Getting started

There would be a meeting of key stakeholders with a discussion of the available data and potential data sources. This process can be done more formally through an information, resources and needs analysis (INRA) to guide the development of the network (see part II of the present toolkit module).

There would be an analysis of some recent existing data, possibly including:

(a) Treatment demand data;
(b) Arrest data (that is, possession and use of illicit drugs);
(c) Review of any existing surveys of drug use (school surveys, specialized surveys, general population, rapid assessments);
(d) Expert opinion-for example, gaining the views of those working with drug users about the types of drug used and main drug problems and related-issues.

DEVELOPMENTAL STAGES OF A DRUG INFORMATION SYSTEM *(continued)*

Intermediate steps

Once a network is established, the next step is to gradually improve the data sources. This may involve refining existing data sources or adding a new source of information by, for example:

(a) Developing a standardized form for collecting treatment data;
(b) Setting up a key informant network or survey;
(c) Holding regular (biannual or annual) meetings to analyse, interpret and discuss available data;
(d) Publishing a meeting report.

Further development

Networks are a dynamic process and they need to grow and change along with other developments and changing patterns in drug consumption. It is therefore important to always be considering how the network can further develop through additional activities. Some examples of additional activities that the system/network might undertake once it is up and running are:

(a) Conducting a school survey or undertaking specialized research on a specific drug issue;
(b) Developing a database for collating and analysing treatment data trends over time;
(c) Expanding the coverage of the data collection activities and/or network participation;
(d) Holding a training seminar to develop technical skills, such as analysing and interpreting drug consumption data;
(e) Engaging in some inter-country or inter-regional collaboration by inviting participation from a neighbouring network or system;
(f) Developing a regular reporting mechanism that serves the needs of a target audience (for example, brief and easy-to-read updates on drug trends to supplement meeting reports).

Identifying data sources and establishing databases

Gaining access to information requires making and maintaining contacts with sources. The extent to which public organizations such as treatment agencies, hospitals and police departments will make their data or information available on request varies considerably between countries. Stressing that individuals will not be identified can help convince agencies to participate. However, agencies such as private hospitals, which are not obligated to provide information on request, may be difficult to access. In some parts of the world, law enforcement agencies do not typically collaborate with health agencies and difficulties may arise in combining these different data sources. Since the aim will be to get information from as many types of agencies as possible, it is important to convince agency representatives that the inclusion of their information will benefit their agencies or at lest not be detrimental to their interests. Political support can also be very helpful,

for example, a letter from the Ministry of Health endorsing the network activities can open doors that would otherwise remain closed. Therefore, it is important to be fully prepared before contacting the agencies. It is important to talk about the agency being represented and the reason why the agency is interested in the network and how the information will be used and reported. It must also be clear that the project is one that addresses a public health problem, and as such it is not necessary to have names or addresses of individuals who use drugs, but their information is aggregated and quantified. This can be emphasized through a letter that may follow a telephone call or personal visit. If possible, copies of reports or portions of reports from other networks can be shared, so the agency contact could see how such information can be used. In addition, of course, it is important to make an invitation to the agency contact to attend any network meeting. To maintain their interest, they should also be placed on the network's mailing list for reports and other materials.

TIPS FOR ACCESSING DATA FROM AGENCIES

The following steps should be taken to access data:

(a) Convince the agencies that they can benefit from the exercise or that it will not be detrimental to them;

(b) Fully explain the activities of the network and for what purpose the data will be used;

(c) Acknowledge the contribution of agencies and respect their data ownership by only using the information for agreed purposes;

(d) Build up personal relationships of trust;

(e) Get political endorsement for the network activities;

(f) Provide feedback and try to involve the agencies in the network activities where possible.

Existing networks vary in their criteria for including data from a variety of sources into their databases. Most of the criteria reflect various levels of scientific rigour as well as availability. For instance, in some networks drug-abuse-related arrest data are included, while in others it is not. There are inherent biases with almost all available data sets (a discussion of these biases is presented below). For example, the mayor of a town may want to show how effective his administration is by directing the police to arrest all persons found in possession of marijuana. In this case, the data sets on arrests may show an increase in the proportion of marijuana-related arrests. This increase may or may not be associated with an increase in marijuana use in this particular town. On the other hand, including drug-related arrest data with the added knowledge of administrative directives or other artifacts associated with the collection of such data can be very helpful in the long run, as such data will be collected over time and there will be periods when directives will either inflate or deflate numbers. Networks that include arrest data understand these issues and have found that, over time, arrest data have been useful in understanding the drug problem in their communities. These data are particularly important for detecting new drugs entering the community, for it is often common for the more experienced drug users to have tried new drugs that become available.

In many cases, existing data may not be readily available. Records of drug use patterns may not be kept or those records that are available may be in the form of entries in log-books or as case files. This will be a major challenge to each network. To make matters more complicated, it is possible that in most communities, there will be different methods of data maintenance and access becomes difficult.

If data or reports are not available, there are two approaches that can be used to collect information for the network.

(a) If records are available, it is possible to select a short period such as two weeks each quarter and transfer the record data to network data forms. This transcription can be done by a network member or a member of the agency staff. In either situation, it is important that the transcription be reviewed for accuracy;

(b) Another technique that can be used, particularly if record information is not available or if the record information does not include reference to the use of drugs, is to conduct face-to-face interviews with a sample of clients/patients. The sample could be consecutive cases presented during a two-week period every quarter or some other acceptable approach.

Those two approaches are detailed below.

FOCAL POINTS AS A BASIS FOR A REGIONAL NETWORK– THE CARIBBEAN DRUG INFORMATION NETWORK

Most regional information systems recognize the value of establishing national focal points to ensure the continuity of activities. In the Caribbean, the Caribbean Drug Information Network is based around focal points in each participating country. Focal points act as the national coordinators for information collection, represent the country in regional technical meetings, and prepare an annual national reports. As some Caribbean countries participate in both the Inter-American Drug Abuse Control Commission of the Organization of American States monitoring activities for the Americas, within the framework of the Inter-American Uniform Drug Use Data System and in the local Caribbean network, having the same focal point for both sets of activities ensures coordination and the best use of resources. Further synergy is ensured by adopting comparable measures so that the data collection tools used for network activities do not differ. Focal points provide a useful role by acting as a centre for communication between the different agencies engaged in data collection; they do not necessarily have to collect the data themselves.

Description of available data

A brief summary of the sources and types of existing data that are collected by networks is given below. In collecting information from any source, it is important to remember the following:

(a) If there is a potential of identifying individuals, caution must be taken to protect them wherever possible by having the agency aggregate or summarize information;

(b) Staff within the agencies who have access to information that the network needs have other primary obligations and may not be cooperative in helping the network;

(c) Although it may not appear as such, most agencies have limited resources and may not be so interested in the network, unless they can see that it could help them gain access to additional resources.

Existing agency data

Drug use treatment

One of the main indicators used as a basis for most information systems is reports from specialized drug treatment services. As with health problems, when considering drug use treatment resources, a list of places where drug users would go for treatment must be developed. These could be programmes that specialize in the treatment of drug use and may be free-standing clinics or centres, or they could be units of general psychiatric or medical clinics and hospitals. Treatment programmes and medical and psychiatric hospital admission records would be good sources of information on drug use and drug users.

Advantages. As drug treatment programmes focus on drug abuse, they are more likely to collect detailed information about what drugs are being used by their clients and how those drugs are used (for example, injecting, snorting or smoking). In some cases, clients are even tested using urinalysis to determine their current use patterns. In addition, in many cases, drug treatment programmes want to know what types of drug problems they may need to address in treatment and therefore may be more forthcoming with information, particularly within a network that includes representatives of other types of agencies. Admission forms provide the best information about what drugs clients were using prior to coming into treatment.

Disadvantages. In many situations, treatment records include "drug of choice" or "primary drug problem" and may not ask about other drugs. Furthermore, it is important to get information from both publicly and privately funded treatment programmes, as clientele may use different types of drugs. As mentioned before, another disadvantage of drug treatment information is that those in treatment may not represent the current patterns of drug use; many treated users may be older and the drugs they use may not represent emerging patterns of use. Not all treatment admissions are self-motivated and may be referred from a number of other agencies, including law enforcement, for a number of reasons specific to non-drug use, and therefore there may be inherent biases in the treatment information. Another problem consists in distinguishing between new treatment demands and long-time service users. As many drug users drop out of treatment or relapse after receiving care, drug services often have a disproportion number of long-term and older repeat attendees. The characteristics of this group may be different from those of new clients entering treatment for the first time. Many treatment reporting systems therefore

try to distinguish between first and subsequent treatment demands. As some people will also visit more than one treatment service during a reporting period, methods have also been developed to reduce the possibility of double counting. It is also important to remember that drug users typically seek help for a drug problem several years after they initiate use. Treatment data are therefore considered a "lagged indicator" of incidence. For example, when the drug treatment services in the United Kingdom of Great Britain and Northern Ireland started to observe large numbers of heroin chasers seeking help in the mid- to late 1980s, the epidemic of new users was already five or six years old, having started at the beginning of the decade if not earlier. Another factor that will influence the usefulness of such data is the level of development of treatment services in a country and the range of services on offer. This issue is also important when the scale or nature of treatment provision changes. Increased treatment demand may simply represent an increase in capacity or the development of new services that prove more attractive to those with drug problems. For example, the development of a new stimulant service may lead to increased reports of treatment demand by stimulant users-regardless of patterns of use within the wider community

Recommendations. Understanding how people come to treatment and how information regarding drug use is recorded is important to understanding the data that are collected. Also it is important to show the treatment programmes that their participation in the network may help them access additional resources as they can better document the drug abuse situation in their communities. A good example of a treatment reporting protocol that has been widely used in many cities is that of the Pompidou Group first treatment demand format (http://www.coe.int/pompidou).

TREATMENT DATA COLLECTION–THE MODEL OF THE SOUTH AFRICAN COMMUNITY EPIDEMIOLOGY NETWORK ON DRUG ABUSE

The South African Community Epidemiology Network on Drug Abuse uses treatment demand data as one of its core data sources for understanding patterns and trends in drug consumption in South Africa. In this system, data are collected manually using a standard treatment data form, similar to that used by other systems like the Pompidou Group first treatment demand format (see Exhibit 1). This form is manually completed for each patient and then posted to a coordinator for a designated geographic area, or province, who collates the data. The province coordinator then hosts a meeting with representatives from treatment agencies and other relevant information providers to discuss and interpret their data. A representative from each province then reports, along with other relevant data and information, to a forum at the national level to form a picture of what is happening in his or her province.

This system works well in South Africa as most of the designated subregions, or provinces, have sufficient specialized treatment centres for alcohol and other drug use, but not so many that this manual system becomes cumbersome. Also, this manual system overcomes the need for computers and specialized data entry software at treatment centres-with a pencil and postal service being the minimum resources required for participation in the network.

TREATMENT DATA COLLECTION–THE MODEL OF THE SOUTH AFRICAN COMMUNITY EPIDEMIOLOGY NETWORK ON DRUG ABUSE *(continued)*

The South African Community Epidemiology Network on Drug Abuse system is now being expanded to other Southern African countries under the SENDU network, although the relatively low coverage of specialized treatment facilities in some of the Southern African countries has highlighted the need for capitalizing on existing data from non-specialized treatment facilities for drug users, such as psychiatric hospitals and general health-care settings.

For further information on this treatment reporting system visit the SACENDU web site http://www.sahealthinfo.org/admodule/sacendu.htm.

Hospital admissions and emergency department logs

General hospital data can also be used to collect information on drug consumption, but it is usually a more complicated and demanding task than working with specialized drug treatment centres. However, if specialized treatment centres do not exist or have very limited coverage in a country then hospital data, especially that from psychiatric hospitals, may provide a good starting point for obtaining information on the types of drugs for which people are seeking help. Record-keeping in hospitals varies greatly from country to country. In some countries, hospital admissions and discharges are reported centrally, so that hospitals will have the information available. Elsewhere no central records may be available. If the International Classification of Diseases is used to code the diagnosis associated with the hospital stay, then this may allow the number of drug-related admissions to be assessed. However, unless drug use is the primary, secondary or contributing diagnosis, it will not appear on the reports. In addition, the individual drug type may not be listed, nor will other useful information necessarily be available, such as the route of administration.

Urgent or emergency medical care is generally provided in a facility for unscheduled services to persons whose conditions require immediate attention. These would include trauma cases as well as overdoses. In many countries, persons without access to medical services (such as those in poverty or new immigrants) will use emergency facilities for less urgent illnesses. Some emergency departments maintain admission logs that include the reasons for visits and outcomes of visits. However, if the involvement of drugs is not obvious, unless emergency department personnel ask about the use of drugs, there will be no record of such use available.

Advantages. There are a number of advantages of gathering information about drug users from hospitals and emergency departments. Drug abuse epidemiologists believe that when new drugs or new ways to use drugs occur, there will often be people who will have negative physical reactions to them and will either go on their own to the emergency departments or will be taken there by others. In addition, there are many drug users who will not use drug use treatment programmes or be arrested, but who will use the medical care system. Obviously, the development of the health-care system and the ease with which those with drug problems can

access it greatly influence the potential of this information source. In countries with a tradition of medical reporting and where health-care provision is good, more potential will exist than for those countries in which access to medical provision is restricted.

Disadvantages. The major disadvantages of these resources are: *(a)* accessing the information and *(b)* once accessed, the completeness of the information available. As with all of the methods needed to gather information on drug use, particularly on a regular basis, a great deal of "upfront" work needs to be done. Hospital and emergency department officials need to be convinced of the importance of collecting this information. It is suggested (National Institute on Drug Abuse [2]) that such information allows local hospitals to document the expenditure of their resources for drug use treatment and will help the local medical community understand the health care needs of drug users so that improved strategies for medical care and for the treatment of drug use can be developed. If, however, even basic medical provision is restricted, then it may be that priority is given to other health needs. Where medical staff are under extreme pressure and resources are limited, they may simple not be able to engage in monitoring activities, especially if these are not viewed as a priority. The resources available for health care also may influence the willingness of agencies to take part. For example, private hospitals may not wish to engage in what they see as extra work unless remuneration is made. Confidentiality policies can also make medical personal cautious or unwilling to provide information on their patients. This problem can usually be addressed by asking for data in aggregate form and by stressing that no personal identifiers are required and that individual data will be kept confidential. If data can be accessed, it may be incomplete, with information on patterns of use, drug type and route of administration missing or not collated in a standard fashion. These limitations in data quality can make meaningful analysis of the data difficult

Recommendations. Two major approaches have been used to collect this type of information. One way is to select time periods over the calendar year and provide access to the hospital discharge logs (discharge is preferable to admission, as during the hospital stay, diagnoses are made based on test results) or emergency logs, and either select a random sample of patients discharged or seen in the emergency department and abstract from their medical records. A second method is again to select time periods over the calendar year, but have research staff available 24 hours a day to interview patients about the reasons for their visits and about their drug use. Costs in terms of manpower and training are involved with each approach. It will be important to make sure that the times selected represent variations in season or climate, in special holidays etc., that the periods of data collection will be sufficient to be able to detect drug use, and that the denominator of all patients and their visits will be kept. This second method allows a standard reporting form to be used prospectively, and therefore means that there is more chance that the descriptive information of interest can be collected.

Public health reports of infectious diseases

In many communities and countries, there is a requirement to report diagnoses of infectious diseases, including: HIV infection or acquired immunodeficiency syndrome (AIDS); hepatitis A, B, C etc.; and sexually transmitted diseases that appear at higher rates in

drug-using populations. For example, many countries participate in sentinel surveillance systems that continuously monitor subpopulation groups, so that pregnant women may be anonymously screened for HIV as a convenient sample to explore exposure in the broader community.

Advantages. Like the hospital and emergency department information, the advantage of these reporting systems is that they will include drug users who may not appear in drug use treatment or arrest databases. Furthermore, if it is noted that rates of drug users in these systems are increasing, as they have in many countries, particularly in developing countries, it will be important to target prevention and treatment efforts to limit the spread of infection.

Disadvantages. The problem that these systems pose is that most reporting forms do not require reporting drug use, or if they do, this information is either missing or inaccurate.

Recommendations. It is important to work with those who have responsibility for the reporting requirements for these systems to convince them, first, to include information on the reporting forms about drug use, and, secondly, to make sure that the information requested regarding drug use is appropriate and relevant. For instance, just asking about drug use is not helpful. Information is needed about types of drugs used, how drugs are used (for example, by injecting, snorting, smoking or swallowing), frequency of use of drugs and length of time using drugs.

Poison control reports, forensic science and medical laboratories

Not every community has a central system for reports of poisonings. However, when these are available, they can provide important information on both emergent drug use problems and existing use. Where poison control centres exist, both medical personnel and the public report negative health effects of drugs and other substances. For instance, in the United States, it has been the poison control centers that brought the use of gamma-hydroxybutyrate (GHB) and its precursor gamma-butyrolactone (GBL) to the attention of the members of the Community Epidemiology Work Group. This drug is used along with Ecstasy in clubs and at dance parties such as raves, and can cause death. Similarly, in Europe, an early warning system links reports from various sources, including forensic science laboratories, to assess the availability and risk of new drugs reported in any one member of the European Union. Other routine data sources may arise from medical laboratories, such as screening of intoxicated drivers or subpopulations of drug users in treatment settings.

Advantages. The advantages of using the poison control centre reports are similar to the above: detecting emergent drug use problems and getting information on drug users that may not appear in other reporting systems.

Disadvantages. Clearly the disadvantages are similar to the other medical-based reporting systems: the reports are on drug use episodes and not necessarily on long-term drug users, and may not have sufficient information regarding the specifics of drug use to understand what population is represented in the reports. The number of acute poisoning cases may

be low and, for some drug types, negligible. In many countries, forensic science systems are not sufficiently developed to provide consistent poisons reports. Even where they are well developed, difficulties may still exist in correctly identifying the substance responsible for the poisoning, especially when multiple substances are being consumed. When using medical toxicology data, cases need to be de-identified or confidentiality must be ensured, and sampling issues may present an obstacle for detecting trends in particular drug types (for example, tests on intoxicated drivers may overrepresent stimulant drugs).

Recommendations. It is may be useful to work with the poison control centres and forensic science laboratories to review and revise reporting forms to get the information on drug use that would be needed for the data system on drug users being developed.

Medical examiners and coroners reports

In most locales, medical examiners and coroners are responsible for investigating sudden (unexpected) or violent deaths. As legal issues are at stake, they must be able to compile sufficient evidence to support their determination of cause of death. In many countries, their reports of cause of death are an important part of the nation's vital statistics. However, there is great variation in the training of medical examiners and coroners and in their level of expertise and interest in issues such as drug use. Medical examiners and coroners are not always trained medically or legally. The quality of reports of cause of death is therefore likely to vary between areas. For example, in a recent review the practice of medical examiners was found to vary so greatly between European countries that meaningful comparisons could often not easily be made even where the same international diagnostic criteria had been adopted. Furthermore, not all deaths are thoroughly investigated and, even in cases where all deaths are investigated, toxicological screens to determine the use of drugs are not always pursued. So it is important to know about these issues when accessing death reports. In addition, in most cases, death data are not accessible to the public and special arrangements need to be made to gather this information. Drug users may die from a number of reasons. Cause of death may be directly linked to drug use, such as in drug poisoning or overdose. Or cause of death may be indirectly linked to drug use, but directly linked to the lifestyle of the drug user, or may involve homicide, suicide, AIDS or some other infection (such as sepsis or bacterial endocarditis). Or a drug user may die of natural causes and other diseases. Most drug use data systems include information of the direct and indirect causes of death, but unless the information on drug use is collected, information for deaths among drug users due to natural causes or other diseases will not be included.

Advantages. This is another source of information, if toxicology or other screening is completed, on emergent drugs of abuse and of drug users that may not be found in the other data sources.

Disadvantages. There will be many deaths due to drug use and among drug users that will be missed. The lack of medical training, failure to conduct posthumous investigations and drug testing, and the limitations as to which deaths are referred to a medical examiner or coroner will have an impact on who is reported in this system. The comparability of data

on drug deaths between countries is low, and even within countries considerable variation may exist. Many drug users consume a range of substances, often including alcohol, and coroner's reports often only report on this in a summary fashion, referring to "opiate death". It can also sometimes be difficult to distinguish deliberate poisonings (suicides) from accidental drug overdoses.

Recommendations. A thorough understanding of what deaths are referred to the offices of the medical examiner and coroner will clarify the limitations of the data. In addition, most communities have a central reporting system for deaths. It is important to remember that, although all of these data sources have limitations, taken together, they can provide an excellent idea of drug use patterns within the population of the geographic area being considered. Arrangements can be made with the medical examiner and coroner to access their records, or they can be made with the local public health agency that is responsible for vital statistics to gain access to reports on a periodic basis. There are a number of technical resources on improving data quality, and international standards are being developed in this area (see the EMCDDA web site for a review of the issue http://www.emcdda.org).

Law enforcement

The illegal nature of drug use in most countries will place drug users at risk of arrest. Therefore, information from arrest records also provides information about people arrested for drug use offences. In addition, many law enforcement agencies seize drugs and, in some cases, analyse the seized drugs as to type of drug and purity levels. Law enforcement agencies may also keep track of the street prices of drugs and have a better understanding of how drugs are marketed.

Advantages. Law enforcement agencies have access to information, such as price and purity levels, that most other agencies lack. They also have the potential, as with hospitals and medical examiners, to acquire information on a broad range of population groups, including members of the middle and upper socioeconomic classes, as they may be called in cases of domestic disputes, and may make arrests for driving under the influence of alcohol or drugs.

Disadvantages. As in the cases of the other agency data, law enforcement information is subject to administrative decisions. If there is great public concern about drug abuse, the police are more likely to step up their activities and arrest more drug abusers. Law enforcement agencies may also feel the need to "prove" their worth during times when budgets are being allocated and, at those times, more drug seizures may be made. In some countries law enforcement agencies do not typically cooperate with health and social agencies and may be reluctant to share their data. The categorization of arrest data may also be misleading. For instance, many jurisdictions have laws against possession and sales of drugs. Persons arrested for those reasons may not necessarily be drug users themselves. For that reason, it is important to distinguish between charges related to the use of drugs, the selling of drugs and the trafficking of drugs. When seizure data is analysed, it is particularly important to distinguish between those drugs intended for sale within the country concerned, and drugs intended for consumption elsewhere. Furthermore,

drug use carries great social stigma and those from the higher socioeconomic groups may be less liable to arrest, or may be able to have their arrest records expunged or have the reason for arrest altered.

Recommendations. Law enforcement agencies vary as to how they record arrest and seizure information. In some areas, specific individuals or divisions are responsible for maintaining data on arrests. As with all the other categories of agency-based data, it is important to understand how the data are recorded and to know what political or social pressures could be occurring that would influence what arrests are made.

It should be borne in mind that the objective of the network is not only to define the characteristics of the drug abuse problem in the network's target area, but also to identify emergent drug abuse patterns. For this reason, having data for sequential time periods, quarterly, semi-annually or annually, is very important. Interpretation of any changes that are observed must be cautiously made with a great deal of consideration of whether what is being observed is an artifact of some administrative decisions or a real pattern change. Networks are therefore encouraged to include information from a variety of agencies, including at least a health agency, a law enforcement agency and a drug abuse treatment programme. If there appears to be some consistency across those agencies in an emergent pattern, the network members will be more confident about the observed trend. Having similar information from a number of geographic areas will also strengthen their findings.

Surveys

In general, three types of surveys are available to networks, covering the general population, students, and special populations. General population surveys include either person-to-person, telephone or mailed interviews with a representative sample of the general population usually in households. They vary by age range and whether certain subgroups are oversampled, that is, whether the sample of persons being interviewed include larger numbers of groups than actually appear in the general population. For instance, a national household survey on drug abuse may over-sample specific ethnic groups to make sure the number of people representing those groups is sufficient to make estimates of drug use patterns for them. The general population survey can provide a good estimate of the number of persons in the population who use drugs at the time of the survey (indicating prevalence for some drug types). They perform less well for more stigmatized and low-prevalence behaviour (such as drug injecting or heroin use). While general population estimates may be cost-effective and useful in large developed countries, that is not always the case in developing countries. The value of this kind of exercise is particularly questionable in countries that lack a tradition of public polling or where suspicion of the authorities is high among the general public. The high cost of this kind of work and the technical sophistication of the sampling methods required also mean that investing in this activity may not yet be cost-effective for many developing countries.

Student surveys provide information on drug use patterns among young people. As drug use is often initiated when people are in their teens, student surveys provide estimates of the incidence of drug use (new cases). These surveys are generally self-administered within the

school setting. What ages are targeted for these surveys depends on a number of factors: what existing data and population surveys indicate are the ages of initiation of drug use; the foci of drug abuse prevention programmes; and, of course, the reading and comprehension levels of the students. Usually, student surveys are conducted with children aged 10 and older. Module III of the GAP toolkit gives guidelines on conducting school surveys. An increasing number of countries have conducted surveys of their student population, and the data can be useful in making comparisons between countries (for further information, visit the web site http://www.undcp.org/drug_demand_gap_m-toolkit.html).

Special population surveys are generally conducted with well-defined population groups meeting certain inclusion (and exclusion) criteria. These may include the homeless or street children, users of specific drugs, representatives of special groups such as sex workers, or young people who attend nightclubs or dance events. These community samples of drug consumers can provide rich data about the behaviour of this group, which is difficult to obtain by other means. However, interviewing drug users who are not in contact with services is a challenging endeavour. The primary challenge of special population surveys consists in estimating the denominator and the characteristics of the total population to allow that the sample surveyed is indeed representative. Further sources of information on the application of special population surveys is provided in the references to the present GAP Toolkit Module 1.

All surveys are most useful if they are conducted on a regular basis to allow trend analysis. Annual or biannual surveys using the same survey form, sampling approach and data collection methodology can lead to detection of up and down trends that influence the allocation of resources to either treatment or prevention services.

Advantages. There are several major advantages of surveys over other data collection methods. If well designed, surveys provide the information needed to develop incidence and prevalence rates with precision. They have broad coverage, including those populations of drug abusers who are able to maintain their habits without being arrested or hospitalized, perhaps seeking treatment from private clinics or practitioners. Other information can be added to a survey of the characteristics of drug users compared to non-drug users and of other factors that are of interest to those sponsoring the survey. When surveys are conducted on a regular basis, every year or every other year, it is possible to monitor trends across time.

Panel surveys (longitudinal, prospective studies), in which the same group of people are interviewed on a regular basis, have the potential for identifying risk and protective factors relative to initiation and involvement in drug abuse, documenting the progression of drug-using behaviours, and specifying consequences of drug abuse and dependence.

Disadvantages. The major limitation of surveys is the failure to identify emergent drug use trends (if you don't ask you won't find out) and their poor performance with stigmatized and low-prevalence behaviour. Furthermore, if only a general population survey is conducted without an oversample of young people, it will be difficult to ascertain new cases, and information on the most affected populations (those who are arrested or live on the streets) will not be available.

The conduct of surveys requires special training and can be very expensive to complete. To be successful, a survey must have high response rates across subpopulations so that the results will not be biased in any way. School surveys are significantly cheaper and arguably more practical and their completion is technically straightforward. For information systems in developing countries, school surveys are therefore usually a higher priority than general population surveys. However, it must be remembered that: students will only be likely to report drug use if they are convinced that their answers are confidential and will not result in any negative consequences; low-frequency events will still require large samples to detect; and those young people who may be most at risk of using drugs may be absent (truants, non-attendees etc.). Also, in some parts of the world, access to education is limited or many pupils may leave school at an early age; this again will compromise the usefulness of school surveys.

Recommendations. if the network is planning to use survey data, it will be important to know the following:

(a) What population does the group of respondents represent? Does it include children and adolescents? Adults and older people? Does it include men and women? Does it represent urban and non-urban groups? The way to determine the answers to those questions is to compare the proportions of the respondents within each of the descriptive categories to the proportions of the total population. For example, if the total population consists of 49 per cent males and 51 per cent females and the respondent population consists of 58 per cent females and 42 per cent males, the survey slightly underestimates drug use rates for males;

(b) How large is the sample selected for the survey? Is it large enough to ensure that estimates of the rates of specific categories of drugs of interest are stable? A statistician may be needed to assist in determining the answer to that question;

(c) What drug categories are included in the survey? Are those categories representative of drugs used in the community? Are the categories of interest to the interpretation of the survey results and to the network?

(d) What drug types are asked about, do they cover the areas of interest, and are the questions posed in a clear and meaningful way—distinguishing between different types of psychotropic substance?

(e) Were all possible measures taken to reduce the bias in responses by making the respondents feel confident that their answers were confidential and not likely to lead to negative consequences for them or their communities?

SCHOOL SURVEYS

School surveys are recognized as one of the easiest ways to make comparisons between countries. They are also relatively inexpensive and methodologically straightforward. This data source is often among the first to be systematically collected by new networks. A good example of this is the approach adopted by the Inter-American Uniform Drug Use Data System. The System is based upon a number of indicators, but participating countries are encouraged to conduct a school

SCHOOL SURVEYS *(continued)*

survey as one of their early activities. A standardized method and short questionnaire is used to ensure the comparability of results and support is given to some of the more technically difficult activities such as drawing the sample. Tools also exist to allow the data to be easily entered and analysed. In this way, the Inter-American Uniform Drug Use Data System is successfully generating a comparable data set for countries in the region. As with other data sources, school survey data have their weaknesses and do not provide a full picture of the drug problem. Nonetheless, this method does provide extremely useful data that can be relatively easily collected. By repeating the survey every few years using the same methods, a data set that reflects changes over time can be assembled.

Qualitative data

Qualitative information can be used in a drug information system either to complement and aid the interpretation of other data collected or alone where only very limited data are otherwise available. The main sources of qualitative data used include focus groups, in-depth interviews, key informant surveys and more sophisticated ethnographic approaches. The incorporation of qualitative data into a drug information system will greatly aid the interpretation of trends in indicator data by providing more specific information on what drug trends represent. For example, rapid assessment approaches often incorporate qualitative methods along with existing data and specialized surveys on drug use to facilitate interpretation of the later sources. Qualitative information also serves an important function in providing information that cannot be pre-empted by a structured survey questionnaire or through existing data sources, and in doing this can act as a sensitive warning of new drug trends that may require further investigation. The richness of information provided on the broader context surrounding drug use (for example, cultural, social, economic and demographic factors) can be helpful in understanding the antecedents and consequences of particular drug-using behaviours. As such, qualitative information is very valuable when it comes to designing interventions in response a particular trend detected by a drug information system.

Advantages. One key advantage of qualitative data collection is that it does not depend on the availability of infrastructure relating to drug problems. That is, it is a viable form of data collection in situations where there are no specialized treatment agencies for drug dependence, where there is no routine toxicology for illicit drugs, or where coverage of services for drug-related morbidity are inadequate for monitoring purposes. Similarly, in a situation where there is minimal existing knowledge about the drug situation, qualitative methods are sufficiently flexible to provide a starting point for gathering information, which in turn can provide direction for further data collection activities (for example, providing contact points for snowball samples of drug users). Another advantage is that some methods of qualitative data collection can be conducted with minimal cost and infrastructure and can be adapted to existing structures (for example, key informant interviews can be conducted over the telephone to overcome geographic barriers, and existing groups of people concerned with drug issues could be used to form the basis of focus group discussions).

Disadvantages. The open-ended or unstructured nature of data collected through these methods means that considerable time and expertise is often required for data analysis. Also, considerable training and experience are necessary to undertake some qualitative data collection (for example, on the basis of ethnography), so that the applicability of the methods depends on the availability of human resources to support data collection. Obviously the applicability of the methods also depends on the availability of participants who have good knowledge of the drug use situation, and their willingness to disclose this information. Practicalities of interviewing people also need to be considered, such as social and cultural factors affecting the group dynamics within focus group discussions.

Recommendations. There needs to be clarity on the specific target group for the qualitative research and the questions that need to be answered from the research. Methods of qualitative data collection need to be adopted that are clear, transparent and appropriate given the available level of expertise and infrastructure to collect and analyse data (including the choice of software). Methods chosen need to accommodate the local social and cultural factors that may impinge on the quality of data collected. People from whom qualitative information is obtained should have adequate knowledge of the research question through contact or experience with drug users. Similarly, one should consider the impact of social and cultural factors on reporting in group situations (for example, gender, ethnicity and status) and the method used for recording data (such as written records or tape recordings), and methods should be chosen that minimize the adverse impact of those factors.

USING SPECIALIZED SURVEYS AND KEY INFORMANTS TO MONITOR DRUG TRENDS—THE ILLICIT DRUG REPORTING SYSTEM

Specialized surveys of drug users feature in most systems in an ad hoc manner, where they are used to investigate issues highlighted by existing data, or are included where they already exist and provide relevant information. One system, namely the Illicit Drug Reporting System in Australia, undertakes specialized surveys of drug users as part of its routine data collection-these data actually forming the core of this strategic early warning system.

The Illicit Drug Reporting System uses convenience samples of injecting drug users in capital cities as a sentinel population for monitoring trends in problematic forms of drug use. Annual self-report data from this group provides a barometer for trends in the type of drugs being injected, health-related issues (such as frequency of injection, HIV risk-taking behaviour and overdoses) new forms of drug use, and changes in the availability and marketing of drugs.

Use of specialized surveys as a routine data source works well in Australia because there is a substantive population of injecting drug users who have broad exposure to the main drug types and who are often the first group to be exposed to changes in drug availability and shifts in patterns of drug consumption. Also, this group is readily accessible through the existing service providers and there is a strong technical infrastructure for researching this group. While this method provides a cost-effective means of keeping a watchful eye on emergent drug trends in the Australian context, it would require considerable investment in countries where active survey research on populations of drug users was not commonplace.

USING SPECIALIZED SURVEYS AND KEY INFORMANTS TO MONITOR DRUG TRENDS–THE ILLICIT DRUG REPORTING SYSTEM *(continued)*

Nevertheless, this system provides an example of how specialized surveys can provide valuable information to assist with understanding trends in drug consumption.

Perhaps more relevant to developing regions is the supplementary data provided to the Illicit Drug Reporting System through the application of routine key informant surveys. The collection of qualitative data from experts who have regular contact with drug users through a semi-structured interview is inexpensive, requires minimal infrastructure, and has been successfully applied in developing regions. For example, the expert opinions of school counsellors have been incorporated into the routine data collection activities of the Seychelles through a semi-structured questionnaire on drug trends among youth. Similarly, key informant interviews were used in Pakistan to map intra-country variation in drug consumption patterns and service provision.

For more information on this system, visit the Illicit Drug Reporting System web site http://ndarc.med.unsw.edu.au/ndarc.nsf/website/IDRS.

CHECKLIST

The key items are as follows:

(a) Coverage-city, country, region;
(b) Specification of drug categories;
(c) Data resources;
(d) Time period covered by data;
(e) Characteristics of drug users provided by data;
(f) Format of data-reports, hard copy in files, computerized.

Definitions of data elements

To be useful in making comparisons across time and space, usually information systems use standard definitions of data elements. The most common data elements and their definitions are presented below.

Basic concepts

Incidence

Incidence may be defined as the proportion of people within a defined population residing in a defined geographic area who are newly diagnosed as having a specified health condition or problem in a given time period. For example, 5 per cent of persons living in country X were newly diagnosed with condition Y in 1999, or 2 per cent of persons aged

34 years and older residing in London reported having used marijuana for the first time in 2000.

DATA ELEMENTS:

- Source of data
- Types of drugs used
- Method of use
- Proportion of people using drugs
- Who is using the drugs
- Age
- Gender
- Ethnicity

Prevalence

Prevalence may be defined as the proportion of people within a defined population residing in a defined geographic area who are diagnosed as having a specified health condition or problem in a given time period (includes newly diagnosed cases or persons who newly initiated a problem behaviour and existing cases). For example, 15 per cent of persons living in country X were diagnosed with condition Y in 1999, or 10 per cent of persons aged 34 years and older residing in London reported having used marijuana in 2000.

Time periods

In general, drug abuse researchers use the following four time periods when reporting about drug use in a population or subpopulation.

(a) Lifetime refers to the use of a specific drug at least once in a lifetime;

(b) Annual refers to the use of a specific drug at least once in the prior year (12 months);

(c) Current refers to the use of a specific drug at least once in the prior month (30 days);

(d) Daily refers to the use of a specific drug 20 or more times within the prior month.

Drug categories

As with time periods, drug abuse researchers generally report on the incidence and prevalence of drug use within a defined population for a specified time period by the drug categories listed below. The drug categories are fairly inclusive, yet it is known that many populations within certain geographic areas may use drugs not included in the list. The following special categories are important and should be included in all reports on drug abuse:

(a) *Cannabis type.* Includes marijuana and hashish;

(b) *Opioids.* Includes heroin, opium, and other opioids (for example, morphine, fentanyl and buprenorphine);

(c) *Cocaine.* Includes powder (salt) cocaine, crack cocaine and other forms of cocaine;

(d) *Amphetamine-type.* Includes amphetamine, methamphetamine and Ecstasy-type amphetamines;

(e) *Sedatives and tranquilizers.* Includes legally manufactured barbiturates and benzodiazepines;

(f) *Hallucinogens.* Includes lysergic acid diethylamide (LSD) and other hallucinogens;

(g) *Solvents and inhalants.* Includes a range of volatile substances such as gasoline/petrol, adhesives, aerosol products (for example, paint sprays, air fresheners, analgesic sprays), anesthetics (such as nitrous oxide), cleaning agents, solvents, and room odorizers (for example, amyl nitrite, butyl nitrite);

(h) *Other drugs.* Any illicit substances that do not fall within the above categories, such as gamma-hydroxybutyrate and anabolic-androgenic steroids.

Age categories

Using standardized age categories helps compare trends for different groups over time both across and between populations located in different cities, regions or countries. In most countries, drug use patterns vary across age groups, with children using mostly inhalants and solvents or marijuana, while those in their 20s and 30s may use drugs such as heroin or cocaine. There are other age-related data elements that are of interest to drug abuse researchers. These elements are more likely captured through surveys where self-administered or face-to-face interviews are completed. In most data sets, age is collected as an open category and summarized according to reporting needs. Age groupings often referred to in summary statistics of drug data include:

(a) *Adults.* 15-64 years;

(b) *Youth.* 15-24 years;

(c) *Adolescents*. 15-16 years.

Route of administration

The harmful consequences of drug abuse vary not only by drug type but also by the way the drug is consumed (route of administration). In particular, drug injecting is associated with the most severe consequences such as transmission of HIV infection and an increased risk of overdose and of drug dependence. Typical routes of administration include, oral consumption (eating, drinking and swallowing), sniffing or snorting (inhaling up the nose), smoking or inhaling sublimate ("chasing the dragon") and injecting. Most information systems attempt to differentiate data on drug users according to route of administration, especially for those drugs that can be injected. Injecting behaviour is often considered so important that a separate question will be used to ask about lifetime and current injecting experiences and possibly the extent to which the individual has shared injecting equipment with others.

Establishing a database

Information that is obtained by the network will appear in a variety of formats. It is important that one format for the presentation of survey and agency-based data be used by network members. This type of standardization will be helpful as the network maintains itself over time. The problem with standardization is that it focuses on the lowest common denominator, that is, those databases that have the least amount of information. It may be that separate formats are developed for each source of data. This means that the network may need to have formats specific for treatment, for law enforcement, for emergency departments etc.

The reference to "existing" data means data that are available in the form of tables or graphs in reports or stored in data files that are computer-accessible and can be made into tables. Putting data into tabular form enables information to be presented in a small amount of space. Tables present information, or data, in an orderly fashion in rows (the horizontal lines) and columns (vertical lines). The intersection of a row and a column creates a cell.

NOTE

When developing a database, make sure that confidentiality of the drug user is not violated.
See annex for further resources on ethical guidelines for epidemiology.

Tables are structured as follows:

COLUMN 1	COLUMN 2	COLUMN 3	...COLUMN N
CELL 1,1	CELL 1,2	CELL 1,3	CELL 1,N
CELL 2,1	CELL 2,2	CELL 2,3	CELL 2,N
CELL 3,1	CELL 3,2	CELL 3,3	CELL 3,N
CELL N,1	CELL N,2	CELL N,3	CELL N,N

The columns and rows represent different data items or characteristics. For example, a column may represent a drug category and the row may represent age groups. Then cell 1,1 would represent column 1-category and row 1-age group. If column 1 was heroin and row 1 was age group under 17, then cell 1,1 would be either a number or percent representing people using heroin who are under 17.

In available tables, the data presented in a cell is either a number or a percentage. If it is a percentage, it is important to note whether the 100% is the sum of percentages found in the rows or columns or of both rows and columns combined. Below are three tables that look at drug use by gender and age.

The first table shows what percentage of male and female current users of illicit drugs are under 17 years of age, 17 to 24, 35 to 34 and 35 or older. The percentage then is: age

group/gender, where the denominator equals the total number of males or females and the numerator equals the total number of males within each age group.

Table 1. Distribution of current users of any illicit drug: gender by age, 1999
(Number and percentage)

	All ages		Age groups							
			<17		17-24		25-34		35+	
Gender	Number	%	Number	%	Number	%	Number	%	Number	%
Male	350	100	100	28.7	175	50	25	7.1	50	14.2
Females	150	100	30	20	80	53.3	15	10	25	16.7
Total	500	100	130	26	255	51	40	9	75	15

Table 1 shows that the distribution of males and females by age groupings is similar. Half of the male and the female drug users were aged 17 to 24. The next largest group for both males and females are those under 17, then those 35 and older and lastly, those 25 to 34.

Now table 1 will be turned around to determine what proportion of each age group were males and females using the same numbers. In table 2, the denominator (100 per cent) will be the same for all age groups.

Table 2. Distribution of current users of any illicit drug: age by gender, 1999
(Number and percentage)

	All ages		Age groups							
			<17		17-24		25-34		35+	
Gender	Number	%	Number	%	Number	%	Number	%	Number	%
Male	350	70	100	76.9	175	68.6	25	62.5	50	66.7
Females	150	30	30	23.1	80	31.4	15	37.5	25	33.3
Total	500	100	130	100	255	100	40	100	75	100

Table 2 shows whether the gender distribution of drug users within each age group is similar to the overall distribution. Seventy per cent of drug users are male and 30 per cent are female. In fact, males tend to dominate within each age group, although there seems to be an over representation of males among those under 17.

Table 3. Distribution of current users of any illicit drug by gender and age, 1999
(Number and percentage; total drug users = 500)

	Age groups							
	<17		17-24		25-34		35+	
Gender	Number	%	Number	%	Number	%	Number	%
Male	100	20	175	35	25	5	50	10
Females	30	6	80	16	15	3	25	5

Table 3 shows the distribution of all drug users by gender and age groups. Thirty-five per cent of all drug users are males between the ages of 17 and 24, followed by males under the age of 17, and then females aged 17-24.

The data that are important to include in the database by reporting source include:

(a) Type of drug by mode of administration;

(b) Age: actual age in years provided by the data source or converted from the date of birth to the date of the report (for example, if the date of birth is 22 January 1964 and the date of admission to treatment is 17 December 17 2000, the age is 36 years). For the network report, consistent age groups are used. To comply with the annual reports questionnaire and to make the age groupings comparable to other systems, use the following age categories: children (12 and under); young teens (13-14); late teens (15-16); young adults (17-24); adults (25-34); and older adults (35 and older);

(c) Gender;

(d) Ethnic group, if applicable.

Examples of formats that are used to store data can be found in exhibits 1 and 2 below, used by the Pompidou Group of Epidemiology Experts in Drug Problems and the Community Epidemiology Work Group in the United States, which provide good models for treatment data.

In addition to maintaining the charts in "hard copy", it is possible to transfer the charts from hard copy to computer. In this way, when the network begins to accumulate data over time, it is possible to examine the data for trends. It is important to note that the trends must be interpreted cautiously, since many external factors, such as those mentioned extensively above as disadvantages of using existing data and information, need to be considered. Trends may actually represent not changing patterns but administrative practices.

Exhibit 1 below provides an example of a treatment admission data-collection form adapted from the Pomidou Group first treatment demand format.

Exhibit 1. Form used for collecting treatment data

1. City [ ][ ] *City-specific centre*

2. Treatment centre [ ][ ][ ]----[ ][ ] *Code number -type of centre*

3. Client No. *Internal code*

A. Treatment contact details

4. Date of treatment demand [ ][ ]-[ ][ ]-[ ][ ] *Day Month Year*

5. Type of contact with this centre *(circle)*

1. New client 2. Old client 9. Not known

6. (a) Ever previously treated, at any treatment centre *(circle)*

1. Never treated 2. Previously treated 9. Not known

(b) If previously treated, when last? [ ][ ][ ]

Number of months since left last treatment *(or enter code)* 888. Never previously treated 999. Not known

7. (a) In contact with other treatment centres *(specify and circle)*

_____

1. Yes 2. No 9. Not known

(b) Source of referral *(specify, and circle code)*

_____

1. Self/family/friends
2. Other drug treatment centre
3. General practitioner
4. Hospital/other medical agency
5. Social services
6. Court/probation/police
8. Other
9. Not known

B. Socio-demographic information

8. Sex *(circle)* 1. Male 2. Female 9. Not known

9. (a) Age [ ][ ] Years

(b) Date of birth [ ][ ]--[ ][ ]--[ ][ ] *Day Month Year*

10. (a) Current living status *(circle)*

1. Alone
2. With parental family
3. With friends
4. With partner
5. Institution
6. Temporary/homeless
8. Other
9. Not known

(b) Living with drug misusers *(circle)*

1. Yes 2. No 9. Not known

11. (a) Resident of city *(circle)*

1. Yes 2. No 9. Not known

(b) Area of residence within city *(specify)*

_____ [ ][ ]

12. (a) Nationality (specify and circle code)

_____ [ ][ ][ ]

1. National of this country
2. National of other country
9. Not known

(b) Ethnicity *(specify)* _____ [ ]

13. Employment status *(circle code)*

1. Regular employment
2. Unemployed/casual work
8. Other (specify)
9. Not known

14. (a) Highest educational level *(specify)* [ ]

(b) Age left school [ ][ ] Years *(or enter code)*

01. Never went to school 88. Still at school 99. Not known

C. Problem drug use

	(a) Drug name *(write in)*	(b) Route of administration *(enter code)*	(c) Frequency past month *(enter code)*	(d) Age at 1st use *(years)*	(e) Duration of regular use *(years)*
15. Primary drug					
16. Secondary (1)					
17. Secondary (2)					
18. Age 1st used any drug					

(b) Route: 1. Inject, 2. Smoke, 3. Eat/drink, 4. Sniff, 9. Not known.
(c) Frequency: 1. 1 per week or less, 2. 2-6 days per week, 3. Daily, 4. Not used past month, 9. Not known.
[ ][ ] Years

D. Risk behaviour

19. (a) Currently injecting *(circle)*

1. Yes 2. No 9. Not known

(b) If injecting, shared past month *(circle)*

1. Yes 2. No 8. Not applicable (not injecting) 9. Not known

20. (a) Ever injected *(circle)*

1. Yes 2. No 9. Not known

20. (b) If ever injected, age 1st [ ][ ] Years

(c) If ever injected, ever shared *(circle)*

1. Yes 2. No 8. Not applicable (never injected) 9. Not known

21. HIV status *(circle)*

1. Tested-positive
2. Tested-negative
3. Tested-results unknown
4. Never tested
9. Not known if tested

Exhibit 2 below provides an example of a treatment data collation form adapted from the Community Epidemiology Working Group in the United States.

Exhibit 2. Form used for collating treatment data

Reporting site_____

Characteristics of clients admitted to treatment

From _____ **To** _____, 2001
Month Month

Total number of treatment admissions: _____

	Alcohol only	*Alcohol-in-combination*	*Heroin*	*Cocaine*	*Marijuana*	*Amphetamines*
Total N						
(Use to derive %)						
Gender:						
Male	_____%	_____%	_____%	_____%	_____%	_____%
Female	_____%	_____%	_____%	_____%	_____%	_____%
Race/ethnicity:						
White	_____%	_____%	_____%	_____%	_____%	_____%
Black	_____%	_____%	_____%	_____%	_____%	_____%
Hispanic	_____%	_____%	_____%	_____%	_____%	_____%
Age at admission:						
17 & under	_____%	_____%	_____%	_____%	_____%	_____%
17-24	_____%	_____%	_____%	_____%	_____%	_____%
25-34	_____%	_____%	_____%	_____%	_____%	_____%
35 +	_____%	_____%	_____%	_____%	_____%	_____%
Route of administration:						
Smoking	_____%	_____%	_____%	_____%	_____%	_____%
Sniffing	_____%	_____%	_____%	_____%	_____%	_____%
Injecting	_____%	_____%	_____%	_____%	_____%	_____%
Other	_____%	_____%	_____%	_____%	_____%	_____%
Secondary drug:						
Type of drug #						
	%_____	_____	_____	_____	_____	_____

Exhibit 2 allows an examination of the characteristics of drug users within each drug category. It shows what proportion of those admitted to treatment with a primary alcohol only problem are men, how many are under the age of 17 etc. This is important information to have. The percentages that are calculated all use the total number of persons within each drug category (that is, alcohol only, alcohol-in-combination, heroin etc.) as the denominator.

However, the network may want to address additional questions that would require the denominator to be a different one. For example, they may want to know what proportion of women admitted to treatment use alcohol. In this case, the calculation would use the number of women admitted to treatment as the denominator and the numerator would be

the number of women admitted to treatment with alcohol only (etc.) as their primary problem. So using the same information but changing the base, that is, whether it is drug category or gender, provides answers to two different but very important questions. Exhibit 2 shows the tabular format that would provide the information where the client/patient characteristic is the denominator.

Network meetings and interpretation of the data

The network meetings are the most important component in any integrated drug information system. It is here that the data are presented and discussed. It is the proceedings of the network meeting that forms the network report. There are three significant participants at these meetings: the chair, the network members and a reporter.

In these proceedings, the chair of the network meeting has several major roles that must be played. The chair:

(a) Convenes the meeting and either develops the agenda or assigns this role to another network member;
(b) Makes sure that all members keep on schedule;
(c) Makes sure that each member has both the data in the appropriate format and has a written report;
(d) Allows only a few minutes for questions after each individual report;
(e) Discourages discussion of the data presented until after all presentations are completed;
(f) Summarizes the key findings that were presented;
(g) Encourages discussion of the findings;
(h) Asks about other corroborating or additional information that is needed and assigns network members to access this information and to present it at the next meeting;
(i) Assigns someone to write a proceedings report that would include the discussion and establish a date when the draft is ready for review;
(j) Assigns someone to disseminate the report;
(k) Every so often, reviews the dissemination list with network members.

The importance of having a short but lively network meeting was emphasized above. Each network member also has a significant role to play. The members bring to the meeting information in the form of data, but also in the form of their own expertise and familiarity with drugs and drug users within their own communities, whether treatment, outreach or law enforcement.

Once each network member has compiled the information from their data source in a standardized format, they need to write a presentation that: *(a)* summarizes the data; and *(b)* discusses whether factors such as a police sweep or contamination of a widely distributed drug may have affected the available data, that is, increased arrests for cannabis possession or increased numbers of emergency department episodes for heroin use.

Once the network has a number of meetings and a database, the network members should include another section that looks at trends over time.

Although questions may be raised by network members during their presentations, it is probably more efficacious to save discussion until the end of the meeting. The chair or other person assigned to this task should listen and take notes of each presentation, looking for cross-cutting findings or issues. For instance, the network member presenting information on arrests may mentioned that there appears to be an increase in arrests of young people for possession of heroin, while the member presenting emergency department visits may note that more people under the age of 21 are being seen for heroin overdoses. Those two observations, when viewed individually, may not signify any changes, but together they suggest that more young people are involved with heroin.

When all the network members have made their presentations, the chair or designated officer should present his or her observations. This should open the discussion about the data that was presented. The discussion does not have to be limited in the types of observations made, but should focus on the question: "What do these data tell us about drug use in our area?"

Having someone available to listen and take notes is very helpful to the group, particularly in order to capture the questions and discussion on paper so that the information can also be included in the proceedings report.

For further information on the interpretation of data from drug information networks, refer to other GAP toolkit modules on data analysis and interpretation (http://www.undcp.org/drug_demand_gap_m-toolkit.html).

Preparation of reports

The foregoing discussion emphasized the need to clarify what questions the network is asking of the data and then preparing the data to accurately address those questions. The network may want to think of several types of reports. Certainly, the most important report is the one that summarizes the information discussed at the network meeting. In the introduction to the present toolkit, a description of the integrated drug information system included a review of the importance of the network report, how it is disseminated and to whom it is disseminated. In that description, it is suggested that the network report should include an executive summary and a summary either by data source (agency) or by drug type. If more than one geographic area is represented in the network, a section by geographic area may be warranted.

The report would usually contain simple narrative summaries with some presentation of the data in table format (as shown above in tables 1-3) or in graphic form. For instance, the data from tables 1 and 2 could be made into a bar chart. Figures II and III below represent the data from tables 1 and 2. The data from table 3 are graphically presented as a pie chart in figure IV, where the entire circle represents all the current illicit drug users. Presentations such as these graphs are helpful to readers who have more difficulty reading tables. For this reason, graphs are used more often than tables in network reports.

Figure II. Distribution of current users of any illicit drugs, by gender and age group (1999)

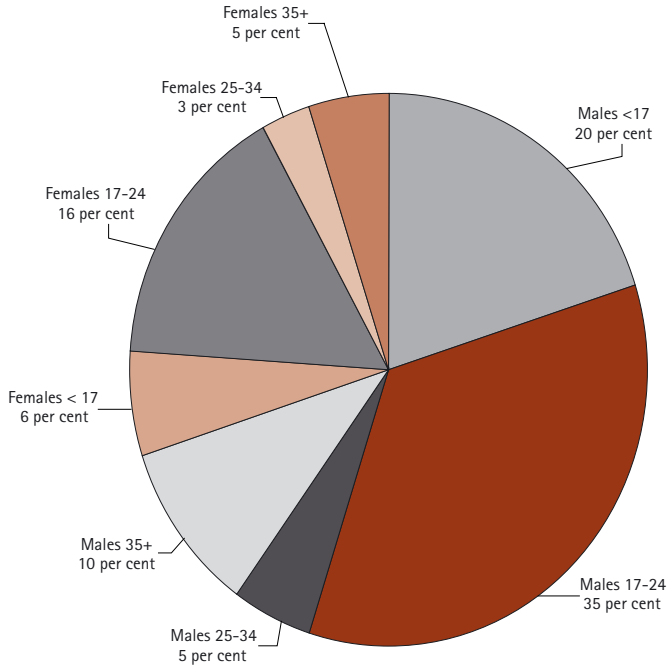


Figure III. Distribution of current users of any illicit drugs, gender by age (1999)

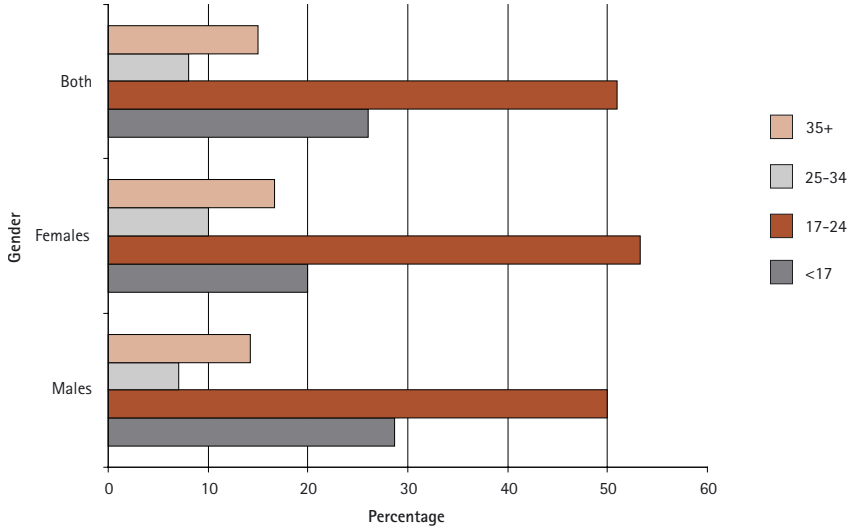
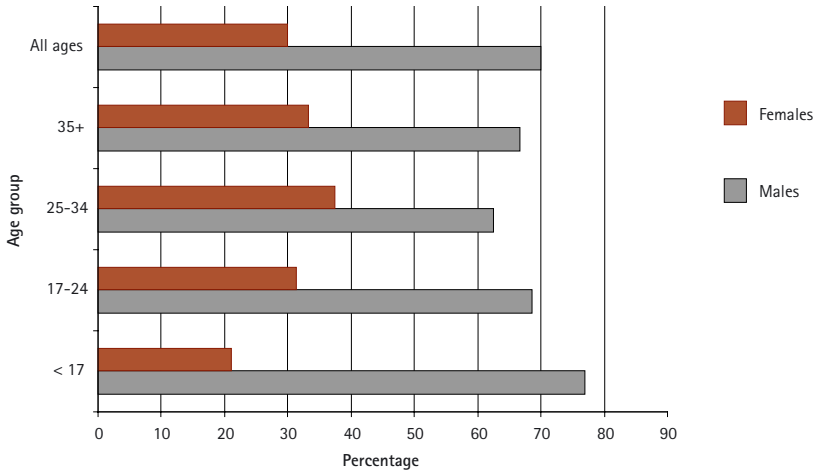


Figure IV. Distribution of current users of any illicit drug, age group by gender (1999)



Structure of the report

The size of the report depends on a number of factors, in particular, how many agencies are included, how many drugs are being considered, whether time trends are included and how many geographic areas are represented in the network. The following is a suggested table of contents for two types of networks. The first network is one that just began in one geographic area. It has met only once and does not have complete agency representation. The second network has complete agency representation for a single geographic area and has met for three years. A third type of network is one that consists of representatives from multiple geographic networks.

New network report

Executive summary for "name of network": indicate authors and contact name, agency, address, telephone number and email address

I. Goals and objectives of network

- A. Define the long-term purpose of the integrated drug information system
- B. Specify the objective of the current meeting
- C. Briefly describe future plans

II. Brief description of the geographic area being represented by the network

- A. Boundaries
- B. Demographics of population residing in the geographic area

III. List agencies represented at the meeting, specify chair

IV. Brief narrative on types of drug patterns used in the area; if noted during meeting, describe differences by reporting source

V. Brief discussion on characteristics of drug users; if noted during meeting, describe differences by reporting source

VI. Summary of discussion by network members about the findings

Network report

I. Introduction

- A. Objectives of the integrated drug information system
- B. Composition of network; agency representation
- C. Dates and place of meeting

II. Fuller description of geographic area

- A. Total population size and demographics such as age, ethnicity, socio-economic status
- B. Discuss factors that may influence drug use patterns in the city such as homeless populations, changes in drug laws, influx of new drugs and increased prevention efforts

III. Data sources and time periods covered

- A. Source of data-describe where the data included in this report came from; agency and type of data (for example, arrest information from precinct "A")
- B. Specify limitations of the data (for example, arrest data came from only one of the 10 precincts in the area)
- C. What is the time period covered by each data source—for example, 1 January 2000 through 31 June 2000
- D. Introduce the data sources with a listing that represents the sequencing of the data as they are presented; any results from special studies, key informant interviews or ethnographic studies should be presented last
- E. Data source presentations with exhibits, tables and graphs

IV. Summary of network comments and discussion giving an overall interpretation of the data presented. Include gaps in data and plans being made to fill the gaps.

V. Date, time and place of next meeting.

Ongoing network

Follow the above outline but add trend data. Generally, the trend section is divided by types of drug.

I. Drug "A"

A. Overall description of trends summarizing information from all sources of data

B. Trends by individual source of data; increases/decreases by specific population groups (for example, gender, age and ethnicity); new modes of administration (ranging from intranasal use to injecting); new drugs of abuse

C. Special studies

SUGGESTED NATIONAL REPORT FORMAT

Acknowledgements
Owners of data, contributors, funding and support etc.

Executive summary or abstract
- A. Background (for example, functions and structure of network, meeting etc)
- B. Summary of drug situation
- C. Recommendations

I. Introduction
- A. Country or city information (demographics, politics etc.)
- B. Background to network (history and purpose, data sources, structure and coverage of network, integration of network with drug demand reduction, policy and other development activities etc.)

II. Information on drug consumption
- A. Existing data sources
- B. Survey data
- C. Specialized/focused survey data
- D. Overview of drug situation/trends (by drug type where possible)

III. Development proposal/future directions
- A. Priority areas for future development
- B. Identification of needs in order to address priority areas
- C. Policy implications for drug demand reduction activities

IV. Conclusion and recommendations

V. References

List of cited reports

Annexes

I. Names and contact details of network participants
II. Completed annual reports questionnaire and/or regional reporting mechanism

Other issues related to collecting and interpreting data

Ethical concerns

Collecting data on drug consumption presents particular ethical challenges due to the illicit nature of drug-taking. Many countries have institutionalized procedures to protect the rights of participants in medical research, which are enforced through obligatory compliance with the World Medical Association Declaration of Helsinki, or locally developed ethical frameworks that are consistent with the principles of the Declaration of Helsinki. The Declaration of Helsinki can be found at http://www.wma.net. However, even the application of these general guidelines to drug abuse epidemiology presents particular ethical challenges. These challenges are detailed elsewhere, but the main themes centre around maintaining confidentiality and anonymity of drug users, obtaining informed consent from drug users (especially minors), and protecting the security and safety of both interviewers and interviewees where data collection involves face-to-face interviewing. Additional challenges remain for the application of general ethical principles to varied social and cultural settings, especially in countries where procedures for regulating the ethical parameters of medical research have not been institutionalized. For further discussion of ethical principles relating to epidemiology, refer to the World Health Organization publications on this topic (http://www.who.int/dsa/cat98/ethic8.htm). The specific application of ethical guidelines to drug abuse epidemiology is discussed by Fry and Hall in *Bulletin on Narcotics*, vol. LIV, No. 1 (2002) (see reference list annexed to the present toolkit module 1). An expansion of issues pertaining specifically to ethics in drug abuse epidemiology is planned as part of the GAP toolkit (http://www.undcp.org/drug_demand_gap_m-toolkit.html).

Gender

Available evidence suggests that gender differences in drug use vary between countries and regions, and are affected by factors such as the type of drug consumed, the pattern of drug use, the age of the user and the regional and cultural setting. The reflection of gender differences in patterns of drug use, particularly those based on agency data, will be strongly affected by any gender differences in access to services (that is, health data), in the likelihood of being apprehended for drug-related crimes (that is, arrest data), or in the likelihood of being recruited into surveys. Further, the cultural, social and economic context may differentially affect the ability and willingness of males and females to disclose and discuss drug use (for example, social acceptability of use), or their drug use being picked up by routine data sources (for example, abuse of prescription medications). If interventions are to be properly informed by data, then sound data on patterns of drug use in both males and females need to be collected, analysed and interpreted. In practical terms, this means disaggregating data by gender, where possible and relevant. Gender differences in drug consumption patterns found in data collected must be interpreted in light of the potential biases in the data (for example, differential access to service), as would be the case with interpreting drug-related indicator data in any situation. School-based surveys and general population surveys are a good way to get a rough idea of gender differences in drug consumption, although results from these will still be affected by the social

acceptability of drug use. Such services may also not provide good data on problem drug use, the data providing information on problem drug use often being biased for the reasons noted above. Where information on drug use is particularly scarce, a specialized survey on males or females alone, or analysis of existing data on services targeting either males or females, could provide a starting point for understanding the type of drug consumption patterns that are particular to either gender. For notes on gender issues in drug consumption and related harms, refer to http://www.nida.nih.gov/NIDA_Notes/NNVol15N4/tearoff.html, and for an example of a gender-specific analysis of drug use, see Ministry of Social Justice and Empowerment of India and UNDCP, "Women and Drug Abuse: the Problem in India" (New Delhi, 2002).

Concluding remarks

Drug information systems have been found in many countries to be effective tools for monitoring drug consumption. In most contexts, they represent a cost-effective means of bringing together the available data and expertise on patterns and trends in drug consumption. These systems, which have been found effective in many developed regions, are also proving successful in developing regions. Without doubt, one of the key advantages of the systems is their ability to instigate communication and cooperation between different bodies with an interest in drug consumption. Providing a multidisciplinary platform for the sharing and discussion of drug consumption data greatly enhances the capacity to develop data collection and the accurate interpretation of trends. Open dialogue between policy makers, researchers, epidemiologists and practitioners also provides a bridge for using data on drug consumption to guide policy and the implementation of demand reduction activities (that is, treatment, prevention and reducing the adverse social and health consequences of drug consumption). The present guide has provided a starting point for the development of such a system, emphasizing the key element of human networks. The annex provides a list of further resources to assist with development of a drug information system, while other modules of the GAP toolkit provide further guidance on developing core data collection activities.

Finally, it is critically important to remember one point: developing an information system is a practical accomplishment, the success of which is dependant on ensuring that the methods used are appropriate to the local conditions. The present toolkit provides only a general guide based on what has been learned from working elsewhere. These guidelines must be adapted to individual circumstances. Whom to invite to participate in a network, what are the best information sources to use and how to report them will vary both between and within countries. Furthermore, developing comprehensive information is a long-term endeavour. Accordingly, the guidelines on information, needs and resources analysis presented in the present toolkit suggest a method for defining a development strategy complete with short-, medium- and long-term goals. One of the common observations of those working in this area is that even when formal information sources are poor, considerable knowledge still exists, and valuable insights can be gained from forming a network where different perceptions of the drug phenomenon can be shared can be shared.

References: Selected documentation and resources

Below is a selected list of relevant resources and documentation to assist in the development of a drug information system. Web-based resources are provided where possible. This list is not comprehensive, but is intended to assist the reader by providing guidance to a few key resources as a follow-up to the present toolkit module, and a basis from which the reader can gain the broader exposure to the body of literature on drug abuse epidemiology.

General guidelines on Drug Abuse Epidemiology

UNDCP Global Assessment Programme on Drug Abuse methodological toolkit:

The GAP toolkit consists of interlinked resources on prevalence estimation, school surveys, data analysis and interpretation, ethics and other core spheres of drug abuse data collection. Updates on guidelines available can be obtained by emailing gap@undcp.org, or writing to the Global Assessment Programme, Demand Reduction Section, UNDCP, P.O. Box 500, A-1400 Vienna, Austria.
http://www.undcp.org/drug_demand_gap_m-toolkit.html

World Health Organization, Guide to Drug Abuse Epidemiology (Geneva, 2000)
http://www.who.int/substance_abuse/pubs_psychoactive_drugs.htm

National Institute on Drug Abuse, Assessing Drug Abuse within and across Communities: Community Epidemiology Surveillance Networks on Drug Abuse (Baltimore, Maryland, Department of Health and Human Services, National Institutes of Health, 1998)

Ethical and gender issues

Ethics

Guidelines documents on ethics in epidemiology
http://www.who.int/dsa/cat98/ethic8.htm

Nuffield Council on Bioethics, "The ethics of research related to healthcare in developing countries".
http://www.nuffieldbioethics.org/publications/pp_0000000013.asp

Fry and Hall, "An ethical framework for drug epidemiology-Identifying the issues", *Bulletin on Narcotics*. Vol. LIV, No. 1 (2002)
http://undcp.org/bulletin_on_narcotics.html

World Medical Association Declaration of Helsinki
http://www.wma.net, or in English: http://www.wma.net/e/policy/17-c_e.html

Gender

National Institute on Drug Abuse notes on gender issues in drug consumption and related harms http://www.nida.nih.gov/NIDA_Notes/NNVol15N4/tearoff.html

Ministry of Social Justice and Empowerment of the Government of India and UNDCP, *Women and Drug Abuse: The Problem in India* (New Delhi, 2002)

Women and Drugs, Symposium, Prague, November 1993
http://www.coe.int/T/E/SocialCohesion/pompidou_group/5_2EPublications/List_of_publications/prague_eng.asp#TopOfPage

Data collection

Global mechanisms of data collection on drug abuse and related issues

UNDCP Global Assessment Programme on Drug Abuse
http://undcp.org/drug_demand_gap.html

Report by the Secretariat on the world situation with regard to drug abuse, in particular the spread of human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) through drug injection (E/CN.7/2002/2).
http://undcp.org/cnd_session_45.html

Drug information systems: Principles, structures and indicators (E/CN.7/2000/CRP.3)
http://www.undcp.org/pdf/drug_demand_gap_lisbon_consensus.pdf

Global Workshop on Drug Information Systems: Activities, Methods and Future Opportunities, 3-5 December 2001, Vienna.
http://undcp.org/drug_demand_gap.html

UNDCP Annual Reports Questionnaire Part II: Extent, patterns and trends of drug abuse http://undcp.org/drug_demand_gap_datacollection.html
http://undcp.org/cnd_questionnaire_arq.html

Surveys

General population surveys

http://www.emcdda.org/situation/themes/drug_use_general_population.shtml

http://www.samhsa.gov/oas/oas.html

School surveys

GAP methodological toolkit module on school surveys
http://www.undcp.org/drug_demand_gap_m-toolkit.html

Monitoring the Future project
http://monitoringthefuture.org

Hibell and others, *European School Survey Project on Alcohol and Other Drugs Report* (Stockholm, Swedish Council for Information on Alcohol and Other Drugs, 2000)

General survey issues and specialized surveys

Journal of Drug Issues, *Substance use survey data collection methodologies and selected papers*, vol. 31, No. 3 (Tallahassee, Florida State University, 2001)

Group of Epidemiology Experts in Drug Problems of the Pompidou Group, *Handbook on Snowball Sampling* (Strasbourg, Council of Europe, 1997)

World Health Organization Guide to Drug Abuse Epidemiology (Geneva, 2000)

Qualitative data collection

European Monitoring Centre for Drugs and Drug Addiction Scientific Monograph No. 1, *Estimating the Prevalence of Problem Drug Use in Europe* (Lisbon, December 1997)

European Monitoring Centre for Drugs and Drug Addiction, Scientific Monograph No. 4, *Understanding and Responding to Drug Use: the Role of Qualitative Research* (Lisbon, July 2000)

Rapid situation assessment

Rapid assessment and response
http://www.rararchives.org/index.html

"Rapid Assessment and Response Guide on Injecting Drug Use" (IDU-RAR), 1998 (unpublished), and the "Rapid Assessment and Response Guide on Psychoactive Substance Use among Especially Vulnerable Young People" (EVYP-RAR), 1998 (unpublished), WHO/PSA and UNICEF in collaboration with UNDCP/UNAIDS
http://www.who.int/substance_abuse/pubs_psychoactive_drugs.htm

Drug Abuse Rapid Situation Assessments and Responses (United Nations publication, Sales No. E.00.XI.12)

"Special issue: rapid assessment and response, *International Journal of Drug Policy*, (2000)

Bulletin on Narcotics, Special issue on rapid assessment of drug abuse, vol. XLVIII, Nos. I and 2 (United Nations publication)

Drug information systems

National drug information systems

Community Epidemiological Work Group
http://165.112.78.61/CEWG/CEWGHome.html

Illicit Drug Reporting System
http://ndarc.med.unsw.edu.au/ndarc.nsf/website/IDRS

South African Community Epidemiology Network on Drug Use
http://www.sahealthinfo.org/admodule/sacendu.htm

Canadian Community Epidemiology Network on Drug Use
http://www.ccsa.ca/ccendu/index.htm

Regional drug information systems

The Pompidou Group of the Council of Europe
http://www.coe.int/pompidou

European Monitoring Centre for Drugs and Drug Addiction
http://www.emcdda.org

Inter-American Drug Abuse Control Commission and the

Inter-American Uniform Drug Use Data System
http://www.cicad.oas.org/en/Observatory/Main.htm

Caribbean Drug Information Network
http://www.carec.org/projects/caridin_daess/caridin_daess.htm

Southern African Development Community Epidemiology Network on Drug Use
http://www.sadc.int/index.htm

East African Drug Information System
http://undcp.org/drug_demand_gap_activities_easternafrica.html

National and regional reports from drug information systems

Community Epidemiological Work Group reports
http://165.112.78.61/CEWG/Reports.html

European Monitoring Centre for Drugs and Drug Addiction annual report
http://annualreport.emcdda.org/

Selected European national reports
http://www.emcdda.org/infopoint/publications/national_reports.shtml

South African Community Epidemiology Network on Drug Use
http://www.sahealthinfo.org/admodule/sacendu.htm

Peer-reviewed journal articles on drug information systems

Bulletin on Narcotics, Special issue on drug abuse epidemiology: science and practice, vol. LIV, No. 1 (2002)

Griffiths and others, "Drug information systems, early warning and new drug trends: can drug monitoring systems become more sensitive to emerging trends in drug consumption?", *Substance Use and Misuse*, vol. 35 (2000) pp. 811-44.

Parry and others, "The South African Community Epidemiology Network on Drug Use (SACENDU): description, findings (1997-1999), and policy implications", *Addiction*, vol. 97 (forthcoming).

Hando and others, "The development of an early warning system to detect trends in illicit drug use in Australia: the Illicit Drug Reporting System", *Addiction Research*, vol. 6, (1998), pp. 97-113.

S. Darke, S. Kaye and L. Topp, "Cocaine use in New South Wales, Australia, 1996-2000: 5-year monitoring of trends in price purity, availability and use from the illicit drug reporting system", *Drug and Alcohol Dependence*, vol. 67 (2002), pp. 81-88.

Darke and others, "Heroin use in New South Wales, Australia, 1996-2000: 5-year monitoring of trends in price, purity, availability and use from the Illicit Drug Reporting System (IDRS)", *Addiction*, vol. 97 (2002), pp. 179-186.

Access to further academic journal articles online

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi

http://www.nlm.nih.gov/medlineplus/substanceabuse.html

http://www.bireme.br/

www.healthinternetwork.net

http://www.tandf.co.uk/addiction-abs/

United Nations International Drug Control Programme resources

Terminology and Information on Drugs (United Nations publication, Sales No. E.99.XI.7)

Demand Reduction. A Glossary of Terms (United Nations publication, Sales No. E.00.XI.9)

Drug Abuse Rapid Situation Assessments and Responses (1999) (United Nations publication. Sales No. E.00.XI.12)

ANNEX

Writing a report: content and formatting guidelines

This annex is also provided in Word
and PDF formats

Name of Drug Information System

Annual Meeting Report 2002

Month date, year
Location of meeting
Country

(Insert Logos here)

Name of Drug Information System

Annual Meeting Report 2002

Month date, year
Location of meeting
Country

Prepared by
Author, M. S.
Researcher, Ph.D.
Drug Abuse Unit
Our city Department Of Public Safety

The contents of this report represent the proceedings of the (insert meeting name), held in (insert meeting venue and date), which was supported by (insert funding and technical support agencies).

For further information, contact: (insert contact details for network coordinator).

(Insert details of the authors and/or name of organization producing the report, publisher and the place and year of printing.)

For further information and resources on drug information systems, visit the UNDCP Global Assessment Programme on Drug Abuse web site at *www.undcp.org*, email *gap@undcp.org*, or contact: the Demand Reduction Section, UNDCP, P.O. Box 500, A-1400 Vienna, Austria.

Acknowledgements

Contents

Executive summary

The executive summary of the report should contain a brief introduction to the network and meeting report, a general statement summarizing the main findings of the meeting and a brief review of specific trends for each drug category and other drug-related issues (for example, the number of AIDS diagnoses, HIV or Hepatitis B and C infection rates, deaths due to drugs and drug-related accidents). This should then be followed by a summary of recommendations and follow-up action for the network.

If the network meeting report is very brief, it may be more appropriate to provide an abstract rather than an executive summary. An abstract should be about 150 words in length. It should contain a general statement of the findings, followed by a one-sentence statement for each drug category and for any other relevant observations, such as the number of AIDS diagnoses, HIV or Hepatitis B and C infection rates, deaths due to drugs and drug-related accidents. There should also be a sentence or two on the main conclusions and recommendations of the meeting.

The structure of the executive summary is reflected in the section headings listed below.

A. Background

B. Summary of the drug situation

C. Recommendations

I. Introduction

A. Country or city information

This should be a short section that describes factors unique to the city or country concerned. It can include population demographics, based on such factors as age, gender, race and ethnicity, and briefly describe relevant geographic features and political, economic or social events. Any factors that could be related to the drug abuse problems should be included.

B. Background to network

II. Information on drug consumption

List the sources and types of data used in the report. Wherever possible, explain any limitations or caveats on the data elements. For each source, define two time periods that the data cover: the latest reporting period and the comparison reporting period.

Establish an order for reporting findings from each data source. This order will be used for each report. The range of data would include the following:

(a) Treatment admissions;
(b) Arrests;
(c) Deaths;
(d) Emergency department episodes;
(e) School or other surveys;
(f) Availability, price and purity;
(g) Seizures;
(h) Trafficking and distribution;
(i) Ethnographic studies, key informant surveys and focus groups;
(j) Special studies.

A suggested order for the presentation of findings is reflected in the headings below.

A. Survey data

1. General population surveys

2. School or youth surveys

3. Specialized or focused surveys

B. Existing data sources

1. Treatment data

2. Arrest and seizure data

3. Other existing data

C. Qualitative data

1. Key informant surveys

2. Focus groups

3. In-depth interviews

4. Ethnographic studies

5. Other

D. Overview of drug situation and trends

1. Introduction

This section could be used to give an overall summary of illicit drug use, or of a particular drug that has become a significant problem, or of one important aspect of the data, such as drug-related accidents.

2. Primary drug problem

Begin with a statement providing an overview of all indicators and, if possible, of the general direction of any trend. Elaborate with any qualitative information available, from key informants, focus groups or ethnographic studies.

Each subsequent paragraph could discuss the data from each data source. For consistency, the order of the paragraphs could follow the listing of the data sources mentioned above. It would be helpful to the reader to refer to any tables, charts or other exhibits included in the report.

In addition, a summary of any special studies could be included.

3. Second most important drug (and subsequent drugs)

The same format should be followed as that given above. A description of special studies and findings would add more detail about some aspect of the drug abuse problem in the city where the studies occur. University and government researchers in the city who are not part of the integrated drug information system network may be asked to contribute to this report. Credit for the research and any funding associated with the studies should be provided.

For the convenience of the reader, all tables, charts and other exhibits should be numbered and titled. The title should reflect the drug involved, the source of the data, the characteristics studied and the time period covered.

4. Summary of main trends

III. Future directions

A. Priority areas for future development

B. Identification of needs in order to address priority areas

C. Policy implications for drug demand reduction activities

IV. Conclusion and recommendations

Annexes

I. List of participants

II. List of documents

III. Completed annual reports questionnaire and/or regional data collection questionnaire

Annual Reports Questionnaire

Part II
Drug Abuse

Extent, patterns and trends of drug abuse

Report of the Government of

Reporting Year

Name, address, telephone, telex, fax and e-mail of the person responsible for national drug abuse data in the country.

Name

Title/position

Address

Telephone	**Telex**
Fax	**E-mail**

Name, position, address, telephone, telex, fax and e-mail of the technical person responsible for the completion of Part II, *if different from above.*

Name

Title/position

Address

Telephone	**Telex**
Fax	**E-mail**

Structure of the questionnaire

This questionnaire contains the following sections:

The sections ask for information at two distinguished levels, which recognises the fact that at present many countries do not yet have detailed data on these topics.

- **Summary expert opinions**
  The questions at this level ask for broad general 'qualitative' information. All questions refer to the past year, being the reporting period.The questions do not require actual data; if you have no data based on surveys, registers or formal estimation methods, the questions can be answered on the basis of the opinions of informed experts. *This should allow all countries to respond.*

- **Quantitative estimates**
  The questions at this level ask for quantitative statistical estimates. The ARQ includes standardized response categories – *the Global Standardized Data-set (GSD).* However, should your data not conform to these categories they can still be included. Please simply indicate the categories used (for example age-range, drug category) in the space provided.

  Estimates should be provided for the reporting year. Where this is not possible please include the most appropriate recent figures available. You should always specify the year of the estimate.

  If you do not have a national estimate you can specify an estimate for a part of the country or for a sub-population. If you have more than one of such partial estimates, you should take the estimate that in your opinion is the best alternative for a recent national estimate. In such case you should also specify the geographical or population coverage of the estimate as simply but explicit as possible, as well as the size of the reference population.

  For easy recognition a different background colour is used for quantitative estimates.

General instructions for completion

- Many questions have pre-coded response categories and you only have to mark the appropriate boxes. Most other questions require to fill in rank order numbers, numbers or percentages.

- Several questions relate to drug classes or drug types. Whenever applicable, it is important that the information requested is reported for individual drugs. Although we have taken care to include all major drugs relevant for the topic concerned, the pre-coded lists might not fully suit the interests of your country. We therefore provide in each list the opportunity to add other drug classes or drug types. You may use these open categories also to insert alternative aggregate groups of drugs.
  For example: some questions list 'heroin' and 'other opioids'; if you only have information on opioids without specification of types, you should specify 'any opioids' as 'other drugs'.

- In all tables you should leave cells blank if you do not know the answer or cannot provide the required figure. All empty cells will be interpreted as 'no information available'. If a figure would result in the value zero, please specify this as 0.

- Instructions for specific questions are provided in boxes alongside the questions. In several places in the questionnaire we have provided open text boxes to add remarks and comments on the topic. For this purpose you can also use the empty pages at the end of the questionnaire.

- For further notes and definitions of technical terms used in this form please refer to the accompanying *'The ARQ, a Lexicon of Terms and Guidance Notes'*.

Complete Q2 and Q3 only when there has been use of the drug in the past year (Q1 = YES)

Class of drugs Type of drugs	Q1 Have the drugs below been used in your country in the past year? NO	Q1 YES	Q2 How are main drug classes ranked in order of prevalence? Put in numerical order	Q3 Within each drug class separately, how are drug types ranked in order of prevalence? Put in numerical order
Cannabis type	☐	☐	☐	
Marijuana (herbal)	☐	☐		☐
Hashish (resin)	☐	☐		☐
Opioids	☐	☐	☐	
Heroin	☐	☐		☐
Opium	☐	☐		☐
Other	☐	☐		☐
Cocaine type	☐	☐	☐	
Powder (Salt)	☐	☐		☐
Crack	☐	☐		☐
Other	☐	☐		☐
Amphetamine type	☐	☐	☐	
Amphetamine	☐	☐		☐
Methamphetamine	☐	☐		☐
'Ecstasy' type	☐	☐		☐
Sedatives & Tranquillisers*	☐	☐	☐	
Barbiturates	☐	☐		☐
Benzodiazepines	☐	☐		☐
Hallucinogens	☐	☐	☐	
LSD	☐	☐		☐
Other	☐	☐		☐
Solvents & inhalants	☐	☐	☐	
Other drugs				
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	

Ranking of drugs:
Start in Q2 with 1 for the most prevalent class of drugs, 2 for the second most prevalent class, etc. If necessary, you can assign equal rank numbers to more than one class of drug.
Continue with ranking individual drug types in Q3 in order of prevalence within each drug class separately.

*Non-prescribed / non-therapeutic use only

Complete Q4 and Q5 only when there has been use of the drug in the past year (Q1 = YES)

Q4

What has been the trend over the past year in prevalence of each drug class?

Q5

What has been the trend over the past year in prevalence of each drug type?

Class of drugs / Type of drugs	Q4: Large increase	Q4: Some increase	Q4: No great change	Q4: Some decrease	Q4: Large decrease	Q5: Large increase	Q5: Some increase	Q5: No great change	Q5: Some decrease	Q5: Large decrease
Cannabis type	☐	☐	☐	☐	☐					
Marijuana (herbal)						☐	☐	☐	☐	☐
Hashish (resin)						☐	☐	☐	☐	☐
Opioids	☐	☐	☐	☐	☐					
Heroin						☐	☐	☐	☐	☐
Opium						☐	☐	☐	☐	☐
Other						☐	☐	☐	☐	☐
Cocaine type	☐	☐	☐	☐	☐					
Powder (Salt)						☐	☐	☐	☐	☐
Crack						☐	☐	☐	☐	☐
Other						☐	☐	☐	☐	☐
Amphetamine type	☐	☐	☐	☐	☐					
Amphetamine						☐	☐	☐	☐	☐
Methamphetamine						☐	☐	☐	☐	☐
'Ecstasy' type						☐	☐	☐	☐	☐
Sedatives & Tranquillisers*	☐	☐	☐	☐	☐					
Barbiturates						☐	☐	☐	☐	☐
Benzodiazepines						☐	☐	☐	☐	☐
Hallucinogens	☐	☐	☐	☐	☐					
LSD						☐	☐	☐	☐	☐
Other						☐	☐	☐	☐	☐
Solvents & inhalants	☐	☐	☐	☐	☐					
Other drugs										
	☐	☐	☐	☐	☐					
	☐	☐	☐	☐	☐					
	☐	☐	☐	☐	☐					

*Non-prescribed / non-therapeutic use only

Q6

Do you have an estimate of drug prevalence among the general population?

Tick ONLY ONE

☐ **No** ➔ Proceed to Q10

☐ **Yes**
an estimate for the country as a whole

☐ **Yes**
an estimate for a part of the country or a sub-population

Q7

For which year does the estimate apply?
Which part of the country or the population is covered by the estimate?

Year of the national estimate ☐

Year of the partial estimate ☐

Part of the country or sub-population for which the estimate applies

☐

Estimated size of the reference population for which the estimate applies ☐

Please complete questions Q8 – Q9 for the estimate specified in Q7 above

	Q8		Q9	
	What is the estimated LIFETIME prevalence rate per 100 among the general population? ***Specify separately for the female population***		**What is the estimated prevalence rate per 100 among the general population in the REPORTING YEAR?** ***Specify separately for the female population***	
Preferred prevalence measure			**Last 12 months**	
Prevalence measure used				
Preferred age range	**15-64 years**		**15-64 years**	
Age range used				
	All %	Females %	All %	Females %
Cannabis type				
Opioids				
Heroin				
Opium				
Other				
Cocaine type				
Powder (Salt)				
Crack				
Other				
Amphetamine type				
Amphetamine				
Methamphetamine				
'Ecstasy' type				
Sedatives & Tranquillisers*				
Barbiturates				
Benzodiazepines				
Hallucinogens				
LSD				
Other				
Solvents & inhalants				
Other drugs				

All figures should be rates per 100 of population. You do not need to add % after your figures.

Provide decimal figures. If an estimate results in a zero prevalence rate please note as 0.

If you have an estimate of the NUMBERS of users, please convert these into rates per 100 of the reference population.

If you do not have figures for the preferred age range, you should specify the age ranges that apply to your estimates.

If you do not have figures for the preferred prevalence measure for the reporting year, you should specify the prevalence measure used for your estimate.

*Non-prescribed / non-therapeutic use only

Q10

Do you have an estimate of drug prevalence among the school (youth) population?

Tick ONLY ONE

☐ **No** ➔ Proceed to Q15

☐ **Yes**
an estimate for the country as a whole

☐ **Yes**
an estimate for a part of the country or a sub-population

Q11

For which year does the estimate apply?
Which Part of the country or sub-population is covered by the estimate?

Year of the national estimate ☐

Year of the partial estimate ☐

Part of the country or sub-population for which the estimate applies

☐

Estimated size of the reference population for which the estimate applies ☐

Prevalence of drug abuse among the school (youth) population

QUANTITATIVE ESTIMATES

Please complete questions Q12 – Q14 for the estimate specified in Q10

	Q12	Q13	Q14
	What is the estimated prevalence rate per 100 among YOUNG ADOLESCENTS population in the REPORTING YEAR? ***Specify separately for the female population***	**What is the estimated LIFETIME prevalence rate per 100 among the school (youth) population?** ***Specify separately for the female population***	**What is the estimated prevalence rate per 100 among the school (youth) population in the REPORTING YEAR?** ***Specify separately for the female population***
Preferred prevalence measure	**Last 12 months**		**Last 12 months**
Prevalence measure used			
Preferred age range	**15-16 years**		
Age range used			
	All % / Females %	All % / Females %	All % / Females %
Cannabis type			
Opioids			
Heroin			
Opium			
Other			
Cocaine type			
Powder (Salt)			
Crack			
Other			
Amphetamine type			
Amphetamine			
Methamphetamine			
'Ecstasy' type			
Sedatives & Tranquillisers*			
Barbiturates			
Benzodiazepines			
Hallucinogens			
LSD			
Other			
Solvents & inhalants			
Other drugs			

All figures should be rates per 100 of population. You do not need to add % after your figures.

Provide decimal figures. If an estimate results in a zero prevalence rate please note as 0.

If you have an estimate of the NUMBERS of users, please convert these into rates per 100 of the reference population.

You should always specify the age ranges used for the estimates.

If you do not have figures for the preferred age range of young adolescents, you should specify the age range that applies to your estimates.

If you do not have figures for the preferred prevalence measure for the reporting year, you should specify the prevalence measure used for your estimate.

*Non-prescribed / non-therapeutic use only

Q15

Has there been practice of injecting among drug users in the past year?

Q16

What has been the trend in injecting over the past year?

If there has been no practice of injecting (Q15, Any drugs = NO), proceed to Q23.

	NO	YES	Large increase	Some increase	No great change	Some decrease	Large decrease
Any drugs (type unspecified)	☐	☐	☐	☐	☐	☐	☐
Heroin	☐	☐	☐	☐	☐	☐	☐
Other opioids	☐	☐	☐	☐	☐	☐	☐
Cocaine type	☐	☐	☐	☐	☐	☐	☐
Amphetamine	☐	☐	☐	☐	☐	☐	☐
Methamphetamine	☐	☐	☐	☐	☐	☐	☐
'Ecstasy' type	☐	☐	☐	☐	☐	☐	☐
Other drugs							
☐	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐	☐

With 'sharing' needles or syringes we mean 'using a needle or syringe that has been used previously by someone else'.

Q17

Has there been practice of sharing needles or syringes among drug injectors in the past year?

☐ **No** ➔ Proceed to Q19

☐ **Yes**

Q18

What has been the trend over the past year in sharing needles or syringes among drug injectors?

Large increase	Some increase	No great change	Some decrease	Large decrease
☐	☐	☐	☐	☐

Q19

Do you have an estimate of the percentage or number of drug injectors among all drug users?

Tick ONLY ONE

☐ **No** ➔ Proceed to Q23

☐ **Yes**
an estimate for the country as a whole

☐ **Yes**
an estimate for a part of the country or a subgroup of drug users

Q20

For which year does the estimate apply? Which part of the country or subgroup of drug users is covered by the estimate?

Year of the national estimate ☐

Year of the partial estimate ☐

Part of the country or subgroup of drug users for which the estimate applies

☐

Estimated size of the reference population for which the estimate applies ☐

Please complete question Q21 for the estimate specified in Q20

	Q21a: What is the estimated PERCENTAGE of drug injectors among all drug users?	Q21b: What is the estimated NUMBER of drug injectors?
Any drugs (type unspecified)	☐	☐
Heroin	☐	☐
Other opioids	☐	☐
Cocaine type	☐	☐
Amphetamine	☐	☐
Methamphetamine	☐	☐
'Ecstasy' type	☐	☐
Other drugs		
☐	☐	☐
☐	☐	☐
☐	☐	☐

Q22

What is the estimated PERCENTAGE of active drug injectors who report to have shared needles or syringes the last time they injected drugs?

☐

If there has been no practice of sharing (Q17 = NO), proceed to Q23

Q23

Does your country make a distinction between drug users in general and drug users who are considered particularly problematic, chronic or in need of help?

☐ **No** ➔ Proceed to Q29

☐ **Yes**

Q24

What has been the trend over the past year in "severe / problematic" drug use?

Large increase	Some increase	No great change	Some decrease	Large decrease
☐	☐	☐	☐	☐

Q25

Do you have an estimate of drug users, who are considered particularly problematic, chronic users or in need of help?

Tick ONLY ONE

☐ **No** ➔ Proceed to Q29

☐ **Yes**
an estimate for the country as a whole

☐ **Yes**
an estimate for a part of the country or a subgroup of drug users

Q26

For which year does the estimate apply?
Which part of the country or which subgroup of drug users is covered by the estimate?

Year of the national estimate ☐

Year of the partial estimate ☐

Part of the country or subgroup of drug users for which the estimate applies

☐

Estimated size of the reference population for which the estimate applies ☐

Please complete questions Q27 – Q28 for the estimate specified in Q26

Q27

What is the estimated number of "severe / problematic" drug users?

☐

Q28

Which definition of "severe / problematic users" applies to the estimated number of Q27 and how is the estimate calculated?

☐

Q29

Have new drugs or new patterns of drug use been reported in the past year?

☐ **No** → Proceed to Q31

☐ **Yes**

Q30

Which new drugs or new patterns of use have been reported?

Q31

Have new groups of drug users been reported in the past year?

☐ **No** → Proceed to Q33

☐ **Yes**

Q32

Which new groups of drug users have been reported and in relation to which types of drugs?

Please use the space below to document any other developments in prevalence and patterns of drug abuse in your country over the past year.

Q33

Have there been reports about prevalence of infections among drug injectors in the past year?

Q34

What has been the trend over the past year in prevalence of infections among drug injectors?

	NO	YES	Large increase	Some increase	No great change	Some decrease	Large decrease
Hepatitis B	☐	☐	☐	☐	☐	☐	☐
Hepatitis C	☐	☐	☐	☐	☐	☐	☐
HIV	☐	☐	☐	☐	☐	☐	☐

Q35

Do you have an estimate of drug injectors having any of the infections mentioned in the table above?

Tick ONLY ONE

☐ **No** ➔ Proceed to Q39

☐ **Yes**
an estimate for the country as a whole

☐ **Yes**
an estimate for a part of the country or a subgroup of drug injectors

Q36

For which year does the estimate apply?
Which part of the country or which subgroup of drug injectors is covered by the estimate?

Year of the national estimate ☐

Year of the partial estimate ☐

Part of the country or subgroup of drug injectors for which the estimate applies

Estimated size of the reference population for which the estimate applies ☐

Please complete questions Q37 – Q38 for the estimate specified in Q36

Q37

What is the estimated NUMBER of infected drug injectors?

Q38

What is the estimated PERCENTAGE of infected persons among drug injectors?

	Q37	Q38
Hepatitis B	☐	☐
Hepatitis C	☐	☐
HIV	☐	☐

	Q39 Have there been reports about drug-related deaths in the past year?		Q40 How are drugs ranked in order of the primary cause in drug-related deaths?	Q41 What has been the trend over the past year in drug-related deaths?				
	NO	YES	Put in numerical order	Large increase	Some increase	No great change	Some decrease	Large decrease
Any drugs (type unspecified)	☐	☐		☐	☐	☐	☐	☐
Heroin	☐	☐	☐	☐	☐	☐	☐	☐
Other opioids	☐	☐	☐	☐	☐	☐	☐	☐
Cocaine type	☐	☐	☐	☐	☐	☐	☐	☐
Amphetamine	☐	☐	☐	☐	☐	☐	☐	☐
Methamphetamine	☐	☐	☐	☐	☐	☐	☐	☐
'Ecstasy' type	☐	☐	☐	☐	☐	☐	☐	☐
Other drugs								
☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐	☐	☐

Ranking of drugs as primary cause in drug-related deaths:
Start with 1 for the drug most frequently the primary cause in drug-related deaths, 2 for the second most frequent primary cause, etc. If necessary, you may assign equal rank numbers to more than one drug.

Q42

Do you have an estimate of the number of drug-related deaths?

Tick ONLY ONE

☐ **No** → Proceed to Q48

☐ **Yes**
an estimate for the country as a whole

☐ **Yes**
an estimate for a part of the country or a sub-population

Q43

For which year does the estimate apply? Which part of the country or sub-population is covered by the estimate?

Year of the national estimate ☐

Year of the partial estimate ☐

Part of the country or sub-population for which the estimate applies ☐

Estimated size of the reference population for which the estimate applies ☐

Please complete questions Q44 – Q47 for the estimate specified in Q43

	Q44 What is the estimated TOTAL number of drug-related deaths?	Q45 What is the estimated number of FATAL DRUG OVERDOSES ONLY?	Q46 What is the estimated number of drug-related AIDS DEATHS?	Q47 What is the estimated number of drug-related OTHER DEATHS (excluding fatal drug overdoses and AIDS deaths)?
Any drugs (type unspecified)				
Heroin				
Other opioids				
Cocaine type				
Amphetamine				
Methamphetamine				
'Ecstasy' type				
Other drugs				

Ranking of drugs as primary cause of treatment:
Start with 1 for the drug most frequently the primary cause of treatment, 2 for the second most frequent primary cause, etc. If necessary, you may assign equal rank numbers to more than one drug.

	Q48 Have people received treatment for drug problems in the past year?		Q49 How are drugs ranked in order of the primary cause of receiving treatment?	Q50 What has been the trend over the past year in the numbers of people receiving treatment?				
	NO	YES	Put in numerical order	Large increase	Some increase	No great change	Some decrease	Large decrease
Any drugs (type unspecified)	☐	☐		☐	☐	☐	☐	☐
Cannabis type	☐	☐	☐	☐	☐	☐	☐	☐
Heroin	☐	☐	☐	☐	☐	☐	☐	☐
Other opioids	☐	☐	☐	☐	☐	☐	☐	☐
Cocaine type	☐	☐	☐	☐	☐	☐	☐	☐
Amphetamine	☐	☐	☐	☐	☐	☐	☐	☐
Methamphetamine	☐	☐	☐	☐	☐	☐	☐	☐
'Ecstasy' type	☐	☐	☐	☐	☐	☐	☐	☐
Other drugs								
☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐	☐	☐

Q51

Do you have an estimate of the number of people receiving treatment for drug problems?

Tick ONLY ONE

☐ **No** ➔ Proceed to Q59

☐ **Yes**
an estimate for the country as a whole

☐ **Yes**
an estimate for a part of the country or a selection of treatment facilities

Q52

For which year does the estimate apply? Which part of the country or selection of treatment facilities is covered by the estimate?

Year of the national estimate ☐

Year of the partial estimate ☐

Part of the country for which the estimate applies

Types of treatment facilities included and/or excluded in the estimate

Please complete questions Q53 – Q58 for the estimate specified in Q52

	Q53 What is the estimated NUMBER of people receiving treatment for drug problems?	Q54 What is the estimated PERCENTAGE of people receiving treatment for the FIRST TIME EVER among people in treatment?	Q55 What is the estimated PERCENTAGE of FEMALES among people in treatment	Q56 What is the estimated MEAN AGE of people in treatment?	Q57 What is the estimated PERCENTAGE of DRUG INJECTORS among people in treatment?
Any drugs (type unspecified)					
Cannabis type					
Heroin					
Other opioids					
Cocaine type					
Amphetamine					
Methamphetamine					
'Ecstasy' type					
Other drugs					

Q58

Which definition of 'people treated for drug problems' applies to the figures in the columns of Q53 –Q57 above?

	Q53 Tick as Appropriate	Q54 Tick as Appropriate	Q55 Tick as Appropriate	Q56 Tick as Appropriate	Q57 Tick as Appropriate
All people receiving treatment during the year					
People STARTING treatment during the year					
People in treatment at CENSUS DATE in the year					
People discharged from treatment during the year					
Other					

If estimates for 'all drugs' in Q53-Q57 above include also treatment for alcohol problems, please tick here ➔

Data collection capacity

Q59

Has your country capacity with regard to data collection instruments specified below?

Q60

How would you qualify the present suitability of these instruments for making national estimates about the drug situation?

	Q59 NO	Q59 YES	Q60 Poor	Q60 Moderate	Q60 Good
Registers					
Specialised treatment register	☐	☐	☐	☐	☐
Registers on drug-related morbidity	☐	☐	☐	☐	☐
Registers on drug-related mortality	☐	☐	☐	☐	☐
Survey instruments					
Prevalence surveys among the general population	☐	☐	☐	☐	☐
Prevalence surveys among school populations	☐	☐	☐	☐	☐
Surveys among drug users	☐	☐	☐	☐	☐
Qualitative research instruments					
Rapid Situation Assessment	☐	☐	☐	☐	☐
Other	☐	☐	☐	☐	☐

Q61

If applicable, what are the main obstacles for implementation or improvement of data collection instruments suitable for making national estimates about the drug situation?

Reports

Please list below relevant national reports or major studies about the extent, patterns or trends in drug abuse in your country, published in the past year. ***Specify author, title and year of publication. Attach copies of documents and reports if possible.***

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Additional information

Please use the space below to add notes of clarification to any of the information contained in this questionnaire or to document any issue that you wish to draw to the attention of UNDCP.

Additional information (continued)

The completed questionnaire should be addressed to:

The Secretary-General
United Nations International Drug Control Programme
Vienna International Centre
PO Box 500
A-1400 Vienna, Austria

PART TWO

Information, Needs and Resources Analysis

Introduction

Chapter I

Background

The information, needs and resources analysis is the first step in establishing a drug information system. It is the groundwork on which to base the development of an integrated drug information system. This inventory is an important first step in the development of an integrated system, as it will:

(a) Establish the baseline information available on drug use in each country;

(b) Determine which data sources are available to contribute to an integrated drug information system;

(c) Determine what resources already exist in each country that can be used to support such an integrated system;

(d) Identify priority infrastructure and training needs in order to develop an integrated system;

(e) Establish communication between relevant stakeholders who will form part of the integrated system;

(f) Involve all relevant agencies and individuals in the development of the integrated drug information system.

That is, the integrated drug information system will provide the necessary information to help decide who should be involved in the analysis, what data can contribute to the analysis, what should be the focus of the analysis (that is, geographic coverage and types of drugs covered), potential methods of communication for the integrated drug information system, and what each agency/or individual in the country can contribute to an integrated system in terms of both skills and data/information. It will also begin to establish the necessary communication of information between relevant stakeholders, help establish local ownership of the network, and gain government support for the development of the integrated system.

The information, needs and resources analysis comprises several stages. First, baseline information that already exists in the country needs to be established. Secondly, the existing resources that could support an inte-

grated system need to be identified. Thirdly, gaps in resources and information need to be identified. And finally, this information must be assimilated in a strategic analysis, whereby a framework for an integrated system is established and specific development goals are set. The purpose of each step is explained below.

The baseline information gathered during the information, needs and resources analysis can provide a rough guide to the drug abuse situation in the country, act as a catalyst for stimulating discussion of drug trends, and provoke support for the more comprehensive and ongoing integrated system to monitor drug trends. Using the baseline information obtained in the analysis will make it possible to focus the integrated system on locally relevant drug issues, and to undertake ongoing drug abuse monitoring in a way that is appropriate and sensitive to local conditions.

The identification of resources (that is, infrastructure and skills) for supporting an integrated drug information system in the country will ensure maximum utilization of existing structures and ensure that capacity is built around existing. This should improve the sustainability of the integrated system and make sure that resources are not wasted duplicating existing structures.

The information, needs and resources analysis will also assist in identifying the gaps, needs, within the country in order to develop an integrated drug information system. For example, the information, needs and resources analysis might identify training in the analysis of existing indicator data as a priority area for development, or a need for a central coordinating body for the integrated system and associated infrastructure. These needs can be addressed by the integrated system once it is established, or may need to be addressed prior to or during the formation of an integrated system.

Finally, the information, needs and resources analysis will prioritize the needs with a strategic analysis and associated action plan, which, when implemented, will initiate the development of an integrated drug information system. This strategic plan should propose which individuals and agencies could be involved in the integrated system, and at what level (for instance, expert advisory group for the intregrated system, data gatherers, presenters, coordinating functions and communication with policy makers), what resources are needed to support the network, and which data sources could be given priority for development and inclusion in the integrated system.

STRUCTURE OF THE INVENTORY

The inventory is a preliminary step that must be taken before starting an integrated drug information system, because the outcome of the inventory will guide the development of the integrated system. There are five main steps involved in building the integrated system, which are indicated below.

STEP 1

Identifying relevant individuals and institutions

STRUCTURE OF THE INVENTORY *(continued)*

STEP 2
Assessing information and resources available

STEP 3
Identifying resources and needs

STEP 4
Strategic analysis

STEP 5
Writing the report of the information, needs and resources analysis

Carrying out the information, needs and resources analysis

Compiling the inventory of resources involves an audit of existing and potential information sources on drug abuse in the country. This audit is called an "information, needs and resources analysis". It aims to:

(a) Establish what information exists on drug abuse in the country;
(b) Establish what resources exist to support a drug information system;
(c) Develop a strategic framework for a drug information system.

The following steps are required to achieve those aims:

(a) First, people and institutions that have access to information on drug abuse (or key stakeholders) must be identified;
(b) Secondly, the nature and extent of information available from those persons and institutions must be assessed;
(c) Thirdly, the resources needed to develop a drug information system need to be identified;
(d) Finally, the information obtained through the three above-mentioned steps must then be assimilated in a strategic analysis to form a framework and development strategy for an integrated drug information system.

The report of the information, needs and resources analysis

The purpose of the information, needs and resources analysis is to produce a report that can serve as a resource for discussion when developing an information system on drug abuse. A format for this report is provided in annex I. The report of the information, needs and resources analysis is intended to help establish a sound information base, as the first step in establishing ongoing drug abuse surveillance. The data sources and resources

reported are not intended to be exhaustive, but to provide a starting point, directing the reader toward potential data that can be used to monitor drug abuse.

Building a resource library

A second requirement is to build a library of resources pertaining to the integrated drug information system. These resource files are to be contained in the annexes to the report of the information, needs and resources analysis. Ideally, the resource files should contain information on potential network members, existing reports on drug abuse, existing data sources on drug abuse and methods used for collecting and collating data. The reference library should be used to keep track of resources available in the country and to ensure that information collected is available for reference at a later date. The resource library can be updated at regular intervals based on new information that becomes available, and used by people within the drug information system as a reference for drug abuse information in the country.

Updating the information, needs and resources analysis

Auditing resources for the integrated drug information system should be done at regular intervals. In keeping with the nature of drug abuse, monitoring information on drug abuse is a dynamic process. Members of a network need to revise their approach to data collection according to the demands of the situation. The most important thing to remember when developing data sources is to work with the resources currently available, and to build on them gradually within the means available.

Adapting an integrated drug information system to the country

Focus of the system

Different countries will have different focuses for their integrated drug information system, depending on the country situation. The country context will have a strong bearing on the objectives of drug abuse surveillance, and the means by which drug abuse surveillance can be achieved. The kind of country factors that need to be considered include:

(a) Geography, population, urbanization, ethnicity, religion and language;
(b) Economic development, political situation and priority issues in the country;
(c) Broad perceptions of drug abuse in the country.

Thus, the first thing that should be done before embarking on the information, needs and resources analysis, is reflect on the country situation. This information should be documented in the report of the information, needs and resources analysis under the "Country information" section, to provide the reader with a context to interpret the drug abuse information sources and networking.

Coverage of the system

Having reviewed the country situation, it must be considered at what level the integrated drug information system is to operate. In other words, is it going to be a national system, a regional system, or a local or city system? The present guide focuses on development of a national or city-based system.

As already noted, there are several levels at which drug information systems operate, and comprehensive systems are usually built on smaller subsystems at a city or regional level. Other systems may focus on sentinel drug-abusing areas, for example, major cities where problematic drug abuse is apparent. Factors such as accessibility, resources and population distribution may affect the coverage of the system.

Once the level of the information system has been decided, the next steps would be taken according to the resources available within the level chosen for the drug information system (that is, resources available within the entire country, if the national level is chosen). If it is not certain what level of information system is needed, the next steps should be taken using all available information in the country to determine what level of information system would be most easily built using the resources available.

TIP:

Begin with a manageable area, such as the capital city of the country

Establishing information on drug abuse

The first step of the information, needs and resources analysis involves establishing what information currently exists on drug abuse in the country. This will provide baseline information on what data sources can form the input for the drug information system. Thus, the present section considers a fact-finding mission to establish what information sources on drug abuse exist in the country. It is divided into two steps, the first designed to identify people that have access to information on drug abuse, and the second designed to meet with these people and obtain that information.

Preparatory work

Because the information, needs and resources analysis serves as a preliminary step to establishing an integrated drug information system, it is important to involve all key stakeholders in the process, and build a sense of local ownership of the analysis and resulting integrated system. This means informing stakeholders in advance about the analysis and the integrated system, establishing open communication between all involved in the process, and maintaining transparency while conducting the analysis.

Government approval. The initiation of the information needs and resources analysis should have Government approval in order to ensure ongoing support and successful cooperation with local authorities and staff of relevant services as well as to gain access to various levels of information.

Advisory group. In order to achieve those aims, it is important to establish and independent advisory body to oversee the analysis and the subsequent development of the network. This advisory body should include representatives from the following agencies and organizations where they exist:

(a) Data providers (non-governmental organizations, hospitals, specialized treatment agencies, law enforcement etc.);

(b) Government ministries, especially those that oversee data providers;

(c) *National drug control authorities;*

(d) University or research institutions, particularly social research and statistical units, or equivalent bodies;

(e) Health institutions that are responsible for drug demand reduction activities (that is, prevention, treatment and reducing the adverse consequences of drug abuse).

The execution of the information, needs and resources analysis and subsequent report should be done under the guidance of the expert advisory committee.

Guidelines

Chapter II

Step 1: identifying relevant individuals and institutions

(See annex I, working sheet – step 1)

In order to establish what information is available on drug abuse in the country, the people and institutions that have access to the relevant information on drug abuse must first be identified. This may involve making contact with one or two key people in the country who are dealing with drug abuse, and seeking their referral to other individuals and agencies. If there is no obvious initial contact point in the country, it may be necessary to investigate a range of agencies that, through their work, may come into contact with drug abusers or collect data relating to drug abuse.

Below is a list of agencies that may be able to provide information on drug abuse and related issues. This list is intended as a starting point, and, when approached, the agencies concerned may refer the inquirer to other sources of information, such as drug user groups, individual experts or other services for drug abusers (for example, needle exchange services or telephone helplines).

Essentially, agencies that drug abusers come into contact with must be sought out. It has to be decided which agencies in the country may be able to provide information on illicit drug abuse. The next step (step 2) is to convene a meeting with those agencies to establish what information they can offer to an integrated drug information system.

TIP:

Where there are too many agencies to cover, canvass existing services through an initial introductory letter or phone call to identify the most relevant or representative services to include in the INRA process. Alternatively, hold a meeting of agency representatives to establish the status of data collection and possible ways of moving forward.

POTENTIAL CONTACT PEOPLE FOR INFORMATION ON DRUG ABUSE

Government departments of health and welfare
National drug councils and authorities
Universities and research centres
Non-governmental organizations that have contact with illicit drug abusers
International agencies that may be involved with substance use or related issues (for example, UNDCP, the Joint United Nations Programme on HIV/AIDS and the World Health Organization)
Drug treatment centres
Outreach services for at-risk groups (such as street people, sex workers or youth)
Police headquarters and local police stations
Prisons and the judicial system
Hospitals and emergency rooms
Psychiatric facilities
Ambulance service
Forensic laboratories and coroners

Step 2: assessing information and resources available
(See annex I, working sheet – step 2)

Step 2 involves convening a meeting with the organizations and institutions that may be able to provide relevant information on drug abuse. This can be done as a joint meeting between all agencies, or, if time permits, one person can make site visits to each agency individually. In either case, one person must be delegated to lead the process, organize meetings, take notes, and keep records of the information obtained. The type of questions to be answered through meetings with the agencies include the following:

(a) Does you country have a national household survey of drug abuse among the general population?
(b) Have any school surveys or youth surveys on drug abuse been conducted?
(c) Have any specialized research studies (including rapid situation assessments) been undertaken on drug abuse?
(d) Is there a registry of treatment admissions relating to drug abuse?
(e) Is there a registry of hospital and emergency admissions relating to drug abuse?
(f) Does you country keep a database of deaths relating to drug abuse?
(g) Do police keep statistics on arrests relating to illicit drugs?
(h) Are there any telephone help lines that take calls relating to illicit drug abuse?
(i) Are there any outreach services or individuals who have regular contact with drug abusers?

NOTE:

For each of these data collection possibilities, it is important to assess the scope of the data (for example, coverage, sampling and reporting), which can be done using the questions listed below.

At the meeting(s), it is important to introduce the process of the information, needs and resources analysis and to explain the role of the investigator and the relationship between the analysis and the development of an integrated drug information system. That done, the next step is to obtain any available information on drug abuse from the agency, find out the methods used to collect this information, and identify any barriers to data collection. Where possible, inspect databases, obtain copies of forms used for data collection, and reports that have been written on drug abuse or associated data collection activities. When obtaining information on drug abuse data collection activities, it is important to enquire about the issues listed below.

The information obtained during the meetings should be summarized under the "Information sources" section of the report. Obtain the contact details of individuals and agencies associated with information sources and note these in annex I of the report. Notes from the meetings, along with any questionnaires or reports obtained, should be included in the Resource Library so that can be accessed in the future.

THE FOLLOWING IMPORTANT QUESTIONS SHOULD BE ASKED:

How is the data collected?
What is the coverage of data collection (that is, age, gender and geographic area)?
What sampling methods were used to obtain the data?
How are the data recorded (computer database, written records, log book etc.)?
How up-to-date are the data?
How frequently is the data entered into a central database and collated?
What data categories are kept in the records (for example, age, gender or drug type)?
What drug categories are used? Do they conform to the annual reports questionnaire?
What definitions are used for data categories?
What age group is covered by the data?
How are data reported and disseminated?
What are the barriers to data collection; collation and dissemination?
What resources are needed to develop data collection activities?

CHECK DATA AGAINST STANDARD DATA DEFINITIONS AND PARAMETERS

Drug Categories

- Cannabis-type
- Opioids
- Cocaine
- Amphetamine-type
- Sedatives and tranquilizers
- Hallucinogens
- Solvents and inhalants
- Other drugs

Age

Age is usually coded as an open category to allow for analysis and reporting of specific age categories at a later time (for example, adolescents aged 15-16).

Time period

- Lifetime-used a specific drug at least once in one's lifetime
- Annual-used a specific drug at least once in the prior year (12 months)
- Current-used a specific drug at least once in the prior month (30 days)
- Daily-used a specific drug 20 or more days within the prior month

NOTE:

The above categories confirm to the annual reports questionnaire, part II, "Extent, patterns and trends of drug abuse". For further information on the annual reports questionnaire, part II, visit http://undcp.org/drug_demand_gap_datacollection.html#arq; to download the questionnaire, visit http://undcp.org/cnd_questionnaire_arq.html. For more detailed information on drug categories and terminology, refer to UNDCP publications *Terminology and Information on Drugs and Demand Reduction: A Glossary of Terms* (see the selected documentation and resources annexed to part I of the present toolkit module for publication details).

WHEN OBTAINING INFORMATION FROM KEY INFORMANTS AND OTHER EXPERTS ON PATTERNS OF DRUG ABUSE ASK ABOUT THE FOLLOWING:

Questions to ask key informant

- Types of drug abused
- Demographic characteristics of drug abusers
- Frequency of use
- Route of administration
- Context of use (e.g., where and with whom do they use drugs)
- Problems associated with use
- Service utilization and barriers to accessing services
- Risk-taking behaviour among drug abusers (for example, needle sharing)
- New trends

Step 3: identifying resources and needs
(See annex I, working sheet – step 3)

What resources exist to support the integrated drug information system?

Using the information obtained in the meetings with agencies discussed under step 2, describe what infrastructure and resources are available to establish a drug information system. The type of resources that should be considered include:

(a) People available to partake in a network;

(b) Data sources that could contribute to a network;

(c) Expertise and technical skills that are needed to develop the data collection;

(d) Universities and research institutes that could offer technical support to epidemiological activities;

(e) Infrastructure available to undertake data collection activities and networking (computers, database software, stationery, Internet/email, communications);

(f) Level of staffing and financial support for a network.

The information from this exercise should be summarized in the "Resource" section of the report of the information, needs and resources analysis.

Identifying gaps in resources, or needs

Once the existing resources in the country have been established, the gaps in resources that need to be developed should be identified. Use the information obtained during

step 2 (meetings with agencies and individuals) regarding barriers to data collection, together with the assessment of existing resources to identify resource needs, including human resources, and training. For instance, a barrier to networking may be a lack of communication between agencies because they are located in different cities. One solution to this problem might be to distribute a list of contact details or set up a mailing list. In this case, minimal resources would be required, such as temporary access to a computer to develop an electronic mailing list and a functional postal service. A second example would be where data on hospital admissions relating to drug use were recorded in a database, but could not be readily retrieved and analysed. In this case, the resource needed might be training in data entry and analysis. Obviously, the identification of resources and needs must be realistic within the resource constraints of the city or country. For example, it would not be realistic to plan email communication for a network if none of the network members had access to a computer. Document your assessment of resources needed in the "Needs" section of the report of the information, needs and resources analysis.

Step 4: strategic analysis
(See annex I, working sheet – step 4)

The previous sections dealt with compiling the information on drug abuse that already exists in the country (for example, arrest data and treatment data), the resources that exist in the country, and what resources were needed to develop potential data sources (for example, development of a standardized data collection form or a computer database).

The purpose of this section is to prioritize developments needs and establish a set of realistic goals for developing an integrated drug information system. When setting goals, it is important to consider the objectives and focus of the network and the development of the country. It is better to set achievable goals than set ambitious goals that cannot be realized.

The present section is divided into three parts. The first part involves evaluating the information sources in the country, the second involves forming a framework for the planned integrated drug information system, and the third involves formulating a strategic development plan with specific goals.

Analysis of data sources

Use the information obtained from the "fact-finding mission" on information sources to assess each data source. The following table format should be used as a guide, and the requested information should be filled in for each data source. This information should go into the "Analysis of data sources" section of the report of the information, needs and resources analysis.

Once the analysis of each data source has been completed using the table format below, summarize data sources in order of their potential contribution to an integrated drug information system considering priority, sustainability and development potential. Also, summarize the main type of resources needed to develop these data sources.

DATA SOURCE	(INSERT DATA SOURCE, FOR EXAMPLE, TREATMENT ADMISSIONS)
Current development	Describe which aspects of the data collection already exist, and which areas need further development. **Example:** Data collection is well developed at an agency level, but not collated centrally.
Coverage	National, regional, local/city; describe the proportion of the population and/or geographic area covered by the data source. **Example:** National coverage-includes all cases recorded in the country; or includes all major urban centres within a particular region.
Compatibility with the annual reports questionnaire	Indicate to what extent the data categories (drug categories, age categories and gender) are consistent with reporting in the annual reports questionnaire, and to what extent this data can assist in answering the questionnaire.
Development potential	Consider what resources are needed to develop the data source and indicate whether the development of the data source could occur in the short, medium or long term.
Priority	Rate the relevance and need for the data source as high, medium or low.
Sustainability	Consider the resources needed to maintain data collection over the long term, and rate whether this data source has a high, medium or low potential of being maintained.
Training and support needs	Identify main training and support needs to build the data collection activity. **Example:** Need training and support to develop a form to collect treatment data.

DATA SOURCE	(INSERT DATA SOURCE, FOR EXAMPLE, TREATMENT ADMISSIONS) *(continued)*
Infrastructure needs	Identify hardware or infrastructure needed to develop data collection **Example:** Computer, database software, printed forms for data collection.
Key institutions	List the institutions that would be directly involved in data collection.
Proposed development strategy	Suggest necessary measures that need to be taken to make the data source operational to improve it. **Example:** Develop a standardized data collection form and corresponding data definitions. Provide training to treatment facilities on completion of the standardized data collection form, and data definitions. Provide database software and training in data entry and analysis.

Analysis of the epidemiological network

The purpose of the exercise is to bring together the information on data sources with the resources available for the network. The first step is to assimilate the information in order to come up with a framework for the network that includes the main people involved, the main data sources and the means of networking (coordinating the network, communicating and disseminating information).

Use the information obtained thus far to develop a framework for the network. Specifically, the following steps should be taken:

(a) Describe potential focal points for coordinating the network in the country and attending regional network meetings, taking into account the geography of the country and the objectives and focus of the network;

(b) Identify data sources that could readily form the basis of the drug information system. Consider the relevance of each data source to the country, the coverage and reliability of the data sources, and the practicality and cost-efficiency of developing the data source;

(c) Identify potential methods of disseminating information, considering who needs to be informed, and what communication methods are feasible within the country.

Other factors to consider

Other network factors to consider include the geographical coverage of the network, the frequency of data collection and collation and the main drugs covered by the system.

Writing a proposal for strategic development

The purpose of this section is to develop a strategic action plan, setting specific goals for the short-, medium- and long-term. Based on the information set forth in previous sections, briefly explain the planned integrated drug information system. For example, explain the coverage of the planned system, its focus, objectives and output. Then identify short-, medium- and long-term goals based on the sections below. For each goal, the actions that need to be taken to achieve that goal should be listed. This information should go into the report of the information, needs and resources analysis under "Proposal for strategic development".

Example of a short-term goal

Goal: develop an epidemiological network using the following information sources:

(a) Police data on arrests;
(b) Treatment data from each treatment centre;
(c) Survey research (for example, youth survey) conducted by the Institute of Health.

Example of a medium-term goal

Goal: Development of a centralized data collection system for drug treatment, specifically including steps to:

(a) *Develop a core set of treatment indicators;*
(b) Standardize data definitions used to collect the core treatment indicators;
(c) Develop a procedure for collecting treatment indicators;
(d) Build a database to collate core indicator data obtained from treatment agencies.

Example of a long-term goal

Goal: Develop an accurate recording system for drug-related deaths, in particular opioid-related deaths. Implementation of this goal will require the following actions:

(a) Increasing staff time available to study toxicology and illicit drugs;
(b) Educating coroners and relevant medical officers on how to identify and classify drug-related deaths;
(c) Adding categories for drug-related deaths into the existing database.

EXAMPLE 1: ASSESSING TREATMENT DATA

Step 1: Obtain information on data collection from drug treatment centre

Action: Visit all treatment centres, examine data collection forms, obtain data categories used and definitions used for data collection categories where they exist.

Step 2: Assessment of data

Outcome: Treatment centres have different methods for collecting their data and the data from treatment centres is not centrally collated.

Resources available: All centres collect client data, but most have different categories for different data, and there are no standard data definitions. All centres have access to computers and basic data entry software (for example, Microsoft Excel) to collate and analyse their data.

Step 3: Strategic analysis

Priority development need: Development of a centralized data collection system for drug treatment.

Actions:

(a) Develop a core set of treatment indicators;

(b) Standardize data definitions used to collect the core treatment indicators;

(c) Develop a form to collect treatment indicators;

(d) Build a database to collate core indicator data obtained from treatment agencies.

EXAMPLE 2: DEVELOPING DATABASE AT LOCAL PSYCHIATRIC FACILITY

Step 1: Obtain information on data collection from psychiatric facility

Action: Visit psychiatric facility, examine data collection forms, obtain data categories used and definitions used for data collection categories where they exist.

Step 2: Assessment of data

Existing data is based on client records, and drug abuse is not routinely recorded. Where drug abuse is recorded, it is unclear what type of drug was abused, or whether diagnoses for substance abuse had been made. Records were recorded manually, and data could only be retrieved by a manual count of all cases.

Resources available: Staff at the centre were able to make diagnoses relating to substance abuse, according to diagnostic criteria set forth in the Diagnostic and Statistical Manual of Mental Disorders (Washington, D.C., American Psychiatric Association, 1994), but needed assistance with diagnosis of substance-related comorbid conditions. There was no access to a computer or database software for data entry. The existing administrative staff, who currently entered and retrieved the manual data log books, would be able to assist with data entry. Staff did not have extensive training in data entry and analysis.

Step 3: Strategic analysis

Priority development need: To develop a local database on psychiatric admissions relating to drug abuse.

EXAMPLE 2: DEVELOPING DATABASE AT LOCAL PSYCHIATRIC FACILITY *(continued)*

Actions:

(a) Adapt client record to request specific information on drug related diagnoses in patients (for example, include type of drug involved and diagnostic code);
(b) Train staff on identification of drug abuse among clients and diagnoses of substance abuse;
(c) Obtain a computer by applying for funds to donor organizations;
(d) Develop database with categories that match client log books;
(e) Train administrative staff in data entry;
(f) Train professional staff in data analysis and how to edit database.

Step 5: writing the report of the information, needs and resources analysis

(See annex I, working sheet – step 5)

Each step in the process of information, needs and resources analysis parallels a section in the report of the information, needs and resources analysis, so having completed the analysis, all of the necessary information to produce the report should be available. To actually write the report, follow the content and formatting guidelines set out in annex II of the present guide. To conclude the report of the information, needs and resources analysis, overview the main findings in terms of information sources, resources, needs, and the development strategy.

Contact details of people who contributed information to the analysis should be contained in annex I of the report (people resource file). Annex II should contain all other material obtained during the process, including notes taken during meetings with individuals and agencies about information sources.

Once the report of the information, needs and resources analysis is completed, disseminate it to the agencies/individuals who contributed information to the analysis. The next step is to organize a joint meeting to discuss the report and make any necessary revisions thereto. This meeting will effectively form the first network meeting for the integrated drug information system. Using the report of the information, needs and resources analysis as background resource material, proceed with the development of the integrated drug information system using the guidelines provided for the development of an integrated drug information system.

ANNEX I
Working sheets

Working sheet—Step 1: identifying data sources

Contact people and contact information for sources of data on drug abuse:

National drug councils/authorities

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Survey data on the general populations (for example, government departments of health and welfare)

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Universities and research centres

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Relevant international agencies

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Drug treatment centres and/or psychiatric facilities that treat drug dependence

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Outreach services for at-risk groups (for example, street people, sex workers or youth)

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Non-governmental organizations that have contact with illicit drug abusers

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Hospitals and emergency rooms and/or ambulance service

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Police and forensics

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Forensic laboratories and coroner's records

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Prisons and/or judicial system

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Other

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Working sheet—Step 2: assessing data sources

Check list for assessing data source	
Type of data (i.e., survey, existing indicator data, qualitative data)	
Procedure for data collection	
Categories used in data collection (i.e., demographics and drug categories)	
Procedure for data collated, analysis and reporting	
Resources available to assist with data collection (e.g., data analysis software, expertise)	
Barriers to data collection, collation and analysis	
What is needed to facilitate the data source being used in the network	

Check list for assessing data source	
Type of data (i.e., survey, existing indicator data, qualitative data)	
Procedure for data collection	
Categories used in data collection (i.e., demographics and drug categories)	
Procedure for data collated, analysis and reporting	
Resources available to assist with data collection (e.g., data analysis software, expertise)	
Barriers to data collection, collation and analysis	
What is needed to facilitate the data source being used in the network	

Check list for assessing data source	
Type of data (i.e., survey, existing indicator data, qualitative data)	
Procedure for data collection	
Categories used in data collection (i.e., demographics and drug categories)	
Procedure for data collated, analysis and reporting	
Resources available to assist with data collection (e.g., data analysis software, expertise)	
Barriers to data collection, collation and analysis	
What is needed to facilitate the data source being used in the network	

Check list for assessing data source	
Type of data (i.e., survey, existing indicator data, qualitative data)	
Procedure for data collection	
Categories used in data collection (i.e., demographics and drug categories)	
Procedure for data collated, analysis and reporting	
Resources available to assist with data collection (e.g., data analysis software, expertise)	
Barriers to data collection, collation and analysis	
What is needed to facilitate the data source being used in the network	

Working Sheet—Step 3: identifying resources and needs

	Resources	Needs	Examples of needs
People/organizations to form part of the network, potential data sources to form the basis of the system			Gain cooperation of different institutions/individuals involved Develop way of collecting information on a specific core area (e.g., youth, problem drug use) where there is no data available
Human resources: skills and expertise on data collection, drug issues, research or other relevant areas			Training in specific aspects of data collection Advocacy to increase awareness of the purpose of data collection

	Resources	Needs	Examples of needs
Infrastructure to collect data and communicate between network members			Need internet connection to facilitate communication, or mailing list of member contact details Data entry software to assist with data analysis
Capacity for financing data collection and networking activities, and/or providing staff time to undertake activities			Staff time to assist with data analysis and network coordination Finances to cover provision of data entry software Finances to cover venue and travel

Working Sheet—Step 4: strategic analysis

A. Data analysis

Complete for each potential data source	
Data source	
Current development	
Coverage	
Compatible with annual reports questionnaire reporting categories	
Development potential	
Priority	
Sustainability	
Training and support needs	
Infrastructure needs	
Key institutions	
Proposed development strategy	

B. Network analysis

Organization of the network	
Objectives and focus of system	
Coverage of network	
Coordinating body	
Frequency of meetings and data collation	
Reporting mechanisms	
Other	

B. Network analysis *(continued)*

Network members Name/organization	**Contribution to network** (i.e., data source, expertise, data collation and reporting)

C. Strategic analysis

Short-term goal	
Goal	
Resource requirements	
Proposed action	
Medium-term goal	
Goal	
Resource requirements	
Proposed action	
Long-term goal	
Goal	
Resource requirements	
Proposed action	

Working Sheets—Step 5: INRA report template

See attached report template and diskette

ANNEX II

Writing a report: content and formatting guidelines

Information, Needs and Resources Analysis

Country name, year

Organization
City, Country

(Insert Logos here)

The contents of this report represent the proceedings of the (insert meeting name), held in (insert meeting venue and date), which was supported by (insert funding and technical support agencies).

For further information, contact: (insert contact details)

(Insert details of the authors and/or name of organization producing the report, the publisher and the place and year of printing.)

This report template was provided by the UNDCP Global Assessment Programme on Drug Abuse (GAP). For further information, visit the GAP website at *www.undcp.org*, email *gap@undcp.org* or contact the Demand Reduction Section, UNDCP, P.O. Box 500, A-1400 Vienna, Austria.

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Acknowledgements

Acknowledge involvement and contributions from agencies and individuals involved in the information, needs and resources analysis.

Explanatory notes

IDIS integrated drug information system

INRA information, needs and resources analysis

RSA rapid situation assessment

Executive Summary

A. Background

B. Information

C. Resources

D. Needs

E. Strategic plan

F. Conclusion

I. Introduction

A. Background

Describe the background of the information, needs and resources analysis and the purpose of the report of the information, needs and resources analysis.

Example

Information, needs and resources analyses (INRAs) are being conducted under the UNDCP Global Assessment Programme on Drug Abuse. The purpose of INRA is to establish country capacity for collecting information on drug abuse. INRA involves auditing existing information on drug abuse, auditing infrastructure and resources available to support data collection activities, and identifying key needs for development of a drug information system. INRA is the first step in establishing ongoing drug abuse surveillance. The list of data sources and resources relating to drug abuse presented in this report is not exhaustive, and is intended to serve as a resource to stimulate discussion on drug abuse information, directing the reader toward potential data that can be used to monitor drug abuse.

B. Country information

Include relevant information on the following:

(a) Geography, population, urbanization, ethnicity, religion and language;

(b) Economic development situation, political situation and priority issues in the country;

(c) Broad perceptions of drug abuse in the country.

C. Information, needs and resources analysis for the (insert country name)

This section of the report should outline the focus and purpose of the information, needs and resources analysis in the country concerned, how the analysis was undertaken and who was involved in the process.

II. Information on drug abuse

A. Survey data

Include a description of any surveys undertaken, including:

(a) General population surveys;

(b) School or youth surveys;

(c) Specialized surveys, such as, workplace surveys and rapid situation assessments.

Specifically, include information on when the survey was conducted, the sample and methods used, and a brief summary of the main findings. Also include a reference to any reports arising from the survey.

In the resource library (annexes), include a copy of any reports obtained and questionnaires used, as well as the contact details of the people involved in undertaking the surveys.

B. Existing data

Construct a separate section for each source of existing data that is investigated. In each section, the following should be described:

(a) The nature of the data collected (e.g., representing treatment admissions relating to drugs and alcohol);

(b) How the data are collected (e.g., questionnaire on admission to hospital or patient records);

(c) What is the coverage of data collection (city, regional or national);

(d) How are the data recorded (e.g., computer database, written records or log book);

(e) How frequently are the data entered into a central database and collated;

(f) What data categories are kept in the records (e.g., age, gender or drug type);

(g) Whether cases are coded according to drug type;

(h) How data are reported and disseminated;

(i) Barriers to data collection, collation and dissemination;

(j) Resources needed to develop data collection activities.

Obtain a sample of recent data, and present this in the report along with an interpretation of the data. Use information from the person providing the data to assist with the interpretation of the data. Their expert opinion can also be used to supplement the data provided. For example, a treatment provider may explain patterns of polydrug use and common routes of administration, where the data may only indicate main drug used.

Obtain the contact details of people involved with the data collection activities, and include them in annex I. Also, obtain copies of any questionnaires or forms used for data collection and include them in the resource library (annex II) for future reference.

Examples of existing data sources that might be included in the report are as follows:

(a) Treatment data;

(b) General hospital data;

(c) Mortality data;

(d) Psychiatric hospital data;

(e) Law enforcement data

(f) Other indicator data sources.

C. Qualitative data

Include in this section other sources of information that might be encountered, in particular qualitative information and expert opinion. Qualitative research, such as focus groups, key informant surveys or ethnographic studies should be included in this section. For example, user-group representatives may provide self-report information on patterns of drug use, while night-club security staff may provide information on new types of party drugs. Use qualitative information to gain more detailed information on patterns and trends in drug abuse, the context of drug abuse, and high-risk behaviours among drug abusers. Specific questions that it might be possible to answer using qualitative information include:

(a) Types of drug used;

(b) Demographic characteristics of drug users;

(c) Frequency of use;

(d) Patterns of polydrug use;

(e) Route of administration;

(f) Context of use (e.g., where and with whom do they use);

(g) Problems associated with use;

(h) Risk-taking behaviour among drug users (e.g., needle sharing).

Describe each qualitative research study, including a description of the methods used, the sample and the findings from the study. Describe information obtained from experts in terms of who they were reporting on, the types of drugs used by this group, trends in drug use within the group, and problems and risk-taking behaviour among members of the group.

Include contact details of relevant people in annex I. Obtain any reports arising from qualitative research, together with questionnaires used, and include them in the resource library (annex II).

III. Resources

The purpose of this section is to determine what resources for establishing a drug information system exist in the country. Information on the following should be included:

(a) People and organizations that could potentially form part of a drug information system;

(b) Potential data sources that can contribute to the network;

(c) The nature and level of technical knowledge and expertise relating to data collection activities, survey research and other specific drug research;

(d) The availability of infrastructure to collect data and communicate between network members (e.g., computers, data entry software, email and Internet access and access to stationery);

(e) Capacity for financing data collection and networking activities and providing staff time to undertake activities.

IV. Needs

On the basis of the assessment of resources existing in the country, itemize areas where information, resources, training and infrastructure are needed to build a drug information system. Describe the specific needs for each of the following areas:

(a) Training (e.g., need for training in setting up a database);

(b) Infrastructure (e.g., need for software for data entry);

(c) Communication and networking (e.g., need for Internet connection to facilitate networking).

Any other needs related to setting up data collection activities and networking may also be included.

V. Strategic analysis

A. Analysis of data sources

Insert the tables from the "Analysis of data sources" section on each data source analysed together with the summary of priority data sources. This information should come from the strategic analysis undertaken during the information, needs and resources analysis and should describe the following:

(a) Data source;

(b) Current development;

(c) Coverage;

(d) Compatibility of the annual reports questionnaire;

(e) Development potential;

(f) Priority;

(g) Sustainability;

(h) Training and support needs;

(i) Infrastructure needs;

(j) Key institutions;

(k) Proposed development strategy.

B. Epidemiological network

Provide an outline of the proposed network, describing in detail the people and focal points involved, the data sources that will be used, and methods of communication and information dissemination that could be used by the network. This information should come from the strategic analysis undertaken during the information, needs and resources analysis.

C. Proposal for strategic development

Provide a brief explanation of the planned integrated drug information system in terms of coverage, focus, objectives and output. Include specific goals and actions in the sections indicated below under the headings "Short-term goals", "Medium-term goals" and "Long-term goals". This information should come from the strategic analysis carried out during the information, needs and resources analysis.

1. Short-term goals

2. Medium-term goals

3. Long-term goals

IV. Conclusion

The conclusion of the report should include the following:

(a) A brief review of the purpose of the report;

(b) A summary of information obtained on drug abuse (for example, most common drugs and patterns of use) and potential data sources on drug abuse in the country;

(c) A summary of existing resources (including data sources) to establish a drug information system;

(d) A summary of the main development needs of the country;

(e) A statement of priority goals to achieve with respect to developing a drug information system.

Annex I

Contact details of information providers

Include the contact details of relevant people contacted during the information, needs and resources analysis.

Example of format

Name:

Position:

Organization:

Address:

Telephone:

Fax:

Email:

Annex II

Resource library

Include reports and questionnaires obtained while undertaking the information, needs and resources analysis.

Include notes from meetings undertaken during the information, needs and resources analysis.

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