

The assessment of drug problems





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THE ASSESSMENT OF DRUG PROBLEMS

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EUROPEAN HEALTH21 TARGET 12

REDUCING HARM FROM ALCOHOL, DRUGS AND TOBACCO

By the year 2015, the adverse health effects from the consumption of addictive substances such as tobacco, alcohol and psychoactive drugs should have been significantly reduced in all Member States

(Adopted by the WHO Regional Committee for Europe at its forty-eighth session, Copenhagen, September 1998)

ABSTRACT

This publication is for planners, policy-makers and service providers in European countries who wish to obtain, at relatively low cost, reliable information on drug-related problems in order to develop appropriate responses and subsequently monitor the situation. The purposes for which data are collected and important basic concepts underlying data collection in this field are considered. The authors describe a range of sources of information that can be used, provide an overview of different methods, their advantages and limitations and give concrete suggestions on how to collect and make the best use of existing data. Advice is given on how to set up an information system which can meet the future requirements of treatment and prevention policies, provided with examples of data-gathering instruments.

Keywords

SUBSTANCE-RELATED DISORDERS – prevention and control – epidemiology
DATA COLLECTION
INFORMATION SYSTEMS
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FOREWORD

The problem of psychoactive substance use and associated harm continues to be one of the hot issues in social policies of many countries of the WHO European Region. Changing trends and patterns of drug use, emerging new drugs and groups of drug users result in a challenge to existing drug policies and services, which become less effective if they do not take into account these rapid changes in a drug scene.

This is especially true of countries where drug use epidemics are a more recent phenomenon, and where there is to date insufficient expertise and structures to assess the scope and patterns of these new epidemics and to monitor their development. In view of the rapidly unfolding epidemic of HIV infection among injecting drug users with its dramatic impact on health and social development, national and local governments can no longer ignore the problems related to drug use and have to explore its scope and nature with the aim of developing adequate policy responses.

An accurate and realistic assessment of trends and patterns of drug use has to result in the development of more comprehensive and efficient policy response. In addition, an accurate assessment on national and local situation with substance use makes it possible to compare the collected data with other countries and regions and utilize their expertise in developing appropriate preventive and treatment strategies. In many communities and countries attempts are made to elaborate techniques to assess the scope of the problem, whilst sometimes unaware of the methods and instruments which are available now in the field of substance use epidemiology.

The Regional Office for Europe of the World Health Organization has prepared this document aiming at providing the countries of the Region with the knowledge accumulated so far in the field of gathering and analysing data on substance use related problems. In the preparation of this text many people have been involved and we are indebted to them. The work of the Pompidou Group in this field is gratefully acknowledged. This document, designed for service-providers, planners and policy-makers, sets out the guidelines for gathering information on substance use and related problems, with a special emphasis on collecting in a systematic way and utilizing data from normally existing information sources. Researchers and those who are interested in methodological issues and technical provision of epidemiological studies in the field of drug use are referred to the European Monitoring Centre for Drugs and Drug Addiction publication¹ and a *Guide to drug use epidemiology* recently developed by WHO headquarters.² Much of the text of several sections of the publication that you are holding now in your hands also appears in the document issued by WHO headquarters.

We trust that these guidelines will help national and local authorities to assess and monitor the situation with drug use, particularly in the countries of central and eastern Europe and central Asia, thereby increasing their capacities to develop appropriate drug-related prevention, treatment and harm reduction strategies and actions.

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¹ *Estimating the prevalence of problem drug use in Europe*. European Monitoring Centre for Drugs and Drug Addiction, 1997 (Scientific Monograph Series, No 1).

² *Guide to drug abuse epidemiology*. Geneva, World Health Organization, 1998 (document WHO/MSA/PSA/97.14, pre-publication version).

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1 INTRODUCTION

1.1 Objectives

These guidelines are for planners, policy-makers and service providers in European countries who wish to obtain, at relatively low cost, reliable information on drug-related problems in order to develop appropriate responses and subsequently monitor the situation. The original intention was to develop guidelines for countries of central and eastern Europe (CCEE). However, it has become apparent that despite differences, there are also important similarities and that many of the issues covered here are applicable to all European countries. Thus it makes more sense to put forward a framework that encompasses the whole Region, whilst retaining comments on points of particular relevance to CCEE.

The emphasis in these guidelines is on the nonmedical use of substances listed under the various United Nations conventions. In addition, the substances covered by these guidelines also include some substances not subject to these conventions, such as solvents (volatile inhalants) and some of the amphetamine-type stimulants (designer drugs). This should not be taken to imply that alcohol and tobacco are unimportant, nor to deny that in all countries they are associated with major health and social costs. Rather, the reasons behind the decision to limit the scope of these guidelines are that assessing the nature and extent of illicit drugs and drug-related problems is a relatively new issue in many countries, especially in CCEE, and also that different methods and indicators are sometimes needed to obtain relevant information on legal and widely used substances such as tobacco and alcohol, compared to less common, illegal drugs. A summary of the main indicators of alcohol and tobacco use and related problems, as well as key references, are included in the Annexes. With regard to assessing tobacco use, the reader is also referred to the *Guidelines for controlling and monitoring the tobacco epidemic* (WHO, Tobacco or Health Programme, 1995).

Drug use and drug problems, especially when illegal, are not easily assessed through traditional health or social service channels. It may be necessary to apply techniques which appear unorthodox in terms of conventional epidemiology or social surveys. If few specialized services exist, and if the level of expertise or knowledge is limited, then there is no quick way to obtain accurate and comprehensive measures. It is often inevitable that responses start to evolve on the basis of inadequate knowledge.

Planning and appraisal are further complicated by marked local, national and regional variations, not only in drug use patterns, but also in services and policies. There is no rigid blue-print that can be applied to all situations. These guidelines should be seen as a framework to be adapted to local circumstances. It is important, however, to incorporate as many as possible of the standard core elements suggested in this guide in order to facilitate consistency over time and comparability between areas.

The main focus of these guidelines is on how to obtain more reliable and comparable descriptive information on the prevalence, characteristics and consequences of drug-taking, as well as on how these are changing over time. Such description is a necessary first step towards understanding the situation, identifying priorities, implementing appropriate responses, and monitoring trends. However it will also be necessary to complement this description with more analytical studies to identify risk and protective factors and the underlying processes or

mechanisms involved, and to design evaluation studies concerning the impact of policies and interventions. These more sophisticated, analytical methods are not covered in these guidelines.

The rest of Chapter 1 considers the purposes for which data are collected, and outlines important basic concepts which underlie data collection in this field. Chapter 2 describes a range of sources of information that can be used. Chapter 3 provides an overview of different methods, their advantages and limitations. Chapter 4 gives concrete suggestions on how to collect and make the best use of existing data. Chapter 5 provides guidelines on setting up an information system which can meet the future requirements of treatment and prevention policies. Annex 1 summarizes different sources of information; Annex 2 suggests core data; Annex 3 gives examples of data gathering instruments.

1.2 Information needs

The decision of what information to collect depends on the purposes for which it is wanted, and at what level. For example, surveys of the knowledge and attitudes of school children about drugs may help to design prevention programmes, but they do not help plan services for narcotic addicts. Similarly, analysis of the historical development of drug use may advance understanding of longer-term processes, and inform policy-making in the future, but it is not directly applicable to problems such as how to reduce the sharing of syringes by injecting drug users.

Purposes of information collection

The purposes for which information is collected, and the sorts of knowledge which are particularly important for those purposes may be summarized as follows:

- to describe the nature and extent of drug use:
 - incidence and prevalence
 - types of drugs used, availability and sources
 - profile of populations involved
 - trends over time;
- to plan health and social services for drug problems:
 - number and type of existing services
 - extent and nature of problem use and consequences
 - pattern of risk-behaviours (injecting, sharing, etc.)
 - patterns of help-seeking and service utilization
 - profiles of treated and untreated populations
 - differentiation of range of needs and whether met;
- to develop prevention and education strategies:
 - current prevention resources and activities
 - use patterns in the population and subgroups at higher risk
 - knowledge and attitudes regarding drugs
 - analytical epidemiology (aetiology and risk factors)
 - dynamics of drug initiation and continued use;
- to project future trends:
 - epidemic and econometric modelling
 - early warning systems;

- to evaluate public health interventions:
 - process or outcome measures of treatment programmes
 - changes in attitude, behaviour, etc. in prevention programmes
 - baseline measures or relevant measures in control groups
 - short- and/or long-term measures
 - assessment of contribution of intervention(s) to changes
 - measures of service utilization
 - measures of cost-effectiveness.

Conflicts can arise between these needs (local vs. national, long- versus short-term, broad versus narrow issues) though these are not covered here. The emphasis is on the basic information that is needed as a starting point for developing policies in almost any area, that is to say, on the nature and extent of drug-taking, the main drug-related problems that arise, the sections of the population most affected, and the major trends over time.

At what level?

National governments need rather general information that gives an overview of broad patterns, trends and regional variations to help them develop and assess the overall direction of policies. They also often require information on the impact of different interventions so as to develop guidelines for “good practice”.

At the local level, where the direct impact of drug use is felt, information needs are more concrete and immediately related to the local situation. These circumstances often vary considerably according to the profile and traditions of local communities; the number and type of local services; and the local patterns of drug use and supply. Even within a city, large differences can be found, both between areas, and over time. Thus local information collection needs to be more sensitive, flexible, rapid and specific than at national level. The type of information needed at national or local level depends on the degree of centralization or decentralization in policy-making and service provision.

At the international level, information is needed to assist the development of policies concerning regional or inter-regional issues, and to enable countries within the same region and between different regions to share experiences and to learn from the successes and failures of others. This is of particular relevance with regard to the global spread of injecting, the associated problems of HIV and more recently Hepatitis C. Collaboration is helped by the adoption of agreed, standard criteria, though progress can be made if differences in definitions are made clear.

Context and interpretation

Statistical measures only quantify the extent of drug use or of drug problems. It is essential to interpret those data in the context in which they were collected. This includes the local culture, the nature of the health, social and enforcement structures, the history and tradition of drug use in the society or in communities within it, the processes by which the data were collected, and so on. In this respect, it is of great value to include qualitative data as well as figures. These data refer not only to the context described above, but also to accounts obtained from drug users, and other significant figures in contact with them, concerning their perceptions of the drug scene, beliefs about drug use and drug problems, attitudes towards treatment, and so on. This enables the statistical data to be applied to policies and interventions in more appropriate and relevant fashion.

2 SOURCES OF INFORMATION

This chapter describes a wide range of sources of information that may be useful in assessing patterns of drug use and drug problems.

2.1 Different levels of information

Different sources of information reflect different aspects of substance use. Reliance on only one source (e.g. hospitals or police) will give an incomplete and misleading picture. It is essential to cover as wide a range of sources as possible.

Sources of information can be considered under five headings:

- existing literature and documentation
- routine statistics
- information available at agencies
- local information from groups and individuals
- information from drug users.

Existing literature and documentation

This includes research studies, reports and other compilations of information on substance use and problems in a country. Both “grey” or unpublished documents and published material may be included. It is important to note that existing data are rarely available for a country as a whole. More often than not they are – at best – city level data or limited to particular populations. For example, the work of the Pompidou Group European multicity networks is focused on the city level, because it is more feasible to carry out pilot and developmental work at this level, and because it is easier to take into account the various factors needed to interpret the data.

Routine statistics

These can include:

- hospital discharge diagnoses
- treatment notifications
- police arrests for drug offences
- seizures of illicit drugs
- court convictions for drug offences
- mortality statistics
- infectious disease notifications (e.g. hepatitis B)
- reported AIDS cases.

Routine statistics have the advantage that they are readily available. If they have been collected consistently, then they can provide indirect indicators of trends over the years. However, they often provide only basic, aggregated information on a small number of variables. A more important limitation is that information systems which are not specifically concerned with drug use are very likely to under-record drug-related cases. For example, court statistics give the number of people convicted of offences against the drug laws but not the (usually larger) number of drug users convicted of other offences. Even specialized systems understate the true number of “known” drug users, since not all agencies may be covered, not all drug users may be recognized as such, and the relevant information may not be recorded or transmitted to the system.

It is very likely that the figures which emerge from this filtering process represent only a fraction of the total picture, and an unknown fraction at that. Moreover, the data are in bald numerical form and, by themselves, difficult to interpret. It is therefore necessary to seek information from agencies and other sources which are more directly in contact with substance users.

Agencies

It is important to cover:

- treatment agencies (specialized centres and, as far as possible, nonspecialized services which provide treatment to people with substance use problems);
- medical services which deal with various consequences of substance use (emergency rooms, hospitals, public health units, laboratories, etc.);
- social agencies providing care to people with substance problems;
- law enforcement agencies (police, customs, forensic services, etc.).

Governmental, nongovernmental and private agencies should be included.

Some agencies may already have internal documentation on their caseloads and client profiles, including information on substance-related problems. However, others may not, and those which have will probably record and present the data in their own way. This makes it very difficult to collect and collate information that is comparable between agencies. It is therefore necessary to organize a more systematic review of data that are available at different agencies. This is discussed in 4.2.

The extent to which agency data reflect patterns of drug use depends not only on the nature and extent of drug-taking, but also on the availability of services, on their priorities and policies, and on whether they recognize and record drug users. Even where services exist, only a proportion of all people who use drugs ever go to them because of their drug use. At any given point in time, the proportion in contact with agencies is considerably smaller. Usually, it is individuals with heavier patterns of drug use, who experience more serious problems, and who have fewer alternatives who are known to agencies. Even then there may well be a time lag of months or often years before people become known as drug users.

Local groups and individuals

It is at community level that drug use and especially problems are first experienced. Since it takes time for changes to filter through into agency-based indicators or statistics, it is valuable to tap sources at local level, including community organizations and key individuals. However, data at this level are even more disparate and hard to collect systematically than at agencies. One alternative is to develop networks of local key informants. This is discussed in 2.11 below.

Drug users

Drug users themselves are closest to the phenomena being assessed, though collecting useful and reliable information poses special questions. These are best approached either through confidential discussions with drug users in contact with agencies, or through special research projects. This is briefly discussed in 3.7.

Identifying future information needs

Collecting information from existing sources is useful not only for assessing recent trends and the current situation, but also identifying future information needs. These include:

- improvements in the quality of individual indicators
- more systematic and routine collation of data from different sources
- specific areas requiring special investigations
- data collection strategies that will help to evaluate the impact of interventions and policies.

In countries where resources are limited, developing a high-cost comprehensive reporting system for substance use may not be justified. In these cases, it may be sufficient to utilize existing nonspecialized information systems, after testing and improving their reliability and validity.

In all countries, it is worth developing a network of local “key informants” who can provide insight into current trends and help to interpret the data provided by different indicators.

Developing an information system which is relevant to future needs is covered in Chapter 5.

2.2 Treatment services

The demand for treatment, especially the first demand by drug users who have never previously received treatment is of particular value. Treatment reporting systems are considered in more detail in 5.2.

Possible sources include:

- specialized drug or alcohol treatment centres
- programmes for drug and alcohol users in general services
- primary care services, general health and social services
- voluntary and nongovernmental social agencies.

Data on treatment demand can provide:

- a direct measure of the demand for treatment by people with drug and alcohol problems (mainly dependence);
- indirect indicators of wider trends in problem drug and alcohol use;

Coverage

Although “treatment” is sometimes understood mainly in terms of medical interventions, a broader view is recommended that includes a wide range of activities aimed at ameliorating the psychological, medical and social state of individuals who seek help for their drug or alcohol problems. Thus treatment can be based within structures that are medical or nonmedical, governmental or nongovernmental, public or private. These include outpatient clinics, inpatient detoxification, drug substitution, therapeutic communities, counselling and advice centres, crisis centres, treatment programmes in prison, self-help groups, programmes for drug users provided within general health or social care facilities, as well as – for example – syringe exchange and HIV outreach projects.

If few specialized services exist, or if primary care and general services play an important role in the treatment and management of substance-related problems, then they should be covered. They could include: health centres, general practitioners, community nurses, social workers, youth workers, nongovernmental organizations, psychiatrists, pharmacists, probation officers, prison medical officers, etc. Data collection can pose practical difficulties, since there are usually no centralized structures for collating information, and substance-related problems often constitute only a small proportion of the total caseload.

Voluntary and nongovernmental agencies

In some countries, nongovernmental agencies and informal groups are a major source of help and support for drug users who are unwilling to go to treatment centres or hospitals. It may be difficult to obtain precise statistical data, but they can be valuable sources of information on emerging patterns of drug use or on populations of drug users who are not often reflected in more official sources.

Direct measure of demand on services

The number and profile of people demanding treatment for drug or alcohol problems gives a direct measure of the uptake of services. This offers planners and treatment providers insight into what sorts of clients use which services, and provides a basis against which to evaluate attempts to attract particular subgroups into treatment. In particular, data on first treatment demand, that is to say on people who are demanding treatment for their drug or alcohol use for the first time ever, can provide a sensitive indicator of the relative attractiveness of different services, especially if data are recorded on how long such clients have been using drugs or drinking heavily prior to their first treatment demand.

Indirect indicator of trends in problematic use

First treatment demands can also be used as an indirect indicator of changing patterns of more severe, problematic drug or alcohol use in the communities served by the treatment centres involved. To achieve this, it is important to record information that distinguishes clients who are seeking treatment for the first time from those who have previously received treatment. If this is not done, then it is difficult to identify new populations who are coming to treatment for the first time from the (usually older) “revolving door” population of more chronic drug users who repeatedly go in and out of treatment over several years.

The ratio between first treatment demands and demands by people who have been treated previously can be an indicator of the incidence rate. When incidence is high, the proportion of first treatment demands increases. As incidence falls, so does the proportion of first treatment demands, indicating that the problematic drug using population is increasingly dominated by longer-term users.

Basis for more detailed investigations

A good database on treatment demands provides an excellent basis for more detailed investigations. This added value increases over time if data are collected consistently through a treatment reporting system. Chapter 5.2 of this guide deals with reporting systems. Guidelines for treatment reporting systems have also been developed and tested in eleven European cities by the Pompidou Group.

If a treatment reporting system does not exist, then it may be possible to collect data retrospectively from existing records (see 4.2). However, it is likely that some information will be missing or recorded in noncomparable fashion. Data on psychiatric hospital admissions are dealt with below in section 2.4.

Limitations and advantages

Whilst treatment demand data can provide a sensitive indicator of service attractiveness and drug misuse trends, there are important limitations. It is a lagged indicator, in the sense that there is a delay, sometimes of several years, between first drug use and the first demand for treatment. The type, availability and accessibility of treatment can also have an important impact on the demand

for treatment. For example, if services are primarily concerned with alcohol or opiates, then problems related to other drugs such as stimulants or solvents will be underestimated. It is essential to consider these when interpreting the data.

Minimum data set

The minimum data should include: primary drug for which treatment was sought, age first use of primary drug, other significant drug use, route of administration, age, gender, area of residence and previous treatment (ever previously treated for drug problems at any treatment centre). Core data are given in Annex 2. The model form tested in the Pompidou Group treatment demand study is included in Annex 3. In addition to the model form, the Pompidou Group has also produced a protocol for the first treatment demand indicator, which provides a framework for the routine collection and reporting of comparable core data.

2.3 Emergencies

This refers to drug-related episodes seen at hospital emergency departments and, in some cases, by other services.

Possible sources include:

- hospital emergency rooms
- ambulance service
- crisis centres
- health centres
- poison centres.

Data on emergencies can provide:

- a direct indicator of the demand on emergency services arising from certain consequences of substance use;
- an indirect indicator of trends in selected patterns of problematic drug use.

Coverage

Hospital emergency rooms (ERs) may be particularly useful sources of information in countries with limited primary care or specialized treatment facilities. In some countries, data are collected via the ambulance service; in others, health centres or crisis centres may be appropriate sources. If it is not possible to cover all emergency services, then include the major ones plus a cross-section of other services.

Direct indicator of drug-related emergencies

Data from hospital ERs or emergency services can provide a direct measure of drug-related emergencies such as overdoses, other acute intoxications and adverse reactions, organic and acute psychiatric complications, withdrawal symptoms, accidents, and requests for information or treatment. The population attending ERs overlaps with, but is not coterminous with, the population seen in treatment centres. Data from ERs may thus point to subgroups who experience problems but who are not in treatment.

Indirect indicator of trends in problematic use

Drug-related emergencies seen at hospital ERs also provide a useful indirect indicator of trends in problematic drug-taking in some countries. To do this, it is important to distinguish drug-

related episodes arising in the course of nonmedical drug-taking or associated with drug dependence, from genuine accidents or deliberate self-harm which is unconnected with “drug abuse”. ER data mainly reflect patterns of opiate or multiple drug use, injecting, and heavy use of alcohol and/or sedatives. They are not useful for less intensive use. The significance of “withdrawal symptoms” as an indicator is strongly influenced by whether or not emergency departments dispense or prescribe drugs.

Data recording

Since ER personnel are primarily concerned with the immediate emergency, only limited information is available on other aspects of the patient. In particular, in accident cases, data on whether drug use was involved are often lacking. It is recommended that data collection focus on overdoses and other acute reactions, drug and alcohol related complications, and perhaps withdrawal symptoms. If alcohol involvement in accidents is routinely recorded, then include this as well.

Data can be collected prospectively using a special reporting form, though in a busy ER, compliance is a major problem. It may therefore be necessary to collect data retrospectively through reviewing ER records. However, the quality of the information that is recorded can be highly variable, and the ease with which records can be reviewed depends on the record-keeping system. It is thus essential that the medical personnel are persuaded of the importance of good record keeping, and it is useful to identify a key person who is willing and able to review records on a regular basis (e.g. weekly or monthly). This may require some payment. It is important to use consistent guidelines.

Basic data should include: reason for attendance, main drug(s) involved in the episode, probable motive for episode (nonmedical drug-taking or drug dependence, accident, self-harm, etc.), age, gender, area of residence, treatment given (including any psychoactive drugs) and disposal. Examples of data collection forms are in Annex 3.

2.4 Hospital admissions

In many countries, discharge diagnoses are recorded using an international system such as ICD-9 (now ICD-10; WHO, 1992), or DSM-III-R (now DSM-IV; APA, 1994).

Possible sources include:

- psychiatric hospital admission or discharge diagnoses
- psychiatric registers (ideally covering outpatients)
- general hospital admission or discharge diagnoses.

Hospital statistics can provide:

- a direct indicator of trends in psychiatric hospital admissions with a primary diagnosis of drug or alcohol dependence or abuse;
- an incomplete indicator of organic diseases occurring in drug and alcohol dependents/abusers admitted to general hospitals.

Psychiatric hospitals

This includes admissions for dependence, nondependent abuse, or drug psychoses. Inpatient data should be interpreted cautiously. Primary diagnoses of drug or alcohol dependence may reflect

admissions, but these do not always reflect wider trends in drug dependence. The availability of beds may determine admission rates, younger misusers may be reluctant to accept inpatient psychiatric treatment, and attitudes towards psychiatric care (both among practitioners and in the population) can have a significant impact on hospital-based statistics.

The value of this indicator depends on the treatment policy of the country concerned. If psychiatric hospitals are the primary source of treatment, and if prevalence is relatively high, then the data may reflect trends. More often, they are likely to be of limited value. Where possible, it is recommended that data on treatment demand described in section 2.2 above are more useful. A psychiatric register which also covers outpatients can be useful, as long as data gathering has been consistent and of good quality.

General hospitals

This includes admissions for drug-related organic diseases (infections, hepatitis, cirrhosis, etc.) or for poisoning. The data may give a profile of complications occurring in heavy drug or alcohol users, but should be viewed even more cautiously than data from psychiatric hospitals. Often it is impossible to identify cases because a secondary diagnosis of drug dependence, etc. is not recorded. In poisoning cases, as with drug-related emergencies, it is necessary to distinguish suicides that do not otherwise involve nonmedical drug use. This indicator tends to be unreliable and to under-estimate the true number of drug or alcohol-related cases admitted to hospitals.

2.5 Infectious diseases

Injecting drug use is a known risk factor for infectious diseases such as hepatitis B and C, endocarditis and HIV/AIDS. Data on the prevalence of these conditions or their markers among IDUs are useful for identifying needs for prophylactic measures, such as hepatitis B vaccination, syringe exchange or risk-reduction education, and for monitoring the impact of these measures. Many European countries now have syringe exchange programmes or similar interventions, which have been shown to be effective in some of these countries.

Possible sources include:

- notifications to public health authorities
- infectious disease hospitals or units
- hospital statistics on discharge diagnoses
- public health laboratories
- sentinel surveillance records
- national AIDS prevention and control programmes.

Data on drug-related infectious diseases can provide:

- an indicator of trends in the prevalence of drug-related infectious diseases, mainly among injecting drug users;
- at times, an indirect indicator of the incidence of drug-injection.

Viral hepatitis

The incidence of acute viral hepatitis, in particular hepatitis B, C and other non-A forms, has sometimes been used as an indicator of the incidence of drug injecting, since injectors tend to become infected at an earlier rather than later stage of their career.

Behavioural changes associated with HIV and AIDS may well have changed the significance of hepatitis as an indicator, though if data on risk factors are available (drug injection versus other factors such as homosexual activity or blood transfusion) then epidemic increases in drug-related cases of hepatitis B, non-A/non-B or C may point to an increased incidence of drug-injecting among previously unexposed populations. The converse is not true. A low number of drug-related cases of hepatitis does not necessarily mean a low incidence rate of injecting. Hepatitis A is not a good indicator of drug use.

Interpretation is complicated by the increase in hepatitis C in some drug injecting populations. A further problem is that information on the risk factors involved is often lacking.

AIDS and HIV

The number of drug-related AIDS cases cannot be used as to indicate trends in drug injection prevalence, since the prevalence of HIV and AIDS differs widely between different drug using populations and can change rapidly. These are however valuable indicators for public health policy regarding both prevention and the treatment of people with AIDS.

The rate of HIV-seropositivity among injecting drug users varies greatly between different countries. Similarly, rapid changes over time are sometimes observed. This means that data on HIV cannot be used as an indicator in trends in drug injection, though of course they are very relevant to identifying the need for interventions aimed at limiting the spread of HIV.

Data collection

Data on infectious diseases can be obtained through public health surveillance systems and laboratories, and through hospital discharge statistics, though they may be unreliable due to missing information on risk behaviours. National AIDS reporting systems may be more reliable (for AIDS).

In many countries, viral hepatitis is a notifiable disease, though compliance is often low. It is also necessary to distinguish drug-related cases from those where homosexual transmission is involved.

2.6 Deaths

Data on deaths are important since they represent the most serious outcome. Drug and alcohol related deaths include direct causes such as overdose, and indirect causes such as accidents under the influence of drugs or alcohol, or organic disease such as cirrhosis. This should be considered an important indicator, though its significance as an indicator of trends in prevalence is controversial.

Possible sources include:

- mortality statistics;
- police records (drug-related deaths, road traffic deaths involving alcohol, criminal offences involving drug or alcohol-related fatalities);
- forensic and toxicology departments;
- coroners or medical examiners;
- death certificates;
- hospital records.

Data on drug and alcohol related mortalities can provide a:

- measure of patterns and trends in drug-related deaths (drugs involved, sociodemographic profile, etc.);
- indirect indicator of trends in drug dependence (sometimes);
- indicator of trends in alcohol-related deaths (cirrhosis, road deaths);
- indirect indicator of trends in heavy alcohol consumption.

The quality of death-related data varies considerably from country to country. The feasibility of using this indicator depends on how well deaths are investigated (e.g. toxicological investigation) and on whether data are available on the circumstances of death as well as on the underlying and immediate causes. The criteria for identifying cases are important. Mortality statistics based on causes of death recorded in death certificates usually understate the number of drug-related deaths. For example, acute drug deaths may be recorded as cardiac insufficiency, and records of traffic accident deaths may not mention drugs or alcohol. Similarly, vital statistics on deaths by poisoning do not include drug-related deaths occurring from other causes and do not differentiate the individuals concerned according to their prior pattern of drug-taking.

Drug-related deaths as an indirect indicator

The number of drug-related deaths may in part reflect the prevalence of problematic drug use, but other factors are also important, such as the type and purity of the drugs that are available, the route of administration, and the personal and social characteristics of drug-using populations. Drug-related deaths are more likely to reflect heavy use of substances such as opiates, barbiturates or solvents, multiple drug use, and intravenous drug use. They are not a reliable indicator of cannabis use or “recreational” drug use.

Alcohol-related deaths

Acute deaths arising from alcohol intoxication or poisoning are rare in comparison to the number of alcohol consumers, and do not accurately reflect the prevalence of heavy or problematic drinking. It is more useful to examine indicators such as cirrhosis deaths.

Data recording

The best sources of data on drug-related deaths depend on the legal and administrative procedures in each country. It is important, if possible, to try to distinguish deaths of “drug misusers” from deaths such as suicides or accidents occurring in people who were not “drug misusers”. With deaths of young people involving illicit drugs such as heroin, it is reasonable to assume that the deceased were misusers. With commonly available medicines such as benzodiazepines, it is often impossible to know whether the person was, for example, a heroin addict who accidentally overdosed when using other drugs as a substitute, or a psychiatric patient who committed suicide, unless circumstantial evidence is available or the underlying cause of death is recorded as drug dependence.

It may be useful to review all available sources of data for the past one or two years, and not just rely on mortality statistics or figures provided by the police. This could include: a review of all death certificates involving adolescents and young adults (if all ages were included, the task would be much more onerous unless a random sample were selected); a review of coroners’ records; a review of autopsy records; and any other relevant records that are available. The data should be extracted using standard criteria, for example:

- deaths arising directly from intentional or accidental intoxications involving (a) illicit drugs, (b) alcohol, (c) other psychoactive substances (distinguish all substances involved);
- deaths due to long-term drug or alcohol use (e.g. AIDS, cirrhosis);
- suicides and other violent deaths related to drug/alcohol dependence;
- fatal accidents under the influence of drugs or alcohol.

2.7 Arrests

Law enforcement agencies are concerned with different aspects of the drug situation than health and welfare agencies, though there is often some overlap in the drug users whom they encounter. Police data can thus be a useful complement to health sources as indicators of patterns and trends in illicit drug use, but only if police policy and resources are taken into account.

Possible sources include:

- police and customs records
- specialized drug enforcement units.

Enforcement sources can provide:

- direct measures of trends in arrests for:
 - use or possession of illegal drugs
 - supply or trafficking of illegal drugs;
- indirect indicators of trends in:
 - use of illegal drugs
 - supply of illegal drugs;
- information on:
 - the profile of known illegal drug users
 - drug and alcohol involvement in other offences;
- trends in arrests for drunkenness and drink-driving incidents.

Indirect indicator

Police arrests for use-related offences (e.g. possession) can, with care, be useful as an indirect indicator of trends in illegal drug use, especially if there are no major changes in activity regarding drugs. However, increased police attention to drugs almost always increases the arrest statistics, even if there is no change in the level of illicit drug use. The value of data on alcohol-related arrests depends on cultural attitudes and legal responses.

Although similar considerations apply to seizures of illicit drugs (see 2.10 below), the advantage of arrest data is that they also provide basic information on the people involved, as well as the drugs. However, some groups (e.g. street users or known criminal groups) may be more vulnerable to arrest than others (e.g. middle-class users). As long as biases are recognized, and the possible effect of other factors such as changes in police policy are considered, large changes in the pattern of police arrests for drug offences can be a useful indicator of trends over time.

Data collection

It is important to distinguish drug arrests according to:

- whether they are use-related or supply/traffick-related
- the drugs involved, and demographic characteristics of arrestees
- arrests or persons (who may be arrested several times in one year).

Often, data are restricted to arrests for alleged drug offences (possession, supply, etc.). In some countries, the police keep records of other drug-related offences (e.g. thefts committed by addicts), or a register of “known” drug users or “addicts”. It is vital to examine closely the criteria used and the procedure used to collate the data.

2.8 Court and penal data

Possible sources include:

- court statistics on convictions and sentences
- penal institutions’ records
- prison medical officers records.

Court and penal data can provide:

- direct measure of convictions for offences against the drug laws
- direct measure of sentencing patterns for drug law offences
- direct measure of drug law offenders in the prison population
- indirect measure of drug users/dependents in prison populations.

Court statistics

Court statistics are less useful as indicators of illegal drug use, partly because the data often become available only after a long delay, partly because they are one stage further removed from the original event and are thus further biased by procedural processes. They are useful for examining sentencing policies.

Drug users/addicts in prison

This includes two groups: (a) people sentenced to imprisonment for drug offences. This gives no information on their drug-using status, may include nonusers, and is strongly influenced by sentencing policy. It should not be used as an indicator of drug trends (police arrests are a better indicator); and (b) prisoners who, regardless of their offence, are identified as drug users or addicts. This is also affected by sentencing policy, as well as by arrangements within prisons for identifying and reporting such cases. If diagnoses are reliable, then this indicator may reflect a population of drug users who are not seen at treatment centres and can thus contribute to the overall picture.

2.9 Legal production and distribution

Production and distribution data on legal substances such as alcohol, tobacco or medicines reflect overall supply and availability, but do not give direct measures of consumption patterns.

Possible sources include:

- tax revenue records for alcohol and tobacco
- production statistics for alcohol, tobacco and psychoactive substances

- import and export statistics
- wholesale and retail records of drug purchases and sales
- prescription and dispensing monitoring systems.

Production and distribution data can provide:

- indicators on trends in the overall consumption of alcohol, tobacco and psychoactive drugs.

Information on production and distribution can provide useful indicators of overall consumption and trends in the population as long as good data are available, for example through taxation on alcohol and tobacco, or through monitoring the production, distribution and sale or prescription of psychoactive drugs. It is important to take account of imports and exports when examining the data. The data can also be used in econometric models to examine the impact of factors such as price on consumption levels.

In countries where there is a significant level of home production, illicit production, smuggling or tax-free importation, then consumption estimates become unreliable. It may be possible to estimate the likely degree of error by using information from other sources.

Alcohol

Estimates of per capita consumption of alcohol are a useful indicator of alcohol consumption and trends over time and between countries, especially if different types of alcohol (beer, wine, spirits) and distribution (on-premises, off-premises) are distinguished. However, the illegal and semi-legal production of alcohol (home or domestic brews) do not appear in the legal production and distribution data. Per capita consumption is also considered a useful indicator of trends in heavy drinking, and correlates with specific alcohol-related problems such as cirrhosis. However, correlations between overall consumption and accidents, violence and drunkenness offences are much more weak and variable, being strongly influenced by cultural norms and situational factors.

Tobacco

This approach has also been used to monitor trends in tobacco, though overall sales are not always a sensitive indicator of changes in smoking patterns. Thus relative stability in sales can conceal a decreasing proportion of smokers in the population while the average consumption by smokers increases. With regard to assessing tobacco use, the reader is referred to the *Guidelines for controlling and monitoring the tobacco epidemic* (WHO, Tobacco or Health Programme, 1995).

Prescription drugs

Prescription statistics in themselves give no indication of whether drugs are used for bona fide medical reasons or not. Large increases in the number of prescriptions for specific drugs (e.g. codeine derivatives or benzodiazepines) may suggest increased demand for nonmedical purposes. They can also be used to monitor attempts to control the prescribing of specific preparations. Data on forged prescriptions and thefts from pharmacies may provide interesting pointers, but may be of more value to monitor security measures.

2.10 Illegal drug market indicators

Unlike alcohol or tobacco, reliable information on the production and distribution of illegal drugs is often lacking. Indirect indicators thus play a more important role.

Possible sources include:

- police records
- customs records
- forensic laboratories.

Data on illegal supply can provide:

- direct measures, for different drugs of:
 - the number of seizures
 - the amounts seized;
- indicators of the price and purity of different drugs at different levels of the illicit market (use, supply, traffick, production);
- indirect indicators of the supply and availability of illegal drugs at:
 - local consumer level
 - production or traffick.

As with arrests, data on seizures are influenced by police priorities and practices. Interviews with specialized drug units may help to interpret the data and can also cast light on the characteristics of the illicit drug scene and supply structures.

Quantities and types of illicit drugs seized

The quantity of illicit drugs seized is sometimes used as an indicator of the supply side of the illicit market. However, this is very difficult to interpret, especially in producer and transit countries, unless it is possible to make reliable distinctions between seizures destined for domestic distribution and those intended for another destination. Even then, one particularly large seizure can distort the figures for a whole year. However, if there is a consistent change, both in the total quantities seized on the domestic market, and in the number of larger seizures (on the domestic market), then this would probably point to a changing situation regarding the availability of illicit drugs.

Data on the type of drug seized may indicate new or re-emerging patterns of drug use, but the same limitations apply as those described above for the quantity of illicit drugs seized.

Number of seizures made by the police

Numerically, most seizures made at local level by the police usually involve small quantities seized from users or user-dealers. Other things being equal (e.g. police policy) then the more widespread illegal drugs become, the more likely it is that the police will come across them at some point.

Price/purity of illicit drugs

Data on the price and purity of an illicit drug supplement information on seizures. Thus decreasing street price without a decline in purity, in conjunction with an increase in the number and quantity seized is consistent with rising rather than falling availability of the drug concerned. Conversely, in the same situation, rising prices would suggest that seizures were having a significant impact on the availability on the illicit market. Changes in the differences in price and purity at import (wholesale) level and street (retail) level can also point to changes in the structure of the illicit supply system.

Data collection

It is useful to distinguish data on seizures according to:

- the quantities and types of different drugs;
- the numbers of seizures (per drug) of:
 - small, user-level amounts
 - larger, supply quantities
 - production-level seizures;
- the price and purity of different drugs at different levels.

Particular care is needed regarding prices. For example, it should be specified whether user-level prices of heroin refer to the cost of 1 g, or to estimates of the price per gramme based on the cost of a small street bag. The latter will usually give a price that is two or three times the cost of 1 g.

2.11 Key informants

In particular at the local level, key informants may be a useful source of information. Key informants are individuals who – because of their job, position, membership of a group, or personal experience – have actual and special knowledge about substance use and groups of substance users in certain segments of the population in a region (city or neighbourhood).

Possible sources include:

- community and outreach workers
- social workers, school-teachers and youth workers
- local policemen and prison officers
- pharmacists and street sellers of therapeutic drugs
- religious and community leaders
- community associations, self-help and other local groups
- street vendors, taxi-drivers, bar-keepers, journalists
- known drug users and their friends.

Key informants can provide:

- qualitative data on current or recent local trends and problems
- insight into local community attitudes, perceptions and needs.

Data collection

The main problems are:

- identifying appropriate key informants
- collating usable information from diverse sources
- deciding which information is most reliable and useful.

These problems cannot be solved centrally, so it is necessary to find local liaison people with strong and trusted connections to different sectors of their local communities. The possibilities of this approach depend largely on local circumstances, so it is impossible to give specific guidelines. To increase the willingness of key informants to co-operate, it may be helpful to provide them with a detailed (written) description of the context and the purpose of the study and the questions asked. If the assistance of a key informant is needed over a longer period, it is valuable to organize regular meetings with him to develop a working alliance and to discuss

specific questions. If possible, it may be helpful to have group meetings in which local liaison people from different sources exchange and discuss their information. The collection of information through drug users is briefly discussed in 3.7.

2.12 Other sources of information

Depending on local circumstances, other sources of information may be useful. These include the following.

Pregnancy and drug-using parents

Possible sources include:

- prenatal care services
- midwives and obstetric ward records
- antenatal clinics.

Positive testing at the workplace

Possible sources include:

- employers
- occupational health and social services.

Concerning drug testing at the workplace, it is important to note that this approach raises many ethical considerations.

Drug use in the military

Possible sources include:

- interviews or urine screening of conscripts
- medical records of drug or alcohol problems
- military records of drug violations.

3 METHODS: ADVANTAGES AND LIMITATIONS

This chapter discusses basic issues concerning methodology and provides an overview of the advantages and limitations of different methods.

3.1 Methodological issues

General considerations

It is not easy to obtain reliable and valid information on the nature and extent of drug use and its consequences. Drug use is often stigmatized and illegal, and tends to be associated with a variety of other illegal or socially deviant activities. Some patterns of drug use (e.g. injecting) are rare in the general population, but when concentrated in particular groups, can have consequences disproportionate to their numerical dimensions in terms of costs to the community, health care systems, or institutions such as prisons. However, relying on data on these more visible aspects of drug-taking may well lead to biased conclusions that do not apply to the more elusive and sometimes more extensive hidden populations of drug users.

Similarly, it is difficult to make valid and meaningful comparisons between different countries. Part of the reason lies in what data are collected and how they are recorded and reported. More fundamentally, there can be large differences between countries in legal and administrative structures and in the organization of health care, social services and law enforcement. These in turn reflect underlying differences in history, culture and attitudes regarding “social problems” in general and drug use in particular. Even within Europe, there are important differences in perspective and definition on what “drug misuse” is. These different frameworks (e.g. medical, criminal, social, psychological, economic, or moral) can lead to quite different definitions of terms such as “drug user”, “drug misuse”, or “addict”.

The intrinsic difficulties of studying this phenomenon and of making comparisons mean that the task of interpreting the data is of central importance. This task must be approached in a cautious and critical fashion, with close attention to definitions and methodological constraints. This leads to three major underlying principles:

- the need for clear definitions
- the importance of qualitative as well as statistical data
- the need for a multi-agency and multidimensional approach.

Definitions

In epidemiology, as in any science, criteria for defining cases and other key variables are crucial. With drug-taking, this raises especially difficult problems, since definitions reflect cultural and moral perspectives as well as objective criteria.

Thus legal definitions of “drug abuse” are couched by lawmakers in terms of what is acceptable or not in particular societies. Categories are defined in terms of prohibited behaviours (possession, supply, etc.) and rarely distinguish drug-related behaviour in terms of its health consequences. However, in clinical definitions (such as those of the WHO) the legal/illegal distinction is less important, and much greater emphasis is given to criteria concerning consequences such as dependence, toxicity, etc. In contrast, social scientists and many epidemiologists tend to use behavioural definitions which are couched in terms of patterns of use (for example, number of times used in the last 30 days, route of administration, etc.). All too often in professional discussions, these perspectives are inter-twined, and the definitions appear

to resemble popular/moralistic criteria which define drug abuse as any use of drugs which are not acceptable to one's own frame of reference. The use of different criteria can make large differences to the results obtained, especially in international comparisons.

Two main terms are used in this guide. The first is "drug use" in which the use of specified drugs is defined in behavioural terms (e.g. frequency of consumption in a specified time period). In this definition, the use (consumption) of drugs per se is treated as a neutral scientific datum. The second term is "problematic drug use", which refers to certain consequences of drug use specified according to criteria such as DSM-IV or ICD-10, or other specified criteria. The term "drug abuse" is avoided where possible.

Definitions of key terms used, and the criteria governing data collection and reporting, must be made explicit. This, for example, means:

- which drugs are included
- what time period is involved
- what population is covered
- whether the data refer to persons or events.

Suggested core data are given in Annex 2.

Qualitative as well as quantitative data

Quantitative data, although necessary, are not sufficient for understanding or comparing drug use patterns. It is also necessary to make clear what those data mean in terms of the context in which they were collected. This means taking account of legal, medical and social structures and policies, as well as cultural and socioeconomic circumstances, and it means including more qualitative information that gives insight into the experiences, behaviour, perceptions and processes among those involved, such as drug users, treatment staff or policemen.

Multiple approaches

The third principle is that any single source of information or method reflects only selected aspects of the phenomenon, and that it is essential to combine a variety of approaches and sources of information in order to construct a more three-dimensional and reliable picture. Thus the strengths and weaknesses of different methods can be counter-balanced, and the findings obtained from one source can be checked against those derived from others.

Prevalence and incidence

Prevalence is the total number of active cases (defined according to specified criteria) present in a specified population within a specified period of time (period prevalence) or at any one specified point in time (point prevalence). Prevalence is thus a measure of overall magnitude. "Prevalence data are useful in mapping out the required clinic and health facilities. Is this problem beyond the coping capabilities of a community's health agencies or is it not?"

Incidence is the number of new cases of a given phenomenon (in this case drug use of a specified kind) that arise in a specified population during a specified period. Incidence is thus a measure of rate of change. "Incidence measures provide a basis for studying the causal origins of a phenomenon. By understanding how it occurs in a population and whom it affects, one might comprehend the conditions which are favourable to its occurrence".

Both prevalence and incidence should be specified in terms of the source (s) from which they are derived (e.g. treated prevalence) and expressed in terms of the population to which they refer (e.g. per 100 000 aged 15–44 years).

It is important to distinguish between rapid increases in incidence (epidemic) from the raised (endemic) levels of prevalence that often follow an “epidemic”. In previous experience with heroin use and dependence for example, so-called heroin epidemics often appear self-limiting within a few years – the rapid increase does not continue indefinitely, but slows down once most susceptible people in the population have become users. The implication is that a preventive strategy requires that groups of new users and their most likely successors are identified in the early stages of their drug use. Often, an epidemic is “discovered” only after it has occurred, and by the time a response has been made, facilities are confronted with the aftermath, i.e. a high level of already established users.

Indicators

In many cases, it is not possible to measure prevalence and incidence directly. In this situation, use is made of indirect indicators (treatment requests, seizures by the police, etc.). It is essential to remember that these indicators are assumed to reflect levels of drug use and drug-related problems, but that the exact nature of that relationship is often unknown. Furthermore, they also reflect factors which have little to do with prevalence, for example the resources and priorities of treatment services, police, etc. Thus indicators should be viewed as relative rather than as absolute measures, and it is always wise to use several different indicators rather than rely on any one measure alone.

Indirect indicators such as treatment demand, deaths or arrests are commonly used to monitor trends in various problematic aspects (often consequences) of drug use on the assumption that they reflect, in part at least, changes in the more serious patterns of drug-taking. Other indirect “market” indicators such as seizures or price and purity are often used on the assumption that they reflect changes in the supply and availability of different drugs. Indirect indicators are discussed in 3.5 below.

Comparability

One important purpose of epidemiology is to make comparisons, for example between cities or countries. In order to make meaningful comparisons, it is clearly helpful to use common definitions, methods and so on in order to reduce various sources of uncertainty. However, this can not always be achieved (as, for example, when making historical comparisons). In addition, the use of similar instruments is, though helpful, not essential for comparison. Conversely, the use of similar instruments does not necessarily produce comparability.

In order to make meaningful comparisons, it is still essential to interpret and compare the results within the specific local or national context in which the data were collected. Therefore, careful attention should be paid to the political, (sub-) cultural and definitional frameworks which give meaning to the data, in order to appreciate the differences and similarities found, and to understand some of the reasons for the differences. By providing qualitative descriptions of the local or national context in which a study was conducted, the comparability of (quantitative) epidemiological data is often greatly improved.

3.2 Overview of methods

Range of epidemiological methods

There is a wide range of methodological approaches that can be applied to investigate the nature and extent of drug use and drug problems in a country or local community. These include:

- general population or household surveys
- school or student surveys
- surveys of conscripts or other broad groups
- surveys targeted at high-risk subgroups
- multi-agency case-finding
- reporting systems and case registers
- indirect indicators of substance use
- indirect indicators of the illicit market
- estimates of legal drug production and consumption
- statistical modelling and projections
- ethnography (social-anthropology)
- snowball sampling and contact tracing
- clinical epidemiology.

Which method is appropriate depends on the questions that are asked and the population concerned.

Conceptual framework for different methods

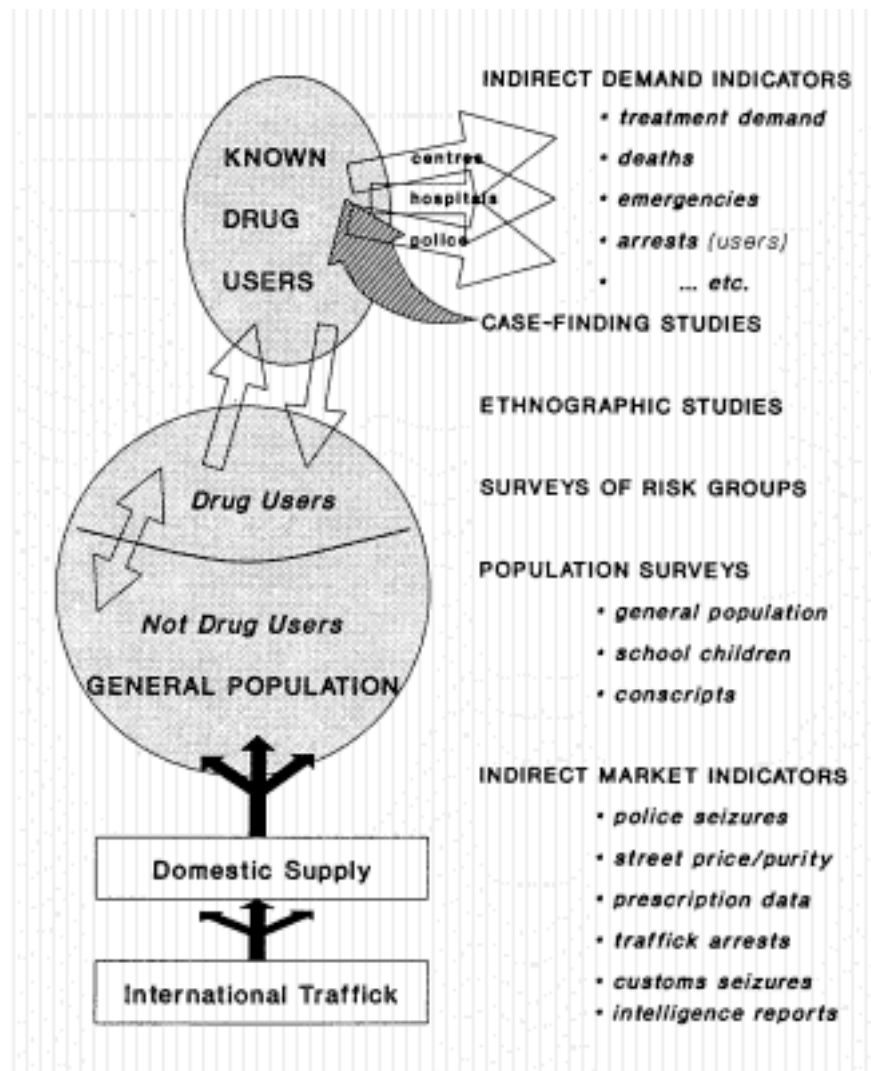
Fig. 1 provides an outline of a conceptual framework for indicators and other methods and sources of information. At the top, the diagram shows that both the indirect demand indicators (treatment demand, drug-related deaths, emergencies, police arrests, etc.) and case-finding studies provide information only about the substance-using population known (recognized) to agencies (treatment centres, hospitals, prisons, etc.). Ethnographic studies, which focus on groups of drug users in the natural community settings where drug use occurs (public parks, “drug-copping” areas, pool halls, etc.) and special surveys targeted at high-risk groups, may include both drug users who have contact with agencies and unknown (“hidden”) segments of the drug-using population. Population-based surveys (general population surveys, school and student surveys, and surveys of military conscripts) are aimed at obtaining a representative cross-section of the (general, school, etc.) population, but tend to undersample important high-risk groups (both hidden and in treatment). At the bottom of the diagram, the indirect market indicators are described, which provide information about the supply and availability of substances on the (inter-) national and local illicit market. In the case of tobacco, alcohol, and prescription drugs, production and distribution data are important indirect market indicators.

Depending on the purpose of a study and the segment of the population concerned, each methodological approach has its specific advantages and disadvantages. The main advantages and disadvantages of each method are described in 3.3 to 3.7.

3.3 Surveys

Population-based surveys aim to measure behaviour, knowledge, attitudes and beliefs concerning alcohol, tobacco, illicit drugs and other psychoactive agents in a representative sample of the general population. They can also be used to investigate risk factors and the relationships of lifestyle and other factors to drug use. Sometimes they are limited to certain age groups such as schoolchildren or young people.

Fig. 1. Conceptual framework for indicators



One advantage is that they are the only way of obtaining relatively direct measures for the population as a whole. However they are less reliable for rarer or highly stigmatized drug use. They also undersample important high-risk groups, and the results are sensitive to how the survey is conducted. It is often difficult to know the degree of bias that occurs. If repeated regularly, using a consistent methodology, they can be valuable for giving information on trends that is less distorted by bias.

General methodological issues

The following issues must be addressed when conducting a survey.

Sampling:

- sampling frame (households, register of voters, etc.)
- sample design (probabilistic, stratified, quota, etc.)
- sample size (rare cases imply large sample)
- groups excluded (institutions, homeless, etc.)
- mobility, non-residents, tourists, commuters.

Questionnaire design:

- clear objectives, definitions and time frames
- cognitive aspects (comprehension, cultural context)
- analysis of internal consistency
- clear instructions
- open versus closed questions
- avoid leading questions.

Methods:

- face-to-face interviews;
- self-completion for sensitive items (self-completion questionnaires may not be suitable for populations with low levels of literacy);
- mail surveys (often low response rate);
- telephone (give lower prevalence);
- match interviewers (e.g. gender, ethnicity);
- training of interviewers;
- confidentiality.

Bias arising from non-response:

- repeat visits to maximize response rate
- non-response related to prevalence (heavier users may be reluctant responders)
- non-response related to lifestyle
- school drop-outs higher prevalence
- non-response analysis (e.g. follow-up sample of non-respondents, compare sample to census).

Validity:

- impact of public attitudes and context of interview on response bias
- include items to assess truthfulness
- more concealment of more deviant behaviour
- lower prevalence for youth in household compared to school surveys
- confusion of cohort and age/developmental effects.

A large literature exists on survey methodology. In general, it is recommended that questionnaires already tested for reliability, validity and cross-cultural applicability be considered. In addition, it is recommended that professional advice be sought before designing any survey.

General population surveys

General population surveys are often based on households, though other sampling frames have been used. Their advantages are:

- if well conducted, they give a measure of drug use in a representative cross-section of the adult population;
- in particular, they are useful for assessing the prevalence of more common drugs (e.g. tobacco, alcohol, minor analgesics, tranquillisers and, in some countries cannabis and some other illegal drugs);

- they can point to risk factors and lifestyles associated with different drug use patterns;
- they can provide a “barometer” of public knowledge and attitudes regarding drugs and drug-related issues;
- if repeated at regular intervals (e.g. every 3 years) they provide a valuable picture of changing drug use and attitudes in the general population.

However, they also have serious limitations:

- they are unreliable for drugs which are relatively rare in the general population or whose use is subject to severe social sanction (heroin, injection use);
- a large sample may be required to obtain reliable measures;
- they miss important high-risk subgroups (prisoners, psychiatric patients, homeless, marginal populations);
- they are expensive if face-to-face interviews are used;
- it is hard to achieve a high response rate, especially among sections of the population who are in conflict with, or suspicious of authority;
- they do not give insight into the social processes and dynamics of drug using groups;

School and student surveys

These involve children or students answering anonymous, self-completion questionnaires, usually in the classroom. They have the same advantages as surveys of the general population, especially if repeated regularly, with the added advantage that it is cheaper to achieve a large sample, since the survey can be administered to groups. School surveys can provide information relevant to prevention, for example on:

- experience with alcohol and drugs by different ages
- knowledge and attitudes
- perceived availability and harmfulness
- risk factors associated with heavier drug use
- relationship between substance use and other behaviour.

However, they have limitations, for example they:

- risk under-reporting, or sometimes exaggeration of heavier drug use;
- are likely to under-sample important high-risk groups (truants and drop-outs);
- indicate nothing concerning the important period just after leaving school or about non-student youth.

It is important that:

- adequate preparation is carried out (discussions with education authorities, schools, etc.);
- the survey does not emphasise illicit drugs, but includes them in the context of smoking, drinking, medicines, and healthy lifestyles;
- the instrument is piloted;
- the survey is carefully introduced and administered, preferably by independent personnel rather than teachers;
- a representative sample of schools and classes within schools is selected.

It can be valuable to include a survey as part of a programme of health education, rather than as an isolated event. The Pompidou Group has recently developed and tested an instrument for conducting comparable school surveys.

Surveys of military conscripts

As with school surveys, these are cheaper than general population surveys, especially if conducted during medical screening at entry to conscription. In addition, reliability may be improved if urinalysis is included, though the possibility of obtaining misleading results remains. However, this only (usually) covers males, and also misses high-risk groups who may avoid conscription and/or effective screening. It is also possible only where all young males are indeed conscripted.

Special surveys targeted at high-risk groups

These can be used to obtain measures of drug use among groups who are missed or under-sampled by population or school surveys. Examples include institutionalised samples, truants and school drop-outs, homeless or mobile populations and minorities. They are more efficient than population surveys, since smaller samples are needed, but they tend to be time-consuming and labour-intensive, and require the recruitment and training of interviewers who can contact these subgroups and obtain reliable information. Furthermore, it is often difficult to obtain a denominator for these subgroups and thus hard to calculate a prevalence rate. In addition, such special surveys are not an alternative to surveys of the general population, since they need to be taken in conjunction with data on the general population.

Similarly, ethnographic studies, although subject to some of the same questions concerning generalizability, can give invaluable insight into behaviour, processes, dynamics, perceptions and consequences among groups of drug users.

Alternatives to surveys for drug-using populations

Surveys provide information on drug use in the general population or subsections of it. Methods which focus on drug-using populations are more commonly used to study problematic patterns of drug use and its consequences. These include intensive case-finding studies, cumulative registers of notified cases, reporting systems and indirect indicators such as those found in this report, ethnographic studies, and nomination and chain-referral techniques such as snowball sampling. Although each method provides information that cannot be obtained through population-based approaches, they all suffer from other limitations. A common problem is that it is difficult to generalise beyond the populations to which the data refer, though these methods may be supplemented by statistical models and projections which aim at achieving more general estimates.

3.4 Case-finding and case registers

Intensive multi-agency case-finding studies

These aim to provide a comprehensive picture of drug users who are known to local agencies as a (usually problematic) consequence of their drug use. Data are collected from all relevant agencies (treatment centres, hospitals, prisons, etc.) concerning all cases who meet specified criteria within a given time period. Some of the practical steps needed to do this are described in Chapter 4.2.

The advantage of case-finding is that it is more efficient than population-based surveys for identifying problematic patterns of drug use, since it focuses on places where such users are likely to be found. It can also:

- give the approximate number of known users
- minimize double-counting between agencies
- indicate the overlap between agencies
- provide a profile of different problems seen at different agencies.

The main disadvantages are:

- the need to identify individuals can raise serious problems of confidentiality, even if safeguards are included to protect individuals;
- it misses drug users who are not in contact (or not known to be in contact) with agencies, but who may nonetheless need help.

This method helps health and social service planners to examine patterns of service utilization, but is not so useful for identifying needs involving users who are not known to existing services. Nor does it identify new trends in problem drug-taking, since people may not come to the attention of services until some years after they have started to experience difficulties. The hidden population of drug users who might be in need of help can outnumber the number who are known to agencies. Methods (e.g. capture-recapture) which allow data from case-finding to be used to generate estimates of the size of the hidden population are briefly noted in 3.6.

An alternative to case-finding is to carry out a survey of the number and characteristics of specified drug-related cases known to relevant agencies in a given time period without asking for individual identifiers. This does not eliminate double-counting, so known prevalence cannot be obtained. However, it does indicate which services are more likely see different sorts of drug-related problems.

Case registers

These are essentially continuous case-finding, usually based on a reporting system in which agencies notify cases. Reporting systems are discussed in Chapter 5.

3.5 Indirect indicators

Data derived from sources such as those described in Chapter 2 can in certain circumstances be used as indirect indicators of patterns and trends in drug-related problems. Most indirect indicators are based on reporting systems which serve various administrative needs of different organizations such as health authorities, the police, etc. The most important include the following.

Indicators of problematic drug use:

- demand for treatment (especially first demand)
- drug-related emergencies
- hospital admissions
- drug-related acute hepatitis B
- drug-related deaths
- police arrests (drug users).

Illicit market indicators of supply and availability:

- arrests for drug supply or traffick offences
- quantities of illegal drugs seized
- number of seizures
- price/purity of illegal drugs.

The major advantages of indicators are (once the administrative reporting exists) that the data:

- are available at relatively low cost;
- indicate important aspects of drug use:
 - health consequences
 - legal consequences
 - availability;
- reflect trends over time, historically and prospectively (if criteria and coverage are consistent):
 - different drugs (relative to other drugs)
 - profile of people involved
 - geographical distribution.

The main limitations of indirect indicators lie in the problem of validity. They may reflect trends in drug misuse, but they are also influenced by other factors.

Problems of validity

How far can the indicators summarized above be taken as valid measures of the nature and extent of problematic substance use in the population? Validity is affected by:

- the reliability of the data
- institutional resources and policies
- reporting system characteristics
- the characteristics of the drug-using population
- time lag
- external or environmental factors
- local variability.

Reliability is one necessary precondition for validity inferences drawn from indicators. The reliability of the data depends on how well agencies recognize relevant cases, whether they record the appropriate information correctly, and on whether they pass on or report the information (“compliance”) to the collating centre.

Institutional responses also have a major impact on the validity of inferences drawn about wider patterns of problematic drug use. These include the resources allocated to drugs. For example, an expansion in the number and variety of treatment centres can dramatically increase the number of people seeking treatment. Likewise, increasing police resources often produces a sudden rise in seizures. Changes in policy, even without a change in resources, can also have marked effects. For example, a decision to start prescribing methadone may result in an upsurge in the demand for treatment. Conversely, a police decision not to arrest people found in possession of small amounts may reduce the arrest statistics. A shift in police priorities, for example from users to higher-level dealers, may likewise have a marked effect on the relevant indicators.

Reporting system characteristics, such as the coverage of sources on which indicators are based, are also important. For example, a treatment reporting system may cover only specialized facilities. If there is a rise in the incidence of new cases, and those who experience problems decide to go to general practitioners (GPs) rather than specialized facilities, then the treatment demand indicator would fail to reflect this.

An episode-based indicator may show more change than one based on persons. For example increased police activity may increase the number of arrests, though not the number of persons, because the same people are arrested more often.

Changes in the characteristics of the drug-using population are important. For example, over the years, an aging cohort of drug users may experience fewer acute problems such as overdose, but manifest more chronic problems such as AIDS. The socioeconomic profile of the drug-using population is also likely to affect the probability of becoming known to various agencies. Changes in drug-using behaviour, for example from injecting to other routes, or vice versa, will likewise have an effect.

It is rare for people to seek treatment, be arrested, or die in the early stages of drug use. There is a time lag between “true” incidence, when people start to use drugs, or when they first become dependent, and the point when they become known to an agency. Thus indicators reflect changes in incidence and prevalence which actually occurred some time, perhaps years, before. This time lag can vary over time as services or the characteristics of the drug-using population change.

Environmental factors which affect indicators such as treatment demand include the availability of drugs, and the attitudes and reactions of significant others (families, local communities, etc.) to drug use. Many of the factors which influence the validity of indirect indicators can vary from one area to another.

Minimizing problems of validity

It is not possible to achieve complete confidence in the validity of inferences drawn from indicators, but problems can be minimized, for example through the following:

- evaluation of the reliability of the data
- knowledge of context
- assessment of bias
- cross-validation between different indicators
- validation against other methods.

The reliability of the data can be checked in various ways. Depending on specific circumstances, these include checks for internal consistency, checking samples of records against more extensive information, expert panel reviews of samples of cases (to assess diagnostic consistency) or comparing notifications from agencies with agency records.

Data from indicators cannot be taken at face value, but must be interpreted in the light of a range of other factors. The first step is an understanding of the context in which the data are collected including the services, their policies and priorities, the way in which the data are recorded and reported, as well as any particular circumstances or changes that may be important. Given local variability, it is often easier to do this on a local (e.g. city) level than nationally. National data can only be interpreted to the extent that regional variations are understood.

The next step is to try to assess the bias that may arise. This involves identifying possible sources of bias such as the examples given above, and then attempting to estimate the likely direction, and possibly degree, of the bias (is it likely to be an over- or under-estimate, and by what order of magnitude?). It is not possible in a summary to cover this satisfactorily, since there are a wide range of possible techniques, and much depends on the particular indicator and on specific conditions.

The basic principle is to formulate hypotheses concerning the likely nature and direction of bias and then to test those against available data, including data derived from sources other than the indicator concerned. This may be evidence from other indicators or from research studies. This usually requires that data collected on the indicators includes more than just crude numbers. It is very useful for this purpose that the indicator data are broken down by basic sociodemographic categories (age group, sex) and main drug(s) involved, as well as by certain key categories relevant to specific indicators.

Even if the validity of a particular indicator is doubtful, greater confidence can be placed if several independent indicators all show the same trends. One example is the report of a multi-city study of indicators of drug use in 13 European cities (1993) carried out by the Expert Epidemiology Group in the Pompidou Group (available from the Council of Europe in Strasbourg).

It is important to emphasise the value of using indicators in combination with other methods. Fitting information together in this fashion is rather like doing a large and complicated jigsaw puzzle – the result is a picture that makes sense, the individual pieces make very little sense at all.

It is thus essential to follow the principles noted in 3.1 and to interpret indirect indicators in terms of the characteristics of the institutions and reporting systems which generate the data, to assess the data in terms of reliability and likely sources of bias, to use a package of indicators, and to set these data against information obtained from other methods.

3.6 Estimates and statistical extrapolations

Consumption estimates

Estimates of consumption in the population can be based on:

- production and distribution data
- representative surveys of the population
- extrapolations from indirect indicators.

Estimates based on production and distribution data (see 2.9) are valuable for legally produced substances such as alcohol, tobacco and psychoactive drugs (as long as good data are available) but less reliable for illegal drugs.

When looking at the results of surveys that have been carried out, it should be noted that they imply estimates of total alcohol consumption that can be 45–60% lower than those based on production/sales, suggesting that population-based surveys give underestimates. The same is likely to be true, perhaps even more so, for illegal drugs. Recent or current use of the more disapproved of drugs such as heroin or cocaine is particularly likely to be underreported in surveys.

Even if overall consumption, and sometimes prevalence, are underestimated, population surveys are valuable because they provide information about the demographic, social and personal characteristics associated with different patterns of consumption of substances such as alcohol, tobacco, cannabis, and more commonly used psychoactive agents.

When using survey data from the general population for planning or policy-making, information on recent (last 12 months) or current (last 30 days) use is more useful than lifetime prevalence unless the survey was particularly concerned with cessation of drug use. In youthful groups such as school children, lifetime prevalence may be useful as well. Surveys are usually not appropriate for issues such as problematic heroin use.

Various attempts have been made to estimate the total consumption of drugs like cocaine or heroin based on information from indirect indicators, for example production estimates, assumptions about distribution and dilution, back-estimates of consumption from estimates of prevalence, and assumptions about average doses used by consumers. Such speculation should be avoided unless there are sufficient data and reasonable grounds for the assumptions that are made.

Statistical extrapolations

There are a number of statistical methods for deriving estimates of total prevalence from some of the other methods outlined here. The validity of some of these methods remains controversial. However they all need good data on “known” users or problem users, and all require careful attention to assumptions and sources of bias. They are not usually suitable in situations where the basic data are unreliable.

Examples include:

- capture-recapture, which is based on the overlap between samples of drug users identified in different sources (e.g. treatment services, emergencies, police arrests);
- multipliers based on the annual mortality rate of narcotic addicts (for example, estimated from cohort studies or investigations of similar samples in other countries);
- multipliers based on estimates of the proportion of all problem drug users who are notified each year by a treatment reporting system;
- estimates based on analysis of the time lag between first use and first treatment demand;
- nomination techniques which aim to establish the proportion of addicts attending treatment centres or arrested each year (to obtain a multiplier)
- application of mathematical models of networks to data obtained through snowball sampling;
- econometric modelling of illicit markets.

It is beyond the scope of these guidelines to describe these various methods. Many of them have been reviewed elsewhere. For example, the Pompidou Group and the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) have produced a report on prevalence estimation as a result of their joint scientific seminar in 1996.

3.7 Community-based methods

Ethnography

Ethnography refers to social-anthropological approaches involving the study of groups of drug users in natural community settings where drug use occurs. Ethnographic research methods are particularly helpful when a phenomenon is studied about which little is known. Typically, ethnographic studies are exploratory, and provide the groundwork for further, more rigorous, study. Examples of drug-use aspects in which ethnographic research has made (and indeed can still make) significant contributions to our knowledge include AIDS, needle-sharing behaviours, sexual practices, and the identification of (new) drug use patterns and trends.

One of the first tasks that an ethnographic researcher is confronted with, is the identification of the target population and the selection of an appropriate strategy to gain access to the target population. For these purposes, much ethnographic research includes the employment of indigenous field staff. Because of their personal experience with drug use and drug users, indigenous field workers often have easier access to the target group than the researcher, both when first entering the group and during the subsequent data collection phase. Important qualifications of successful indigenous field workers include a high status in the targeted group, good communication skills, reliability, and a sufficient degree of stability in daily functioning.

Important issues that should be covered when working with indigenous field staff in ethnographic research include:

- selection of field workers (background, experience, attitudes)
- training of field workers (recruitment of respondents, data collection and recording)
- data quality control
- regular meetings with the research team
- responsibilities towards field workers (safety, protection, support, “going native”)
- the ethics of employing (ex-) drug users in drug using environments
- relationship with the police, treatment agencies, etc.
- the extent to which matching the field workers’ characteristics to the target group is needed.

Among the strengths of ethnographic research are that it provides a direct and rich description of lifestyles, unreported consequences of drug use, attitudes, etc., and is sensitive to local patterns of drug use, new trends, and the social dynamics of drug using groups. For preventive (outreach) purposes, the employment of indigenous staff has the advantage of communicating prevention or education messages in a manner which is easier understood by the targeted group. In ethnographic research however, it is often difficult to generalize from the specific context to other situations, or to project wider prevalence of a phenomenon. Furthermore, it is often difficult to recruit indigenous fieldworkers that meet the necessary qualifications. Nevertheless, ethnographic research is a valuable method for exploring new or unknown phenomena, generating hypotheses and provides insights into drug use patterns that are very valuable when interpreting statistical data en trends.

Snowball sampling

One of the major problems in research on illegal drug use is how to obtain a reasonably representative sample of a population which is largely hidden and whose members may wish to avoid identification. In particular when investigating rarer and more stigmatized patterns of drug use, such as injecting or heroin use, general population sampling methods become a very expensive and inefficient way of obtaining unreliable data on a small sample. Alternatively,

samples recruited at institutions (treatment centres or prisons) consist of individuals with the most serious and problematic patterns of drug use, who are not likely to be representative of the wider population of drug users. Snowball sampling has been proposed as one possible solution to this problem.

Snowball sampling can be generally described as a method for recruiting new cases through a process of onward referral from known cases. Sampling starts with one or more individuals who are known to meet certain criteria (e.g. “current cocaine user”). These individuals are interviewed and asked to nominate and facilitate introductions to other people whom they know and who also meet the criteria. The nominees are contacted and interviewed, and the process is repeated. The sample thus expands by tapping the social contacts and networks of drug users.

The underlying assumption of snowball sampling is that illegal drug use is a social phenomenon, which occurs in the context of groups and networks. Although it is possible that individual users do not know other users (when they buy their drugs from a non-user), the initiation and continued use of drugs almost always takes place within a system that can be characterized as interlinked, even if the number and intensity of these links vary and even if the connections between one subgroup and another are indirect.

Snowball sampling has been successfully used in various studies, in particular on cocaine use. Some investigators using snowball sampling, have focused on analysing networks rather than the characteristics of the individuals involved, while others have applied the method in a less analytical fashion and instead, have used it as an exploratory tool to generate information about the possible distribution and characteristics of hidden drug use in a population. Among the advantages of snowball sampling are that the purposive sampling procedure avoids the need for large samples used in population surveys, and it provides a sample which is broader and more representative than institutional samples. In addition, a relatively small snowball sample gives the basic profile of a much larger number of nominees, and it provides rich information on social networks as well as on individuals. Problems remain with the validity of snowball sampling as a method for estimating prevalence. Although some researchers suggest that a combined approach of snowball sampling and capture-recapture techniques may be useful for prevalence estimation, others are doubtful about whether this is feasible, and whether the assumptions of the models are adequately met.

4 USING EXISTING INFORMATION

This chapter is concerned with how to make the best use of existing data. Even if there is no specific information system on drug problems, a variety of data usually exist because at different times some users, especially those with more severe or problematic patterns of use, come into contact with treatment, welfare or law enforcement agencies.

4.1 Purposes

It is important to collate and analyse existing data in depth, since they can provide useful information on:

- different patterns of substance use and related problems recorded by different agencies
- trends over recent years.

Since the data have already been collected, they can usually be collated relatively quickly and at low cost.

The results can be applied to three questions.

1. As far as the data allow, are existing responses and facilities sufficient and appropriate to the nature and extent of the problems?
2. Are the data adequate for developing, and later evaluating, policies and interventions?
3. What steps are needed to improve the quality and usefulness of the data?

Existing data were often collected for administrative, clinical or other purposes. This may limit the extent to which they can be used to assess patterns of drug use. As emphasised throughout this guide, statistical reports and data from agencies only cover known drug users or problems which have been recognized and recorded as such, and thus reflect an unknown fraction of the total situation. The limitations of individual sources were noted above in Chapter 2. More general methodological issues were discussed in Chapter 3.

4.2 Planning a review of existing data

The collection of information will depend on the resources and interest of each country or community. The following steps are given as an example.

Preparation

1. Discuss the suggestions in this chapter with advisors, including experts in epidemiology, public health and social science research methods.
2. Review existing literature and documentation. This should be done both in terms of content, and to identify key people to help with the review.
3. Determine the broad objectives and possible scope of the review.
4. Refer to Chapter 2 above, and draw up a list of possible sources of information and contacts in the area to be covered.
5. Contact all sources on the list, explain the review and ask:
 - are they or their colleagues aware of drug and alcohol problems
 - what data do they already have

- would they be willing to take part in the review
 - are there any problems which the review might pose for them
 - what important questions do they think the review should include
 - can they recommend other (local) people who might be helpful.
6. Obtain routine statistics (see 2.1) for the last five years.
 7. Identify people from the list to form a small working group to assist in carrying out the review. The group should include the following expertise:
 - experience of drug and alcohol use from a variety of perspectives (governmental, nongovernmental, medical, social, enforcement);
 - research experience in epidemiology and/or social science.
 8. Discuss the preliminary information obtained through steps 1-6, and write a summary of what type of information is available, what sources should be covered, what specific objectives the review should aim to achieve, and what (provisional) case definitions could be used.
 9. Identify who will coordinate the review and where the data collection will be based. This could be “in-house” or contracted to a university or other type of research institute.
 10. Ensure that there are sufficient resources to carry out the review. Although not always available, the following resources are important:
 - secretarial and administrative needs
 - arranging data collection protocols with agencies (time consuming)
 - data collection
 - information management
 - data analysis and report writing.
 11. Confirm the commitment of agencies and other sources, and clarify the basis of their participation. This is important (see 4.3 below).

Review of agency records

The precise components of the review will depend on local circumstances. However it is very likely (and advisable) that a major element will be a review of substance-related problems known to different agencies.

This involves asking agencies to provide (anonymous) information on all cases involving substance-related problems that they have seen over a given period of time. As noted earlier, different agencies often record data in different ways using different criteria. It is necessary to use a standard form and definitions of which cases are to be included. Developing forms is discussed in 4.4 below.

From a methodological point of view, it is better to do this prospectively, since it is easier to achieve standard criteria. This is essentially a prospective case-finding study (see 3.4). It can also be done retrospectively, though it is harder to maintain comparability between agencies. The time period to be covered depends on what is feasible (number of agencies, numbers of clients, ease and method of obtaining data from existing records, availability of staff time, etc.) and on what method is chosen. There are three possibilities.

1. Ask agencies to provide retrospective aggregate data on clients seen over the time period, tabulated according to categories such as:
 - primary drug
 - age and gender distribution
 - route of administration
 - major problems.

This is affected by how agencies keep records. Data should refer to the last 12 months or calendar year, and if available, each of the past 5 years.

2. Ask agencies to review their records and complete a standard anonymous form for each client meeting the criteria of “substance user” in the period concerned. This is retrospective case finding, and makes more demands on agency personnel’s time. If resources are available, employ a research assistant to do this at all agencies. It may only be possible to cover a short period (e.g. past 3 months) though 6 or 12 months are better.
3. Carry out a census of clients currently in contact with agencies using a standard form and criteria. One drawback is that it produces a total that is much lower than the number who contact agencies over the course of a year, and also gives greater weight to longer-term (often older) clients.

The advantage of options 2 and 3 is that analysis of data based on individuals offers more insights than aggregated data. If the major agencies can readily provide data on the number and basic profile of their cases over the past few years, and are willing to participate in a prospective or retrospective case-finding study covering 6 or 12 months, then it is possible both to describe trends and to examine the current “known” population in more depth.

Double-counting

An important issue in case-finding concerns double-counting the same person, either within or between agencies. At a minimum, count each client only once at the same agency in a given year. Ideally, duplication between agencies should be minimized, since this provides a more accurate measure of known prevalence and indicates the overlap between agencies. However this raises ethical (and practical) questions of how to identify individuals who account for two or more contacts. It may be possible to use an anonymous code based on initials and date of birth, but problems remain.

Definitions

As noted before, it is very likely that agencies have used different definitions or criteria for identifying “a case”, in terms of type(s) of substance use, primary drug, route(s) of administration, etc. When using existing information from different agencies, it is very important to systematically review the available data on such differences, and – even more important – to look for commonalities in the data. On the level of more detailed information (if recorded at all), there are often great differences between the definitions used, but there may be commonalities on the more general level. Therefore, it is advisable to restrict the type of information reviewed to the general or core items, determined by the purpose of the review (see 4.4). However, one should be aware that even on the general level, similar terms may have been used that refer to different types of drug users. For example, the definition of “substance user” may vary according to – among others – the type(s) of drugs used, the duration and/or recency of use, and the frequency of use. Likewise, similar definitions may have been used, but the populations covered by each agency may differ considerably due to differences in procedure with which “a case” was identified.

The data can only be analysed after the similarities and differences in the information from different agencies have been investigated. Even when the analyses are limited to the core items, it is essential that the results are interpreted within the context of the definitional and/or procedural differences. In the worst case, when analysing data with few similarities in definition, it may still be possible to – more tentatively – look for trends in the data on an aggregate level.

As regards the definition of a “drug”, it is advisable for operational purposes to define the substances according to the following list:

- substances listed under Schedules I and II of the Single Convention on Narcotic Drugs (1961), and by the Protocol Amending the Single Convention on Narcotic Drugs (1972);
- substances listed under Schedules I, II, III, or IV of the Convention on Psychotropic Substances (1971);
- other substances whose use outside appropriate medical practice is considered to pose the risk of serious health or social problems, notably volatile inhalants and “designer” drugs not covered by the 1971 Convention;
- alcohol in combination with other drugs defined above.

4.3 Cooperation of agencies

The success of any review depends crucially on the cooperation of the agencies who have the data. It is essential to have both high-level political commitment to making data available, and the support and trust of ground-level staff in the agencies. This requires paying attention to several key issues.

Confidentiality

Explicit guidelines on confidentiality are essential. These should guarantee that:

- the rights and confidentiality of individuals (both drug users and agency staff) will be protected;
- the concerns of individual groups and agencies will be respected, especially if the results may be interpreted as critical;
- data will be kept secure, with access limited to designated persons;
- any reference to identifiable persons will only be made with their prior and explicit permission;
- the data will only be used for the stated purposes of the review;
- no harm will result to individuals and communities.

These guidelines are especially important when the review:

- includes gathering data which refer to individual cases
- involves law enforcement as well as medical and social agencies
- takes place in countries with traditions of authoritarian surveillance.

“What’s in it for us?”

Assessment of the nature and extent of substance-related problems in a country or region does not automatically appear to be of direct relevance to the primary tasks of individual agencies.

Although staff may find the topic interesting, they cannot be expected to give data collection priority over their day-by-day work.

This question may also hide a variety of other concerns, for example that:

- their clients and their work will be reduced to a set of statistics (“You can’t quantify quality”)
- the results will be used against them or their clients in some way
- the information will disappear into a centralized system and be of no benefit to them
- data collection will interfere with the relationship with their clients
- data collection will take up too much time.

Many of these concerns are natural and reasonable. It is essential to discuss these issues openly. There are several steps which help to minimize these concerns and motivate agencies and their staff to participate.

1. Trust and communication are vital for active collaboration. Keep in contact with agencies and allow time for discussion before and during the review.
2. Specify clear objectives, discuss how the data will be used and what benefits are to be gained.
3. Be willing to discuss and provide resources, even if they are modest, for data collection which places an unreasonable burden on agencies.
4. Provide feedback to the participating agencies. This is one of the most important points. Organizing a conference for participants to discuss the results and their implications can also be very constructive.

Quality control

Ensure that the data are as comprehensive and accurate as possible.

1. Specify clear criteria and instructions for data gathering. Make sure that these are clearly understood.
2. Ensure that responsibilities for collecting and submitting data to the central collation point are clearly defined. It is useful to select a key person in each agency to oversee data collection and reporting.
3. Check data submitted by agencies for missing or contradictory responses.

4.4 Developing the forms

The aim of developing a form for the collection of existing data from different agencies is twofold: to help identify a minimum set of core variables that enable a maximum number of agencies to participate (coverage of the data), and to serve as a guideline for comparing data across the participating agencies, cities or countries (comparability of the data). It is recommended that forms used to collect data for the indicators should where possible be based on existing instruments, especially those recommended by international organizations, since this improves the possibility of making comparisons.

It will of course be necessary to adapt the forms to local circumstances. It is suggested that the forms are tested in pilot study before starting data collection. This will help to prevent misunderstandings from arising. It is also suggested that professional researchers are involved in the design and testing of the forms.

It is advisable to limit the amount of data requested to essential core items. This entails clear thinking from the outset about the primary objectives of the review.

Examples of forms that have been used are provided in Annex 3. Comments on key items that should be included for particular indicators were included in Chapter 2 above. Annex 2 suggests a data set of core items.

4.5 Data management and analysis

Data management

A desktop PC is adequate for storing data and carrying out almost any analysis that will be required. Existing records often include inconsistencies and missing values. It is important to check and clean data before data entry.

Databases

The first important database contain information on all the sources to be covered, together with contact names, addresses, telephone and fax numbers. A mail-merge package makes much easier to circulate letters, reminders, etc.

For the individual indicators, unless the basic data are very limited, it is usually worth entering the data into a database which allows the data to be manipulated and presented graphically (e.g. moving averages, percentage changes, trends and distributions by age, gender, main drug).

A review of cases known to different agencies (4.2) requires a separate database which also allows data manipulation (cross-tabulations, etc.).

Data analysis and reporting

When analysing and reporting the results, it is important to relate the data to population base concerned (e.g. known cases per 100 000 population). This is especially necessary when comparing different regions or cities.

The key components of the analysis should include patterns and differences by:

- regions and urban/rural areas
- age and gender
- main drugs involved
- routes of administration
- major problems reported.

The first step is to analyse the different sources or indicators one at a time. It is important to note any circumstantial factors which affect interpretation.

The pattern and trends reflected in each individual indicator should then be compared (multiple indicator analysis). This can include:

- comparing the profiles of drug users between indicators (age, gender, drugs, etc.)
- comparing trends over time between indicator.

The review of cases known to different agencies should aim to give:

- a profile of clients, overall and by agency type;
- relevant cross-tabulations (e.g. major problems by age and gender, or drugs and route of administration by region).

It is sometimes possible to apply more sophisticated analytic methods (e.g. capture-recapture) to give estimates of the total size of the “hidden” population of problematic drug users. This is beyond the scope of this chapter. The reader is referred to the report on prevalence estimation of the Pompidou Group and the EMCDDA (1996).

Reporting results

The results should be thoroughly and systematically presented. The following is given as an example.

1. Summary of main findings, conclusions and recommendations.
2. Description of the review:
 - background and objectives
 - sources of information
 - methods (design, data collection and analysis)
 - problems of data-gathering.
3. Results:
 - indicator by indicator
 - multiple indicator analysis
 - multi-agency review (case-finding)
 - synthesis of findings – trends and current situation;
4. Discussion:
 - limitations of results
 - possible reasons for trends and patterns
 - implications for planning and service development
 - future information needs.
5. Conclusions and recommendations.

Graphical presentation of key findings can help make the results more accessible. Detailed statistics should be presented in appendices rather than in the main body of the report.

5 DEVELOPING AN INFORMATION SYSTEM

5.1 Information need priorities

An ideal list would include the following.

Population-based measures

Ideally, this would include both a general population survey and a school survey. The former in particular is likely to be expensive. An alternative is to include a section on drugs within a broader health survey that covers wider health needs such as diet, smoking, alcohol, as well as drugs. This would be (a) less threatening, since it would not give such emphasis on drugs, and (b) more cost-effective, since it would provide important information of general interest to public health care planning.

Treatment reporting system

This should be a priority in the area of public health policy regarding problematic drug use. Before trying to implement such a system, it would be wise to carry out a review of different services as suggested in 4.2. On the basis of this, establish a small working group including those responsible for the services who see most drug problems to discuss the implementation of a reporting system.

Selected indicators

These will depend on what criteria such as availability, the speed with which they become available, simplicity of collection and reliability. Ideally should include at least one indicator concerning the health consequences of drug use (morbidity or mortality) and at least one law enforcement indicator.

Hidden populations

It is important that indicators based on known drug users are complemented by an attempt to look at hidden populations which are likely to be under-represented in both population-based surveys and treatment indicators. This could be achieved through a study conducted by a university department of, for example, anthropology or sociology, or by another type of research institute.

5.2 Treatment reporting systems

A good treatment reporting system can be a most valuable tool for planners and service providers. The uses of data from treatment services were discussed in 2.2. In summary, data on treatment demand can provide:

- a direct indicator of demand on treatment services
- an indirect indicator of trends in problem drug use

Main components of a reporting system

In order to obtain information on both the direct and indirect indicators mentioned above, it is recommended that a treatment reporting system includes the following three main components:

1. total treatment demand: routine reporting (by means of standard core data) on all clients who demanded treatment during a year;

2. first treatment demand: differentiation of a subset of clients who have never previously been treated for substance use problems at any treatment centre;
3. census of number of clients in treatment at the beginning of each year.

The primary reasons for distinguishing between clients who are demanding treatment for the first time and clients who have been previously treated are that:

- the population of chronic substance users and addicts continues to generate treatment demand (due to relapse and return to treatment);
- new populations seeking or entering treatment cannot be identified if new cases are not differentiated;
- the population of clients who demand treatment for the first time reflects more recent trends.

The reasons for including a census are that:

- this provides a measure of in-treatment point prevalence
- clients in long-term treatment are included
- it provides a baseline for subsequent treatment demands.

By means of systematically collecting and registering data on substance users entering treatment over time, in particular on those who have never been treated before, it is possible to gain insight into trends in the profiles of help-seeking substance users (in terms of type(s) of substance use, mode(s) of administration, types of problems, etc.). A comparison of the proportion of first treatment demanders in the total client population over time, provides information about trends in the incidence rate of problem substance use: when incidence is high, the proportion of first treatment tends to increase. The limitations of using (first) treatment demand as an indicator of incidence have been discussed in 2.2.

Definitions

In general, “treatment” can be defined as any activity aimed at ameliorating the psychological, medical and social state of individuals who seek help for their alcohol or drug problems.

This is a broad definition, which includes:

- interventions aimed at reducing drug-related harm among active users (including syringe exchange and HIV outreach projects), as well as those whose primary goal is detoxification and abstinence;
- nonmedical as well as medical interventions;
- short-term crisis interventions or informal advice, counselling or support, as well as more structured longer-term programmes.

The definition excludes:

- contacts at general services involving requests for social assistance only;
- contacts where drug use is not the reason for seeking help;
- imprisonment per se (though it includes admissions to drug treatment programmes in prison or to treatment as an alternative to prison);

- interventions solely concerned with the physical complications of drug use (e.g. overdoses or infections treated at a hospital);
- contacts by telephone or letter only;
- requests for practical information only;
- contacts with the family of the substance user only.

Following the broad definition of treatment, treatment centres can be defined as agencies that provide treatment as defined above to people with substance problems. The types of treatment services available for alcohol and drug users were discussed in 2.2.

To summarize, they include:

- specialized alcohol or drug treatment centres
- programmes for alcohol and drug users in general services
- primary care services, general health and social services
- voluntary and nongovernmental social agencies.

However, they do not include:

- hospital emergency rooms;
- general health or social care facilities who see substance users who contact them for help with other problems.

In most countries, some form of specialized treatment service for alcohol and/or drug users is available (e.g. outpatient clinics, inpatient detoxification units, drug substitution programmes, therapeutic communities, counselling and advice centres, street agencies, crises centres, drug treatment programmes in prisons, self-help groups, and programmes for drug users provided within general health or social care facilities). If one or more of these agencies exist in a country, they should be covered by the treatment reporting system. Alternatively, if few or no specialized services exist, the treatment reporting system should focus on general health or social care services that do not primarily aim at helping alcohol or drug users, but which are likely to include clients who seek help for their alcohol or drug problems (health centres, general practitioners, community nurses, social workers, etc.).

Concerning the definition of “first treatment demand”, it should be stressed that this measure should reflect those clients who have never been previously treated for substance use related problems at any treatment centre (as defined above). Previous treatment does not refer to any contact which clients may have had with medical or social services. In addition, measures of clients who applied for treatment for the first time this year, or for the first time at this treatment centre, or who were included in a reporting system for the first time, do not necessarily reflect the population of first treatment demanders, and should therefore not be used as indicators of first treatment demand.

In practice, the definition of “never previously treated” is based on the client’s and/or clinical staff’s perception of treatment, and may therefore leave room for different interpretations. To investigate such differences, it may be advisable to subsequently establish the various meanings of the definition, for example in interviews with the clinical staff or with a sample of “never treated” versus “previously treated” clients.

One important issue that should be clarified when using the definition of “never previously treated?” is whether this definition refers exclusively to an earlier actual start of treatment, or (also) to a request for treatment (which is not necessarily followed by a treatment start). An advantage of using “treatment start” as an indicator is that it is easier to define and record than “treatment request”. A disadvantage of “treatment start” is that the number of clients entering treatment is more dependent on treatment capacity than “treatment request”. For example, the existence of a waiting list may cause clients who requested for treatment to withdraw from the list before starting treatment.

If possible, it is advisable to record data on the number and basic characteristics of treatment requests in addition to treatment starts, since this reflects the overall demand for treatment and indicates the size and characteristics of the population who request for treatment but do not enter treatment.

Methodological aspects

It is beyond the scope of this guideline to discuss the methodological problems involved with the use of treatment reporting systems to assess wider patterns of substance use and substance problems in depth. This section is limited to the issues of embedding core data in a larger data set, problems involved with double counting, and the relation between first treatment demand and incidence.

As argued before, a treatment reporting system should minimally provide information on a set of core variables. Nevertheless, treatment agencies or investigators may wish to collect information on a much wider range of variables, depending on the purpose(s) of the reporting system (administrative purposes, clinical assessment, programme evaluation, etc.). When collecting a larger set of variables, it is important to pay attention to the consequences this may have for the collection of the core variables. In particular, when the core data are embedded in a larger data set, it should still be possible to conveniently and reliably extract the core data from the larger data set. In addition, when collecting the core data in the context of a larger assessment procedure, this process should not alter the criteria that govern the core data. To minimize such alterations, it may be advisable to collect information on the core variables prior to the larger assessment procedure.

With regard to the issue of double counting, it is – at the minimum – important to avoid double counting of the same client at the same agency in a given year. Ideally, double counting should also be avoided between different agencies. Both to obtain an unduplicated count of clients and to identify multiple service utilization within agencies (re-admissions) and between agencies, each client should ideally be given a unique identity code. Such a code may also be useful for monitoring patterns of service utilization over successive years.

When setting up a system of identifying individuals who account for two or more treatment contacts, various ethical and practical problems arise. For example, some countries have laws that prevent the matching of identity codes from different agencies, and/or clients themselves may object against identification. On the practical level, it is important to develop a code that (a) is unique to the individual, and (b) sufficiently conceals the person’s identity from unauthorized third parties. When storing data in a computer database, the identity code should provide the only link between the client’s personal biographic information (name, address, etc.) and other data on the client’s status. For the remainder, these two sources of information should be kept separately. An example of a relatively anonymous identity code is a combination of the client’s initials and date of

birth. However, one should be aware that any coding system is subject to errors, for example due to misspellings by the administrator or erroneous information from the client.

Concerning the relation between first treatment demand and incidence, several issues are important. First, since there is generally a considerable delay between initial substance use, onset of problem use, and first application for treatment, one should be aware that first treatment is a lagged indicator of incidence, in the sense that recent incidence is underrepresented. Second, first treatment demand only covers the population of help-seeking substance users, which, by definition, consists of substance users who experienced problems to such a degree that they sought help. Consequently, the incidence of less problematic substance use is underestimated, whereas non-problematic substance use is not covered at all. Third, treatment services may be exclusively or primarily concerned with certain types of substance use, with the consequence that problems related to the use of other drugs will be underestimated. For example, methadone maintenance programmes tend to primarily attract opiate (heroin) users (who may also use additional other substances), and hardly any cocaine users who do not use opiates. Consequently, cocaine use would be underestimated if the indicator of first treatment demand would be largely based on methadone maintenance programmes. Fourth, first treatment demand is not only an indicator of the incidence of help-seeking substance users, but also of the general availability, attractiveness, and accessibility of treatment. In countries with only a few treatment services available, or with only services that require clients to meet strict conditions, first treatment demand is likely to be an unreliable measure of incidence of problematic substance use.

5.3 Law enforcement reporting systems

Information from law enforcement agencies can be a useful complement to health-related information as indicators of patterns and trends in illicit substance use. To interpret the information correctly however, it is essential to take into account in what way the national and/or local policy and resources on law enforcement may influence the data. For example, the number of arrests for drug-related offences does not only reflect the level of illegal drug activity, but also the drug policy and enforcement practices in a city or country.

Law enforcement data can be obtained from both the “demand” and the “supply” side. Law enforcement reporting systems can be based on information from the following sources:

- police arrests
- court and penal data
- seizures.

Police arrests

Data on police arrests may be obtained from police and customs records, and from records of specialized drug enforcement units. These data can provide basic information on the individuals involved, as well as on the drugs they used. As with data on treatment and drug-related deaths, there are often definitional and procedural differences between these sources, and between countries or cities, in what constitutes a police arrest. In some countries, the data refer primarily to arrests for trafficking, in others primarily to drug use or possession-related arrests. In addition, “police arrests” may refer to the number of violations or offences, as well as to the number of people arrested or charged. Strictly speaking, only arrests of drug consumers should be included as a “demand” level measure (i.e. arrests for possession or personal use). Arrests for trafficking might be more appropriately considered as a “supply side” measure. However, in many cases, people arrested for trafficking may well be street suppliers who are themselves consumers.

When collecting data on police arrests, it is therefore important to distinguish between:

- drug use related arrests versus traffick related arrests
- the type(s) of drugs involved, and the demographic characteristics of the arrested persons
- the number of arrests versus the number of persons arrested.

The extent to which police data can be useful as an indicator of (trends in) the patterns of drug use varies according to the occurrence of changes in policy and/or police organization, and the consistency of data collection and recording. As argued throughout this guideline, the data should at all times be interpreted within the context of drug policy, enforcement practices, definitions used, and procedures by which the data were collected.

Court and penal data

Court and penal data are generally less useful than police data as indicators of patterns and trends in illicit substance use, because they are further away from the original event (drug use, possession, trafficking), and are thus biased by both police and sentencing policies and practices.

As discussed in 2.8, court and penal data can be obtained from court statistics on convictions and sentences, and from penal institutions' records (including medical records). These two sources reflect two types of indicators. The first indicator refers to data on drug law offenders who are sentenced to imprisonment. These however, may include offenders who were sentenced for drug use, as well as those sentenced for possession and/or trafficking. The second indicator refers to data on drug users in prison, which may include persons in prison because of other types of offences (such as theft) rather than for offences against the drug laws.

Without further distinction, neither sort of data can be reliably used to describe or compare drug use trends. When collecting court and penal data, it is therefore important to distinguish between:

- individuals sentenced to prison for drug use versus those sentenced to prison for drug possession or trafficking;
- drug users in prison for drug use versus drug users in prison for other types of offences than drug use.

Even when making this distinction however, one should be aware that court data strongly reflect the sentencing policies regarding drug law offenders and drug users, whereas penal data are often heavily influenced by the arrangements within prisons for identifying and reporting drug users.

Seizures

As described in 2.10, data on seizures may be obtained from police and customs records, and from records of forensic laboratories. Seizure data may refer to the quantity of different drugs seized (which is the most commonly used measure), and to the number of separate seizures of different drugs. Typically, the total quantity seized reflects a relatively small number of seizures of large amounts of drugs from traffickers or major suppliers by customs officials or specialized police drug units. The total number of seizures usually reflects a much larger number of seizures of small amounts of drugs seized from users or street dealers by the local police.

In theory, the quantity measure could be used as an indicator of drug availability at the level of the supply side of the illicit market, and the number of seizures as an indicator at the lower level of local or street availability. In practice however, it is difficult to maintain the assumption that the quantities of drugs seized or the number of seizures is directly proportional to the supply of

those drugs. Some of the major violations of this assumption were discussed in 2.10. To summarize:

- the quantities seized and number of seizures depend heavily on the resources, effectiveness (and luck) of enforcement agencies;
- a single large seizure can distort the figures;
- seizures may be destined for domestic distribution or for other countries.

Combined with seizure data, data on prices and purities of illicit drugs can be used for interpreting trends in the illicit drug market. Ideally, information on the relative prices and purities of a drug at the import (major importers or traffickers) level, the level of larger dealers, and the street level can provide insight into the structure of illicit markets.

When collecting data on drug seizures, it is useful to:

- analyse the data on quantities seized and number of seizures separately for each type of drug;
- distinguish between the numbers of seizures of (a) small, user-level amounts, (b) larger, supply-level quantities, and (c) import or production-level seizures;
- record the number of larger seizures (e.g. for heroin: the number over 1 kg, over 10 kg, etc.);
- note whether there were exceptionally large seizures that may distort the overall data;
- supplement the information on seizures with data on prices and purities;
- interpret the data in the context of enforcement policies and/or recording practices.

With regard to the prices and purities of illicit drugs, it is useful to:

- record whether the price is based on small “street bags” or refers to the cost of 1 g;
- specify whether the price and purity of a drug refers to the import level, the dealer level, or the street level;
- specify the source(s) of information.

In addition to the use of illicit drug seizures as an indicator of drug supply or availability, it has been argued that seizures might also be useful as an indicator of the demand for – or the use of – drugs. This however, is not recommended. In addition to the many difficulties mentioned above, the use of seizures as a demand indicator is based on even more dangerous assumptions. For example, to estimate the total number of drug users in a country, one needs to know the total amount of drugs being confiscated, the proportion of drugs meant for consumption being confiscated, as well as the average consumption per user. Clearly, reliable information on these parameters is lacking.

5.4 Combining information from different sources: problems of a multi-agency approach

As argued in 3.1, any single source of information or method reflects only selected aspects of the phenomenon that is investigated. Thus, when making comparisons and interpreting the data, it is essential to combine various approaches and sources of information, in order to construct a more three-dimensional and reliable picture of the phenomenon.

The goals of a multi-agency and multi-dimensional approach are twofold:

- to obtain cumulative information: findings on a phenomenon, obtained from one source or method can be checked against findings on the same phenomenon, derived from other sources or methods;
- to obtain complementary information: findings on a phenomenon, obtained from one source or method can be complemented with findings on other, related phenomena, derived from other sources or methods.

In both cases, the combination of information provides the opportunity to obtain a more reliable or detailed representation of the phenomenon being investigated than a single source or method would provide. However, one should be aware that many of the problems – concerning differences in definition, data collection procedure, etc. – which are involved with interpreting information from a single source or method, are even more apparent in a multi-agency or multi-dimensional approach. Therefore, when combining information from different sources or methods, particular attention should be paid to the issues of:

- comparability of the data (differences in definitions, sampling method and procedure, assessment procedures, etc.);
- quality of the data (differences in validity and reliability);
- coverage of the data (differences in the types of treatment services, agencies, types of drugs and drug users, geographical regions, etc. that are covered);
- quantity of the information (differences in the amount of information provided by each source or method).

Since these issues are very likely to differ considerably across the various sources or methods, it is essential to include them when investigating possible reasons for different results found between different sources or methods.

5.5 Structural requirements

1. It is essential to draw together information from a range of sources using different methods and indicators. Both qualitative and quantitative data, as well as contextual information are necessary.
2. This implies a central unit or department with responsibility for collating, analysing and disseminating information. This department would need to establish guidelines and routine mechanisms for collecting and submitting data to the unit. This need not be large or expensive, but does need to be formally recognized.
3. Such a unit could be established either at regional (e.g. republic) or national level. It would be useful if key centres or individuals could be identified at more local level (e.g. city) who could constitute a network for collecting data.
4. Both at the local and the national level, it is important that the collation, analysis and dissemination of information by the central unit is embedded in structural provisions that facilitate communication between the unit and (local and/or national) policy-makers. For such an “interface” to work properly, it is essential that the responsibilities of both parties are clearly defined.

5. At local level, it would be helpful to involve key workers drawn from as wide a range of the relevant sectors as possible (e.g. youth and social work as well as public health and psychiatry and university departments).
6. It would be very helpful if seminars were held on a regular basis (once or twice per year) where key people working in the different cities and sectors could meet to discuss and interpret the significance and implications of the collected data.

5.6 Conclusion

The establishment of adequate data collection should not be taken as a reason to delay the implementation of common sense measures to respond to drug problems which are already visible. However, the improvement of epidemiological mechanisms for improving knowledge on the nature, extent and changing pattern of drug use and drug problems is essential to the longer-term development of effective policies. Experience from many countries suggests that it is possible to improve substantially the quality and usefulness of data collection, but that it can take some years before the benefits are fully appreciated. Unfortunately, it appears unlikely that drug problems will disappear in the foreseeable future. It is thus valid to lay the basis now for the longer-term development of epidemiological measurement.

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Annex 1

INDICATORS AND SOURCES OF DATA

Indicators of drug use	Sources of data
<p>Treatment demand</p> <p>(1) All treatment requests or starts</p> <p>(2) New treatment requests or starts <i>(patients who have never previously received treatment for drug use)</i></p>	<p>Treatment reporting system, or Records of demand for treatment from:</p> <p>(a) specialized agencies</p> <p>(b) programmes for drug users in general health and social services</p> <p>(c) nongovernmental agencies</p> <p>(d) nonspecialized agencies</p>
<p>Drug users known to other agencies</p> <p>(1) Social welfare clients</p> <p>(2) Education welfare clients</p> <p>(3) Probation clients</p> <p>(4) Pregnant drug users</p> <p>(5) Babies with drug-using mothers</p> <p>(6) Primary care patients</p>	<p>Welfare agency records</p> <p>Education welfare service records</p> <p>Probation service</p> <p>Prenatal care services</p> <p>Obstetric ward records</p> <p>Health centres and general practitioners</p>
<p>Hospital admission or discharge diagnoses</p>	<p>Psychiatric hospital records</p> <p>Psychiatric registers</p> <p>General hospital records</p>
<p>Drug-related emergencies</p>	<p>Hospital emergency rooms</p> <p>Ambulance services</p> <p>Crisis centres</p> <p>Health centres</p> <p>Poison centres</p>
<p>Drug-related infectious diseases</p> <p>(1) Hepatitis B & C (drug-related)</p> <p>(2) HIV infection among IDUs</p> <p>(3) Drug-related AIDS cases</p> <p>(4) Other (endocarditis, etc.)</p>	<p>Infectious disease surveillance programmes</p> <p>Infectious disease hospital units</p> <p>Hospital diagnosis statistics</p> <p>Public health laboratories</p> <p>Sentinel surveillance records</p> <p>AIDS prevention and control programmes</p>
<p>Positive drug tests at the workplace</p>	<p>Employers</p>
<p>Drug use by conscripts</p>	<p>Regular surveys/screening</p> <p>Military medical service records</p>
<p>Drug-related deaths</p> <p>(1) Direct (overdoses, etc.)</p> <p>(2) Indirect (accidents, etc.)</p>	<p>Mortality statistics</p> <p>Coroners or medical examiners</p> <p>Police records</p> <p>Forensic and toxicological services</p> <p>Public health services</p> <p>Death certificates</p> <p>Hospital records</p>
<p>Police arrests for drug use/possession</p>	<p>Police records/statistics</p>
<p>Convictions for drug use/possession</p>	<p>Court statistics</p>
<p>Imprisonment</p> <p>(1) For drug law offences</p> <p>(2) Addicts in prison population</p>	<p>Penal institutions records</p> <p>Prison medical officers records</p> <p>Court statistics</p> <p>Prison medical service</p>

Indicators of drug availability	Sources of data
Arrests for drug supply/traffick	Police records/statistics Customs records/statistics
Convictions for drug supply/traffick	Court information system
Seizures of illicit drugs (by drug) (1) Number of seizures of small amounts for local consumption (2) Number of seizures of larger amounts for traffick (3) Total quantities of drugs seized	Police records Customs records Forensic laboratories
Price/purity of illegal drugs (1) At user level (2) At larger supply and traffick levels	Police laboratories Forensic toxicology laboratories etc.
Drug sales/prescriptions to drug users	Pharmacy records Prescription monitoring system

Indicators of alcohol use	Sources of data
Per capita consumption	Surveys
Alcohol treatment admissions	Treatment reporting system, or Records of patients admitted to: (a) specialized alcohol units (b) nonspecialized centres
Problem alcohol users known to other agencies (multi-agency review)	(1) Social welfare agencies (2) Probation services (3) Primary care
Hospital admission/discharge diagnoses	Hospital records
Cirrhosis	Hospital records
Alcohol-related cancers	Hospital records
Alcohol-related emergencies	Hospital emergency rooms
Alcohol-related deaths	Mortality statistics Coroners or medical examiners Death certificates
Arrests or convictions (1) Drink-driving offences (2) Drunkenness (3) Other alcohol-related offences	Police records Court statistics
Traffic incidents (1) Accidents (2) Breathalyser tests	Police records
Non-traffic accidents and injuries	Hospital records Ambulance services

Indicators of alcohol availability	Sources of data
Production	Alcohol industry production figures
Import and export	Alcohol industry records Customs records
Alcohol distribution (2) Number of outlets (licences, etc.) (2) Alcohol sales	Municipal statistics Retail statistics
Price	Alcohol industry records Retail statistics

Indicators of tobacco consumption	Sources of data
Consumption	Surveys
Treatment demand	Smoking clinics Health centres
Hospital admissions/discharges	Hospital records Cancer registers
Tobacco-related diseases (1) Cancers (2) Other diseases	Hospital records Cancer registries
Deaths	Mortality statistics

Indicators of tobacco availability	Sources of data
Production	Tobacco industry production figures
Import and export	Tobacco industry records Customs records
Distribution (1) Number of outlets (2) Licences	Municipal statistics
Price	Tobacco industry records Retail statistics

Annex 2

SUGGESTED CORE DATA

Which type(s) of data to collect depends considerably on the research questions asked. Hence, any suggested set of core data can only be limited to basic information about a person's status or functioning in broad areas. Given the many differences in context and focus between – and within – agency-based data on the one hand, and data from surveys and ethnographic methods on the other, the focus of this annex is on core data that can be obtained from agencies (treatment services, emergencies, hospitals, agencies involved in investigating drug-related deaths, and law enforcement agencies).

The non-agency-based approaches (surveys, ethnographic methods and snowball sampling) differ to such an extent in both content and methodology, that it is impossible to provide a core data set that covers these methods. The reader is referred to the following sources:

Council of Europe. *Population surveys in epidemiological research on drug use in Europe: Core items and methodological aspects*. Strasbourg, Council of Europe, Pompidou Group, 1995 (P-PG/Epid (95) 19).

Hartnoll, R. et al. *Handbook on snowball sampling*. Strasbourg, Council of Europe, Pompidou Group, 1995 (2nd draft; P-PG/Epid (95) 20).

This annex is structured as follows. First, a set of core items is suggested for a drug treatment reporting system (based on the protocol on drug treatment reporting systems of the Pompidou Group). With this set as a basis, additional core data are given that should – where possible – be obtained when collecting data in each of the subsequent types of agency mentioned above.

Drug treatment services³

- | | |
|-------------------------|--|
| Administrative data: | – city |
| | – treatment centre |
| | – client code number |
| Treatment contact data: | – date of treatment demand |
| | – type of contact with current centre |
| | – ever/when previously treated |
| | – currently in treatment at other centre |
| | – source of referral |
| Sociodemographic data: | – gender |
| | – age |
| | – date of birth |
| | – current living status |
| | – living with drug misusers |
| | – resident of city |
| | – area of residence within city |
| | – nationality |
| | – ethnicity (<i>optional</i>) |
| | – employment status |
| | – highest educational level |
| | – age left school (<i>optional</i>) |

³ This set of core items is based on the list of core items for treatment demand reporting, suggested by the Pompidou Group (Hartnoll, 1994). The model form for these core data is included in Annex 3.

- Problem drug use:
- primary drug: name of primary drug
route of administration
frequency of use past month
age first use
duration regular use
 - secondary drugs: name(s) of secondary drug(s)
route of administration
 - age first use any drug (optional)
- Drug-related problems:⁴
- extent of problems that result from substance use (medical; psychological; social/relational, financial, legal)
- Risk behaviour:
- currently injecting
 - currently sharing of injecting equipment
 - ever injected
 - age first injected
 - ever shared injecting equipment
 - HIV status (optional)
- Initial outcome:
- type of treatment started

Emergencies:

Given the primary concern with the immediate emergency, there is often only limited time to collect information on other aspects of the patient. At the minimum, try to establish whether or not the patient is a (regular) drug user, and in what way the emergency relates to drug use. For example, a drug user may come in for a directly drug-related emergency (e.g. overdose, acute intoxication), or for a non-drug-related emergency (e.g. a genuine accident). The following data should be obtained where possible:

- Drug use:
- is the person a (regular) drug user?
 - primary drug
- Type of emergency:
- directly drug-related emergency (overdose, acute intoxication, withdrawal symptoms, acute adverse reactions, drug-related organic and acute psychiatric complications, drug-related accidents, etc.)
 - other medical reasons not directly involving a substance (non-drug-related accidents, suicide attempts not involving a substance, deliberate self-harm not involving a substance, etc.)
 - main drug(s) involved in the current episode
- Sociodemographic data:
- gender
 - age
 - area of residence
- Treatment data:
- treatment provided (including any psychoactive medication)
 - disposal/referral

If there is a possibility to obtain additional information on the patient's status and functioning, it is recommended to select core data from the list suggested for drug treatment services described above, in particular those on additional sociodemographics and problem drug use.

⁴ These items on drug-related problems are not included in the Protocol on Treatment Reporting of the Pompidou Group, but are suggested here as optional items; they are recommended as core items in the *Handbook on snowball sampling* of the Pompidou Group (Hartnoll et al., 1995).

Hospital admissions:

Where possible, it is recommended that all the core data suggested for drug treatment demand are collected. At the minimum, the following core data are suggested:

- Drug use:
- is the person a (regular) drug user?
 - primary drug
- Reason for admission:
- directly drug-related reasons for admission (in general hospitals: drug-related organic diseases (infections, hepatitis, HIV/AIDS (establish whether drug-related), cirrhosis, korsakow syndrome, etc.); in psychiatric hospitals: primary and secondary diagnosis of dependence or abuse, drug-related psychiatric symptoms)
 - other medical reasons not directly involving a substance
 - main drug(s) involved in the current episode
- Sociodemographic data:
- gender
 - age
 - area of residence
- Treatment data:
- treatment provided (including any psychoactive medication)
 - disposal/referral

Deaths:

It is recommended to collect as much additional circumstantial evidence of the underlying cause of death as possible. The following core data should be obtained:

- Drug use:
- was the person a (regular) drug user?
 - primary drug
- Cause of death:
- intentional intoxication involving substances (suicide by overdose)
 - accidental intoxication involving substances
 - organic disease due to substance use (e.g. AIDS, cirrhosis)
 - fatal accidents under the influence of substances
 - other causes not directly involving a substance (non-drug related organic disease, suicide and fatal accidents or other violent deaths not directly involving a substance)
 - main drug(s) involved
- Sociodemographic data:
- gender
 - age
 - area of residence

Police arrests:

If possible, most of the core items from the treatment demand section can – after minor modifications – be used in the context of police arrests. At the minimum, the following data should be obtained:

- Drug use:
- was the person a (regular) drug user?
 - primary drug
- Type of drug-arrest:
- drug use-related arrest
 - arrest for drug possession
 - supply/traffick-related arrest
 - arrest not directly involving a substance (e.g. thefts)
- Drug(s) involved:
- type(s) of drug(s) involved (in the case of possession, supply or traffick by either a drug user or a non-user)
- Sociodemographic data:
- gender
 - age
 - area of residence

Court and prison data:

As with police arrests, most of the core items from the treatment demand section can – after minor modifications – be used in the context of imprisonment. The following core data are suggested:

- Drug use:
- was the person a (regular) drug user prior to imprisonment?
 - does the person use drugs within prison?
- Type of imprisonment:
- sentenced to prison for drug use-related offences
 - sentenced to prison for drug possession
 - sentenced to prison for supply/traffick-related offences
 - sentenced to prison for reasons not directly involving a substance
- Sociodemographic data:
- gender
 - age
 - area of residence

Annex 3

EXAMPLES OF DATA-GATHERING INSTRUMENTS

Pompidou Group: Non-Fatal Emergencies Indicator

2nd Pilot Study
V.2.0 HP4

Data Collection Form v.2.0		1. City <input type="text"/> <input type="text"/> 2. Hospital <input type="text"/> <input type="text"/> <input type="text"/> 3. ID <input type="text"/> <input type="text"/> <input type="text"/>																																				
4. Date of treatment in emergency room <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> -95 <small>day month</small>	8. Regular contact with treatment facilities previous month 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 9 <input type="checkbox"/> Unknown																																					
5. Age of the patient <input type="text"/> <input type="text"/> or Date of birth of the patient <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <small>day month year</small> -9=Unknown	9. Diagnosis 1 <input type="checkbox"/> Overdose 2 <input type="checkbox"/> Other acute reaction or unspecified acute reaction 9 <input type="checkbox"/> Unknown																																					
6. Gender 1 <input type="checkbox"/> Male 2 <input type="checkbox"/> Female 9 <input type="checkbox"/> Unknown	10. Emergency Outcome 1 <input type="checkbox"/> Medical discharge 2 <input type="checkbox"/> Referred to another care facility 3 <input type="checkbox"/> Patient left against medical advice 4 <input type="checkbox"/> Hospitalization 5 <input type="checkbox"/> Death 7 <input type="checkbox"/> Other 9 <input type="checkbox"/> Unknown																																					
7. Place where the patient live 1 <input type="checkbox"/> City metro 2 <input type="checkbox"/> Outside 9 <input type="checkbox"/> Unknown	11. Name of the drugs directly related to the present episode: Drug code 1. Drug name: <input type="text"/> <input type="text"/> <input type="text"/> 2. Drug name: <input type="text"/> <input type="text"/> <input type="text"/> 3. Drug name: <input type="text"/> <input type="text"/> <input type="text"/> 4. Drug name: <input type="text"/> <input type="text"/> <input type="text"/>																																					
12. Route of administration <table style="width: 100%; border: none;"> <tr> <td style="width: 25%; border: none;">Drug 1</td> <td style="width: 25%; border: none;">Drug 2</td> <td style="width: 25%; border: none;">Drug 3</td> <td style="width: 25%; border: none;">Drug 4</td> </tr> <tr> <td style="border: none;">1 <input type="checkbox"/> Oral</td> <td style="border: none;">1 <input type="checkbox"/> Oral</td> <td style="border: none;">1 <input type="checkbox"/> Oral</td> <td style="border: none;">1 <input type="checkbox"/> Oral</td> </tr> <tr> <td style="border: none;">2 <input type="checkbox"/> Smoking</td> <td style="border: none;">2 <input type="checkbox"/> Smoking</td> <td style="border: none;">2 <input type="checkbox"/> Smoking</td> <td style="border: none;">2 <input type="checkbox"/> Smoking</td> </tr> <tr> <td style="border: none;">3 <input type="checkbox"/> Inhalation</td> <td style="border: none;">3 <input type="checkbox"/> Inhalation</td> <td style="border: none;">3 <input type="checkbox"/> Inhalation</td> <td style="border: none;">3 <input type="checkbox"/> Inhalation</td> </tr> <tr> <td style="border: none;">4 <input type="checkbox"/> Sniffing</td> <td style="border: none;">4 <input type="checkbox"/> Sniffing</td> <td style="border: none;">4 <input type="checkbox"/> Sniffing</td> <td style="border: none;">4 <input type="checkbox"/> Sniffing</td> </tr> <tr> <td style="border: none;">5 <input type="checkbox"/> Injection</td> <td style="border: none;">5 <input type="checkbox"/> Injection</td> <td style="border: none;">5 <input type="checkbox"/> Injection</td> <td style="border: none;">5 <input type="checkbox"/> Injection</td> </tr> <tr> <td style="border: none;">7 <input type="checkbox"/> Other routes</td> <td style="border: none;">7 <input type="checkbox"/> Other routes</td> <td style="border: none;">7 <input type="checkbox"/> Other routes</td> <td style="border: none;">7 <input type="checkbox"/> Other routes</td> </tr> <tr> <td style="border: none;">8 <input type="checkbox"/> Not applicable</td> <td style="border: none;">8 <input type="checkbox"/> Not applicable</td> <td style="border: none;">8 <input type="checkbox"/> Not applicable</td> <td style="border: none;">8 <input type="checkbox"/> Not applicable</td> </tr> <tr> <td style="border: none;">9 <input type="checkbox"/> Unknown</td> <td style="border: none;">9 <input type="checkbox"/> Unknown</td> <td style="border: none;">9 <input type="checkbox"/> Unknown</td> <td style="border: none;">9 <input type="checkbox"/> Unknown</td> </tr> </table>			Drug 1	Drug 2	Drug 3	Drug 4	1 <input type="checkbox"/> Oral	1 <input type="checkbox"/> Oral	1 <input type="checkbox"/> Oral	1 <input type="checkbox"/> Oral	2 <input type="checkbox"/> Smoking	2 <input type="checkbox"/> Smoking	2 <input type="checkbox"/> Smoking	2 <input type="checkbox"/> Smoking	3 <input type="checkbox"/> Inhalation	3 <input type="checkbox"/> Inhalation	3 <input type="checkbox"/> Inhalation	3 <input type="checkbox"/> Inhalation	4 <input type="checkbox"/> Sniffing	4 <input type="checkbox"/> Sniffing	4 <input type="checkbox"/> Sniffing	4 <input type="checkbox"/> Sniffing	5 <input type="checkbox"/> Injection	5 <input type="checkbox"/> Injection	5 <input type="checkbox"/> Injection	5 <input type="checkbox"/> Injection	7 <input type="checkbox"/> Other routes	7 <input type="checkbox"/> Other routes	7 <input type="checkbox"/> Other routes	7 <input type="checkbox"/> Other routes	8 <input type="checkbox"/> Not applicable	8 <input type="checkbox"/> Not applicable	8 <input type="checkbox"/> Not applicable	8 <input type="checkbox"/> Not applicable	9 <input type="checkbox"/> Unknown	9 <input type="checkbox"/> Unknown	9 <input type="checkbox"/> Unknown	9 <input type="checkbox"/> Unknown
Drug 1	Drug 2	Drug 3	Drug 4																																			
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9 <input type="checkbox"/> Unknown	9 <input type="checkbox"/> Unknown	9 <input type="checkbox"/> Unknown	9 <input type="checkbox"/> Unknown																																			

FORM NUMBER

5429223

DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE

SUBSTANCE ABUSE AND MENTAL HEALTH SERVICES ADMINISTRATION

FORM APPROVED:
OMB NO. 0930-0078
Expires 3/31/97

**DRUG ABUSE WARNING NETWORK (DAWN)
EMERGENCY DEPARTMENT REPORT**

1. PROVIDER NUMBER <div style="border: 1px solid black; width: 100%; height: 15px;"></div>	2. CROSS REFERENCE (Facility Use Only) <div style="background-color: black; width: 100%; height: 15px;"></div>
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PATIENT INFORMATION	DRUG/SUBSTANCE INFORMATION						
3. DATE OF VISIT <table border="1" style="width:100%; border-collapse: collapse; font-size: 8px;"> <tr> <th style="width:15%;">Month</th> <th style="width:15%;">Day</th> <th style="width:15%;">Year</th> </tr> <tr> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> <td style="border: 1px solid black; width: 15px; height: 15px;"></td> </tr> </table>	Month	Day	Year				12. ALCOHOL INVOLVED (Mark [X] one response) 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Unknown
Month	Day	Year					

4. TIME OF VISIT

Hours	Minutes	(Mark [X])

1. am
2. pm
3. military

5. AGE (Must be 06-97 yrs.)

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6. SEX

1 Male 2 Female

7. RACE

1 White, not of Hispanic Origin
 2 Black, not of Hispanic Origin
 3 Hispanic
 4 American Indian or Alaskan Native
 5 Asian or Pacific Islander
 6 Unknown
 7 Other (Specify) _____

8. PATIENT'S HOME ZIP CODE

--	--	--	--	--	--	--	--	--	--

(Otherwise mark [X] one response)

1 Unknown 2 No Fixed Address (See reverse side)

9. REASON FOR TAKING SUBSTANCE(S) (Mark [X] one response)

1 Dependence
 2 Suicide Attempt or Gesture
 3 Psychic Effects: "Recreational Use" (e.g., to get high, kicks)
 4 Other Psychic Effects (See reverse side)
 5 Unknown
 6 Other (Specify) _____

10. REASON FOR PRESENT CONTACT

A. Was This an Overdose/Toxic Ingestion?
 1 Yes No

B. If "No," mark one response

2 Unexpected Reaction
 3 Chronic Effects (See reverse side)
 4 Withdrawal
 5 Seeking Detoxification
 6 Accident/Injury
 7 Unknown
 8 Non-toxic Ingestion/Other (Specify) _____ (See reverse side)

11. DISPOSITION FROM EMERGENCY DEPARTMENT

1 Treated and Released or Referred
 2 Admitted as Inpatient to This or Any Hospital
 3 Left Against Medical Advice
 4 Died

13. LIST EACH DRUG/SUBSTANCE SEPARATELY (Generic, Trade, or Street Name) IN ONE OF THE SPACES BELOW (Do NOT list alcohol)

1	SAMHSA USE ONLY						

Mark [X] if confirmed by toxicology tests

For each non-alcohol substance listed above, mark [X] one response in each data item below.

14. FORM IN WHICH DRUG WAS ACQUIRED

		SUBSTANCES			
		1	2	3	4
Tablet/Capsule/Pill	01				
Aerosol	02				
Liquid (oral)	03				
Powder/Crystal	04				
Paper (e.g., LSD/Acid)	05				
Pieces/Chunks (e.g., Crack)	06				
Injectable Liquid	07				
Cigarette	08				
Plant Material	09				
Unknown	10				
Other	11				

15. ROUTE OF ADMINISTRATION

		SUBSTANCES			
		1	2	3	4
Oral	1				
Injection	2				
Inhaled (e.g., fumes)	3				
Smoked (Includes Freebase)	4				
Sniffed, Snorted	5				
Unknown	6				
Other	7				

16. SOURCE OF SUBSTANCE

		SUBSTANCES			
		1	2	3	4
Patient's Own Legal Rx	1				
Street Buy	2				
Other Unauthorized Procurement (e.g., stolen, gift, etc.)	3				
Unknown	4				
Other (Includes Over-The-Counter [OTC])	5				

17. CODED REMARKS (If case involves an IV drug user with HIV/AIDS, please write "HIV+" or "AIDS" in the first four spaces below.)

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**SELECTED REPORTING GUIDELINES AND INSTRUCTIONS
DRUG ABUSE WARNING NETWORK (DAWN)
EMERGENCY DEPARTMENT REPORT**

I. General

The following abbreviated guidelines and instructions highlight critical reporting items. Please refer to the detailed instructions found in the Instruction Manual for Emergency Departments for further information.

II. Reporting Guidelines

Report data on all patients seen in the emergency department for problems induced by or related to drug abuse. For DAWN, drug abuse "is defined as the use of any illegal drug or the *nonmedical use* of a legal drug where the reason for taking the substance was for psychic effects, dependence, or suicide attempt or gesture.

Detailed discussion of the "nonmedical" use definition and other **case** selection criteria can be found in Chapter II, Case Identification Guidelines, of the Instruction Manual for Emergency Departments.

III. Abbreviated Instructions for Completing Selected Items

Data Item M – Patient's Home Zip Code

Use "no fixed address" for the homeless (even if staying at a shelter) and for prisoners brought into the hospital.

Data Item #9 – Reason for Taking Substance(s)

The response categories are: Dependence, Suicide Attempt or Gesture, Psychic Effects: "Recreational Use," Other Psychic Effects, Unknown, and Other (Specify). The definitions are as follows:

1. *Dependence* – A physiological or psychological condition characterized by a compulsion to take the drug on a continuous or periodic basis in order to experience its effects or to avoid the discomfort of its absence (i.e., to avoid withdrawal).
2. *Suicide Attempt or Gesture* – Successful or unsuccessful actions(s) taken for the purpose of self-destruction or to gain attention.
3. *Psychic Effects: "Recreational Use"* – Use of drug(s) for experimentation or to enhance social situations or conditions. Examples of common patient responses are: "just wanted to know what it felt like," "ranted to have fun," "or to get high."
4. *Other Psychic Effects* – Use of drug(s) to improve, enhance, or make better any mental, emotional, physical state. Examples of common patient responses concerning this self-applied medication are: "needed to relax," "wasn't feeling well," "to stay awake," "depression," "anxiety," "to lose weight," "fight with boyfriend/mate."
5. *Unknown* – Should be used only if information is unobtainable or unavailable.
6. *Other (Specify)* – Should be used only when the reason for taking the substance cannot be classified in the categories above. Write the appropriate reason in the space provided.

Data Item #10 – Reason for Present Contact

This data item has two parts, parts A and B. Part A requires a selection of "YES" or "NO" to indicate whether the case is an Overdose/Toxic Ingestion. If the response to part A is "NO," part B requires a response.

3. *Chronic Effects* • Includes Hepatitis, Abscess, Cellulitis, Tremors, and AIDS contracted by IV drug abuse (see manual for additional examples).
8. *Non-Toxic Ingestion/Other (Specify)* – Should be used only when *Reason for Present Contact* cannot be classified into the categories above. (For example, police bring patient in for toxicological testing related to commission of a crime or parents force a child to come in to be checked because of strange behavior.) If *Other*, write reason in space provided.

Data Item #17- Coded Remarks

Please be certain to write "HIV+" or "AIDS" in the first four blocks "if the patient is a confirmed HIV drug user.

**SELECTED REPORTING GUIDELINES AND INSTRUCTIONS
DRUG ABUSE WARNING NETWORK (DAWN)
MEDICAL EXAMINER REPORT**

General

The following abbreviated guidelines and instructions highlight critical reporting items. Please refer to the detailed instructions found in the Instruction Manual for Medical Examiners for further information.

Reporting Guidelines

Report data on all decedents whose death was induced by or related to drug abuse. For DAWN, drug abuse is defined as the use of any illegal drug or the nonmedical use of a legal drug where the reason for taking the substance was for: psychic effects, dependence, suicide, or homicide. Further discussion and examples can be found in the DAWN ME Instruction Manual.

Abbreviated Instructions for Completing Selected Items

Data Item #7 – Deceased's Home Zip Code

Use "no fixed address" for the homeless (even if stayed at a shelter) and for prisoners who expired.

Data Item #8 – Cause of Death

This data item has two parts, parts A and B. Part A requires a selection of "YES" or "NO" to indicate whether the case is a confirmed drug-induced death. If the response to part A is "YES", go on to Item 9 (manner of Death.) If the answer to part A is "NO", parts B. 1 and B. 2 require a response.

- A. Mark [X] if the case is a confirmed drug-induced death (e.g., the drug(s) directly caused the death).
- B1. Mark [X] if the case is a drug-related death, such as a death caused by sepsis in which the decedent had a history of IV drug use and the injection site is indicated as the source of the infection that resulted in sepsis death.
- B2. Mark "Confirmed" if County records substantiate the conclusion that the death is related to drug abuse (e.g., drug abuse is noted as a contributing cause on the death certificate); or
Mark "Presumed" if case involves a death from a gunshot wound in which toxicological findings indicate recent illicit drug use. The two may be related but there is insufficient evidence for legal certification of drug relationship cause.

Data Item #10 – Factors Supporting DAWN Case Determination

Mark with an (X) **all** items that were reviewed in order to determine if this case meets DAWN criteria.

Data Item #15- Coded Remarks

Please be certain to write "HIV+" or "AIDS" in the first four blocks if the deceased was a confirmed IV drug user.

The assessment of drug problems

The problem of psychoactive substance use and associated harm continues to be one of the hot issues in social and public health policies of many countries of the WHO European Region. Changing trends and patterns of drug use, emerging new drugs and groups of drug users result in a challenge to existing drug policies and services, which become less effective if they do not take into account these rapid changes.

The Regional Office for Europe of the World Health Organization has prepared this document aiming at providing the countries and communities of the Region with the knowledge accumulated so far in the field of assessing the extent and scope of substance use problems.