### Workbook 3

# Needs Assessment

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UNDCP United Nations International Drug Control Programme



EMCDDA European Monitoring Center on Drugs and Drug Addiction

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# Acknowledgements

The World Health Organization gratefully acknowledges the contributions of the numerous individuals involved in the preparation of this workbook series, including the experts who provided useful comments throughout its preparation for the Substance Abuse Department, directed by Dr. Mary Jansen. Financial assistance was provided by **UNDCP/EMCDDA/Swiss Federal** Office of Public Health. Cam Wild (Canada) wrote the original text for this workbook and Brian Rush (Canada) edited the workbook series in earlier stages. JoAnne Epping-Jordan (Switzerland) wrote further text modifications and edited the workbook series in later stages. Munira Lalji (WHO, Substance Abuse Department) and Jennifer Hillebrand (WHO, Substance Abuse Department) also edited the workbook series in later stages. Maristela Monteiro (WHO, Substance Abuse Department) provided editorial input throughout the development of this workbook.

Some of the material in this workbook was adapted from a NIDA publication entitled "How Good is Your Drug Abuse Treatment Program? A Guide to Evaluation." Contributions drawing from this report are gratefully acknowledged.

# Table of contents

Overview of workbook series	6
What is a needs assessment?	7
Why do a needs assessment?	7
How to do a needs assessment?	8
Question 1	10
Question 2	14
Question 3	16
Question 4	23
Comments about case examples	28
Case example of a needs assessment Planning and evaluating outpatient care for drug dependent patients in Barcelona (Spain)	29
Case example of a needs assessment A study to determine the welfare service needs in the Eastern Transvaal, Republic of South Africa	42

# Overview of workbook series

This workbook is part of a series intended to educate programme planners, managers, staff and other decision-makers about the evaluation of services and systems for the treatment of psychoactive substance use disorders. The objective of this series is to enhance their capacity for carrying out evaluation activities. The broader goal of the workbooks is to enhance treatment efficiency and cost-effectiveness using the information that comes from these evaluation activities.

This workbook (Workbook 2) describes step-by-step methods for implementing evaluations. These steps span from starting the study, to collecting, analysing, and reporting the data, to putting the results into action in your treatment programme.



#### **Introductory Workbook** Framework Workbook



#### **Foundation Workbooks**

Workbook 1: Planning Evaluations Workbook 2: Implementing Evaluations



#### **Specialised Workbooks**

Workbook 3: Needs Assessment Evaluations

- Workbook 4: Process Evaluations
- Workbook 5: Cost Evaluations
- Workbook 6: Client Satisfaction Evaluations
- Workbook 7: Outcome Evaluations

Workbook 8: Economic Evaluations

# What is a needs assesment?

# Needs assessment is a tool for program planning.

Needs assessments evaluate:

- The capacity of treatment services in the community in relation to the prevalence and incidence of PSU disorders
- The appropriate mix of services required to respond to the di-

verse needs associated with PSU disorders

• The co-ordination of services within a system of care in order to facilitate entry into the system, smooth transition across specific components and appropriate follow-up

# Why do a needs assesment?

Over the last two decades, the role of needs assessment in the planning of services and systems for PSU disorders has increased in importance. Several factors have contributed to this development, including:

• Questions that arise about the relative priority of different community needs. In some jurisdictions with no services for PSU disorders, the focus is now to ask about new services that might be needed. In other areas with available services, the focus is now to ask about how existing services might be better co-ordinated and more efficient.

• The increasing diversity of community interventions that are available. There is acceptance in most jurisdictions that a range of community services is needed and that people coming into treatment should be appropriately assessed and matched to treatment. However, information is needed to help decide how much of what type of treatment is required in a given community or region.

- The increasing use of PS with potential for harm among the general population, and among people seeking treatment.
- The desire to take a more preventive approach to PSU disorders and to improve the balance of treatment, early intervention and

prevention-oriented programmes in the community.

In any case, the specific objectives of the needs assessment must be clarified and documented. These objectives may include:

- to respond to an external mandate for needs assessment prior to approval and release of funds
- to guide the allocation of new funding among several new options being considered

# How to do a needs assesment?

In this workbook, various approaches to needs assessment are described by showing how they can be used to address four questions most commonly asked in a needs assessment project.

Most experts in the field of PSU disorders agree that a single "all-purpose" needs assessment technique does not exist. This is because needs assessment planners have different goals for conducting assessments making it unlikely that a single method would suffice for all purposes.

In this workbook, various approaches to needs assessment are described by showing how they can be used to address four questions most commonly asked in a needs assessment project. More details regarding many of these approaches can be found in recent reviews (DeWit and Rush, 1996). The four questions addressed are:

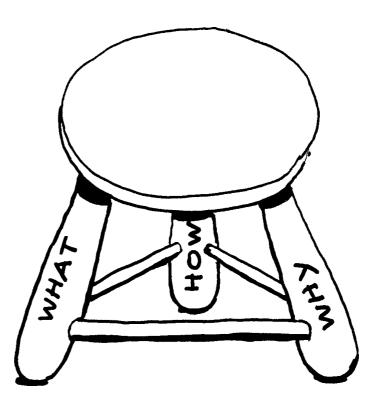
- 1 How many people in the region or community need treatment for PSU disorders?
- 2 What is the relative need for treatment services across different regions or communities?
- 3 What types of services are needed and what is the necessary capacity?
- 4 Are existing services co-ordinated and what is needed to improve the overall level of system functioning?

Use this specialised workbook together, simultaneously with the foundation workbooks to maximise the information that is presented.

The two case examples at the end of this workbook present two very different approaches to needs assessment. The first (from Spain) relies upon existing computerised databases, whereas the second (from South Africa) uses interviews and focus groups. Despite their differences, both evaluations are appropriate because they take into account the unique needs and resources of their settings.

Each of these questions, and the methods for answering them, are addressed below. Keep in mind that this information is supplementary to the general steps for evaluation outlined in Workbooks 1 and 2. When doing a needs assessment, you should carry through each of the general steps for evaluation described in Workbooks 1 and 2. Use this specialised workbook simultaneously with the foundation workbooks to maximise the information that is presented.

Using Workbook 1 as a guide, determine which one of the above four questions is most relevant for your programme evaluation question. Review that section below.



# **Question 1**



# How many people in the region or community need treatment for PSU disorders?

This workbook will briefly describe three approaches to answering this question. Unfortunately, there is no easy answer to this question because the various strategies available to you each come with their unique advantages and disadvantages. The selection will have to depend on your unique circumstances and the expertise, time and resources that are available.

# 1. Mortality-based prevalence models

This method is easy to use, if you have the necessary data. For alcohol, for example, the formula is:

$$A = P^*(D/K),$$

where

- A = the total number of alco hol dependent persons in an area or region
- P = the proportion of liver cirrho sis deaths due to alcohol use

- O = the total number of deaths from liver cirrhosis reported for a given year in the area or region of interest
- K = the annual death rate from liver cirrhosis among al cohol dependent persons with complications (e.g., rate of death from liver cirrhosis per 10,000 alcohol dependent persons).

Evaluation of Psychoactive Substance Use Disorder Treatment

By collecting the necessary statistical information for a region or community, one should be able to fill in the required information and estimate the number of problem alcohol users. This is used as the estimate of the number of people in need of treatment.

Advantages include:

• The simplicity of the formula, once the necessary statistical data are obtained

Limitations include:

- inaccuracies in the statistical data due to misclassification of the cause of death
- instability of the prevalence estimates for small populations since deaths due

to liver cirrhosis (or suicide and alcohol use) occur infrequently

- the need to supplement the resulting estimates of the in-need population with estimates based on PS other than alcohol
- limited utility from prevention or early intervention perspectives because estimates are based on the most severe consequences of alcohol use
- variations in the *constants* in the formula across cultural and social settings
- inability to estimate the number of people in need of treatment within specific population sub-groups (e.g., gender, age)

### 2. General population survey

In a general population survey, you contact a random or representative sample of people in the region or community and ask them questions about their PSU, related problems and perceived need for treatment. A survey of this type can be easy or difficult to complete, depending on the complexity of your evaluation.

It is important to pay attention to the questions you ask and to the criteria you use to indicate whether the respondent A "needs" treatment for a PSU disorder. You may choose to ask questions about the amount and pattern of drinking over a recent time period (e.g., to calculate average weekly consumption, or the number of respondents drinking more than a certain number of drinks on a given day). The main limitation of these data is the under reporting of consumption that usually occurs in a population survey; often underestimating actual consumption by as much as 50%-60%. Alternatively, you may ask questions about problems the person has experienced related to their PSU and create a cut-off point on the list of problems to define the need for treatment. Many people conducting a population survey create their own problem list but this raises significant questions about the reliability and validity of the survey items.

Various survey instruments have been developed that are appropriate for use in either face-to-face or telephone interviews. An excellent example for use in many cultural settings is the Composite International Diagnostic Interview (CIDI) developed by the World Health Organization (Cottler et al., 1991; Robins et al., 1988; Wittchen et al., 1991; WHO, 1990). The basic approach is to establish the presence or absence of a set of A "symptoms", which include both clinical manifestations (e.g., tolerance, withdrawal, craving) and social consequences (e.g.,PSU-related problems with family, friends, job, and/or the criminal justice system). To be assigned a particular diagnosis, an individual must meet predetermined counts of such "symptom".

Advantages include:

• direct estimates of the number of people in need of treatment for PSU disorders.

Limitations Include:

• important segments of the population are difficult to reach in a population survey either because they are hard to locate (e.g., homeless) or because they are excluded in the sampling procedure (e.g., incarcerated, institutionalised). Other strategies will be needed to estimate the in-need treatment population in these groups

- results of surveys may be biased if the response rate is lower for particular sub-groups such as young adults, the elderly, women or particular cultural/ ethnic groups
- there is a heavy reliance on the respondents' self-report of consumption, related problems, and there will be a general tendency to underestimate PSU and related problems
- some survey methods are very expensive (e.g., face-to-face interviews) and require special expertise that may need to be purchased on a consulting basis if it is available (e.g., survey statistician, trained interviewers, data analyst)

### 3. Capture-recapture models

The term "capture recapture" is derived from this process in which individuals in the first sample or list are captured and identified (tagged), and then a certain portion are recaptured or reidentified on the second list. This method requires that you have access to computerised records and a certain level of statistical expertise. Its advantage is that it overcomes the difficulty of accessing hard-to-reach segments of the PSU population by relying on sources of information that contain "naturalistic" samples of known PS users. These sources of information might include police records of arrest for possession of narcotics or court convictions for PSU-related crime, hospital emergency room admissions involving cases of PS overdose or admissions to PSU treatment centres. Used in isolation, these data sources are not particularly helpful for estimating prevalence. However, combining data from two or more sources of information can yield reliable and valid estimates of the total population of PS users.

The case example from Spain, located at the end of this workbook, uses the capture-recapture method for a portion of its analyses. Their data sources included records for treatment admissions, emergency visits, and jail entrances.

The logic of the capture-recapture model for estimating hidden populations of PS users is best understood by way of an example. Suppose that for a given area or region, one has two separate listings or naturalistic samples of known opioid users. The first list, which we will call list X (sample 1), consists of opioid-related ar-

rest cases and the second list called list Y (sample 2), consists of opioid overdose cases presenting to hospital emergency rooms. With two lists or samples, there are four possible locations where any given individual may appear: on list X and not on list Y, on list Y and not on list X, on list X and on list Y and finally on neither list X or list Y. Figure 1 presents the range of possible locations in the form of a contingency table.

In the figure on the next page, the only unknown is cell f22, the frequency count of the number of cases appearing on either list or sample. Once we obtain the number of cases appearing in the first three cells, it becomes possible to estimate cell f22, and subsequently the total population of opioid users.

Obtaining a value for the first cell (f11) requires that researchers attach unique identifiers to each case appearing on both lists. Examples of unique identifiers include date of birth, gender, marital status or ethnicity. Once this procedure is complete, it becomes possible to match the number of individuals or cases appearing on both lists. The term "capture-recapture" is derived from this process in that individuals in the first sample or list are captured and identified (tagged), and then a certain portion are re-captured or reidentified on the second list. The larger the number of unique identifiers, the greater the precision in matching cases. Cells f12 and f21 are easily estimated using the same identifying procedures. With values for the first three cells determined, the following formula, known as the Peterson estimator, may be used to estimate cell f22:

With values for the first three cells determined, the following formula, known as the Peterson estimator, may be used to estimate cell f22:

$$F22 = \frac{f \ 12^* \ f21}{f11}$$

With f22, an estimate of the total population of opioid users is given by:

$$P = \frac{(f11 + f12)^{*}(f11 + f21)}{f11}$$

There is no restriction on the number of lists (samples) that may be used in the calculation of the estimate. In fact, the greater the number of independent listings or samples of opioid users, the more accurate the estimate becomes.

		(	Case in list Y (sample 2)		
			Yes	No	
Case in list X (sample 1)	Yes		f11	f12	
	No		f21	f22=?	

Advantages include:

• a low-cost approach for helping to estimate the number of people in need of treatment for PSU disorders in your region or community.

Disadvantages include:

- potential violation of the assumptions underlying the model, for example, independence of the samples (i.e., being on one list doesn't influence the probability of being on the other)
- contamination of the samples through attrition (e.g., death) or mis-classification
- the length of time required to clean the lists and match cases if the unique identifiers
- lack the required detail and specificity
- limited background information about the PS users on the lists making it difficult to determine the types of treatment services that may be most appropriate for them

# **Question 2**



### What is the relative need for treatment services across different regions or communities?

"Questions about the relative need for services for **PSU disorders** can be answered with indices that combine information on several problems related to the nature and prevalence of these disorders."

One way to answer this question is to compare the prevalence of the in-need treatment population as established with one of the three methods described in the above section. However, other, more easily obtained statistical data may also be available that are correlated with PSU disorders in the community. Geographic areas can then be ranked on the various indicators and then all the indicators combined into one index that reflects PSU disorders. The index may then be used to compare the relative level of these disorders across the regions. This method requires that you have access to computerised records and that you have the resources and expertise to perform computer-based statistical analyses.

Examples of indicators include indices of alcohol availability (e.g., number of liquor stores per 100,000 population); mortality (e.g., rate of alcohol-related deaths per 100,000 population); poverty (e.g., percent owner-occupied units with water supply and/or electricity), and drunk driving and traffic accidents (e.g., rate of drivers involved in personal injury accidents by 100,000 licensed drivers).

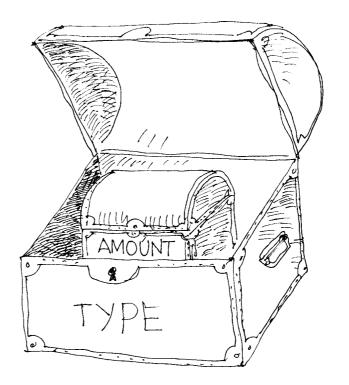
Once the individual indicators have been selected, you have different options for combining them into an overall index. Fairly sophisticated statistical procedures such as cluster analysis and factor analysis have been used to create this index (Beshai, 1984; Tweed and Ciarlo, 1992; Tweed et al., 1992). Adrian (1983) presents two less complicated methods. The first approach involves ranking each indicator across the various geographic areas being compared. A mean rank is then calculated for each indicator and the mean rank for the indicator is then ranked across the areas into an overall rank. This approach weights each indicator equally and has the advantage of being easy to calculate and interpret. The disadvantage is that the approach is relatively insensitive to the magnitude of the difference between ranks.

The second approach used by Adrian (1983) first gives a value of 100 to the overall rate for each indicator. for all areas combined. The small area rates are then calculated as a fraction relative to the overall rate. For each area, the mean of the various indices is then calculated to create the composite PSU index. Unlike the ranking method, this index approach is sensitive to the degree of difference in the ranks between the areas being compared. The main disadvantage is that the mean of the individual indices is sensitive to extremely high values. The index method is more helpful in assessing relative need because it retains the degree of difference across the areas being compared, and thus the relative importance of different indicators. A map of the different areas being compared can also be developed showing the variation in the level of PSU disorders in relation to the average for the entire region.

The main limitation of all these approaches to comparing different areas on the rela-

tive need for services for PSU disorders is the reliability and validity of each of the individual indicators. For example, many social indicators (e.g., income level, housing) have only indirect relationships to PS. Other indicators, such as drunk driving arrests and convictions, will be influenced by the level of policing and judicial discretion. While it can be argued that the disadvantages of one indicator can be offset by the advantages of another, indicators should only be selected if they are reliable, valid and of comparable meaning across the regions.

In summary, questions about the relative need for services for PSU disorders can be answered with indices that combine information on several problems related to the nature and prevalence of these disorders. After one has compared a region or community to other areas a stronger argument for reallocating resources may be possible. However, neither the estimates of the in-need population, nor the relative need for services compared to other areas, provide much direction in determining the type of services or the amount of these services that are needed. Other need assessment strategies are required to answer such questions and these are described below.



# **Question 3**



# What types of services are needed and what is the necessary capacity?

### **Client-centered Community Needs Assessment**

Client-centred Community Needs Assessment (CCCNA) is a prospective data collection procedure that assesses what clients or patients think about services that are needed. It has been applied in both mental health (Cox et al., 1979) and substance use treatment services (DiVillaer, 1990 & 1996). It is easy to complete, and has the added advantage of assessing the point-of-view of potential consumers of programme services. There are four important assumptions underlying this approach:

• community needs should be identified, at least in part, on the basis of comprehensive clinical assessment of a large and representative sample of individuals in need

- needs should be expressed as specific types of intervention (e.g., outpatient PSU disorder counselling; life skills training) that can be established in the community
- relevant demographic and clinical information on those individuals in need of the interventions should be collected
- there should be some assurance that those individuals in need of the interventions would actually use the interventions if established in the community

This method asks about basic client information (e.g., gender, age), his/her PSU behaviour, and information about the "ideal" intervention required by the client. The listed intervention is then coded as:

- 1 the intervention does not exist in the community
- 2 the intervention exists but is not available (i.e., agency admission criteria rule out this client) or accessible (i.e., certain factors such as transportation, hours of operation rule out participation)
- **3** the intervention exists and is available and/ or accessible to the client
- 4 the intervention exists and is available and/or accessible to the client, but the client is unwilling to attend the agency that offers it in the community

As the information accumulates about the status of interventions needed for particular types of clients, a profile emerges of important gaps in service in the community on region.

The main advantage of this needs assessment strategy is that it incorporates information directly about the person in need, as well as the client's own perception of the suitability of different service options to meet their needs. However, the CCCNA method is limited in the following ways:

- needs of people presenting for treatment may not reflect the needs of all people experiencing disorders in the community
- the lack of widely agreed upon criteria for matching clients to treatment means that considerable judgement is involved on the part of clinicians and clients in establishing the "ideal" treatment intervention
- depending on the number of agencies involved, considerable time and resources may need to be dedicated to training of personnel, monitoring the quality of the data collection and analysing and reporting the resulting information

### **Continuum of care approach**

The rationale underlying the continuum of care is that the population in need of treatment for PSU disorders is highly varied and that many different types of services is needed to meet these diverse needs. This approach is easy to complete and doesn't require sophisticated computer-based analyses. In this approach, you list the types of PSU disorder services that ideally should be available to people in a region or community, and then contrast this ideal template with the actual state of affairs. Although there is no international standard for the list of various services that should be used as a template, there is wide agreement that the ideal treatment system should reflect a "continuum of care." The rationale underlying the continuum of care is that the population in need of treatment for PSU disorders is highly varied and that many different types of services is needed to meet these diverse needs. Com-

prehensive assessment and matching to treatment ensures effective use of each type of service in the treatment system. Your list of service types might include:

- case identification
- comprehensive assessment
- case management
- withdrawal management (home/facility)
- brief intervention

- methadone maintenance
- outpatient counselling
- day/evening treatment
- short-term inpatient treatment
- long-term impatient treatment
- supportive housing
- continuing care
- mutual aid

With your list completed, and appropriate definitions developed, you then examine the services in each region or community under investigation and determine whether the service is:

- **available**; that is whether participation in the service is restricted by certain admission criteria (e.g., no legal changes pending; must be male only);
- **accessible**; that is whether factors make use of the program difficult (e.g., lack of public transportation, hours of services, language of service provision).

### Template to assess the availability and accessibility of services along an ideal continuum of care

	Region #1		Region #2		Region #3		Region #4	
	Avail	Acc	Avail	Acc	Avail	Acc	Avail	Acc
Case identification								
Comprehensive assessment		youth only						
Case Management								
Withdrawal/Mgmt - (home)								
Withdrawal/Mgmt - (social)								
Withdrawal/Mgmt - (facility)								
Methadone Maintenance								
Brief Intervention								
Outpatient Counseling								
Day/ evening treatment					fema	ale only		
Short-term Inpatient treatment (medical)								
Short-term Inpatient treatment (non medical)								
Long-term Inpatient treatment						ine uses only		
Supportive Housing								
Continuing Care								
Mutual Aid								

The information about availability and accessibility may come from a formal survey of service providers, a review of previous service inventories or interviews with local key informants. A simple check-off procedure will provide a crude overview of the gaps in the treatment system in terms of the availability and accessibility of specific types of services. One should also provide a brief written description of service availability and accessibility. The table on the previous page may serve as a template for those adopting this approach.

Advantages include:

- easy to conceptualise and implement
- allows for creative thinking about new service options not previously adopted in the region(s)

Disadvantages include:

- lack of standardisation across jurisdictions concerning the components of an ideal treatment system and definitions of the service categories
- insufficient attention to the quality of existing services and the evidence regarding specific types of treatment interventions that they offer (e.g., cognitive-behavioural vs. drug therapy)
- insufficient attention to the flow of clients across these service components and other dimensions of system-level co-ordination
- inability to quantify the required capacity and resource complement (e.g., staff, beds) of the services considered to be needed

#### Normative approach

Normative need assessment models are essentially "demand-based", that is projecting future needs on the basis of past demand on, and performance of, the treatment system. This approach is fairly complicated, and best for those with computer and statistical resources. The most sophisticated of these approaches also takes into account local variation in the profile of PSU disorders.

The Alcohol Treatment Profile System (ATPS) developed in the U.S.A. is a good example of a normative needs assessment model (Ryan, 1984/1985). The ATPS has two main components. The first component, referred to as the "need" component, was developed based on seven mortality-based indicators reported as average annual death rates per 100,000 population for the age group 15 to 74, and for the period 1975-1977. The indicators in-

cluded death rates from liver cirrhosis, alcohol dependence, alcohol poisoning, suicide, homicides, automobile accidents and alcohol-related psychosis. These indicators were factoranalysed and two separate indices of alcohol-related problems emerged. The first factor was called a Chronic Health Index and was used to estimate the prevalence of chronic, long-term alcohol-related problems. The second factor, called the Alcohol Causality Index, was used to estimate the prevalence of acute alcohol intoxication. The value of this index does not indicate how many individuals suffer from acute intoxication or chronic long-term problems, but rather indicates "relative" prevalence ratings for individual counties. The mortality indicators are available nationally at the county level. Consequently, an index value for each county has been calculated and published.

The second component of the ATPS normative model is the "demand" component and is based on treatment data collected at the national level by the National Drug and Alcohol Treatment Survey (NDATUS) (Harris & Colliver, 1989). The survey data provide estimates of the levels and patterns of existing service use and service capacities for each planning area across the country. Level of use is expressed as the number of clients served. Service capacity is expressed as the number of treatment slots. NDATUS classifies treatment into seven different modalities: medical detoxification, social detoxification, rehabilitation, custodial, ambulatory, limited care and outpatient. Service use and capacity are estimated separately for each of these treatment modalities.

In the ATPS model, the NDATUS data form the dependent variable. "Observed" treatment service levels and capacities for an area are therefore modelled as a function of the two indices of alcohol-related problems. Because the relationship between need and demand varies substantially according to different population sizes, population size is included as a third independent variable in the model. Estimates of total expected clients and total treatment capacities and estimates broken down by treatment modality, are related to an area's Chronic Health Index, its Alcohol Causality Index and its population size. For planning purposes, estimates of expected clients and treatment capacities are presented in a series of tables according to an area's population size, Chronic Health Index and Alcohol Causality Index. Needs assessment planners use these tables to compare the expected treatment capacity of a county implied by the normative model with the county's actual or observed capacity.

Advantages include:

- ease of use once the necessary information has been compiled
- for each estimate, the model provides a high and low range for a given planning area and this is helpful in applying the results in the decision-making process

Disadvantages include:

- the social and health indicators that comprise the problem indices in the model are subject to a wide variety of biases
- the data on past treatment service utilisation may not be based on all existing treatment facilities since some may not have participated in the survey or otherwise have been excluded (e.g., treatment in the private sector)
- the assumption that current or past treatment service utilisation patterns are an adequate reflection of current client needs at the time services are provided and in the near future. For example, the needs of the potential population of service users may not be identical to the needs of the client population who have sought treatment in the past

Evaluation of Psychoactive Substance Use Disorder Treatment

### **Prescriptive approach**

Unlike demandbased normative models, which rely on what actually exists in the treatment system in terms of service utilisation patterns. prescriptive models specify the level of treatment services that should or "ought" to be provided to the residents of a given planning region.

Unlike the demand-based ATPS normative model, which relies on what actually exists in the treatment system in terms of service utilisation patterns, prescriptive models specify the level of treatment services that should or "ought" to be provided to the residents of a given planning region. This approach can be seen as an extension of the "continuum of care" approach described above, but more complicated and requiring more computer resources.

Prescriptive models usually begin with a prevalence estimate of the size of the population in need. It is realistic to assume that not all of these individuals will voluntarily seek treatment and that there are only limited resources available to treat those who come to the attention of treatment specialists. An objective, then, is to determine what proportion of the in-need population should receive treatment in a given year. Many prescriptive models arrive at a figure of 20% based on a series of "assumptive" values or proportions assigned to the population with alcohol use disorders in a region or area (see below). This final value, indicating the level of "demand" for treatment services, is then apportioned throughout various components of the ideal treatment system (detoxification, case management, etc.).

Ford (1985) describes a standard set of procedures to arrive at the 20% estimate of the proportion of the in-need population to be treated each year:

- **1** Two-thirds of alcohol dependent persons drink again within one year of treatment.
- **2** The rate of increase in alcohol dependence is around 10 percent per year.

- 3 Considering the rate of recidivism and to keep even with this 10 percent rate of increase, 30 percent of all alcohol dependent persons should be treated in a given year.
- **4** This figure should be divided into two because alcohol dependent persons constitute only half of the in-need population. Thus, 15 percent of the overall in-need population should be treated in a year.
- 5 Add a 5 percent buffer to do more than keep pace with the growth of the problem. Therefore, 20 percent of the problem drinkers per year are considered as the target population.

One of the most serious problems with prescriptive models is that the assignment of assumptive values to the estimated population "in-need" of services is a rather arbitrary procedure based on empirical data which are questionable in terms of reliability and validity. For example, rates of recidivism are estimated from treatment data. The figure of 10% to represent the increase in the number of alcohol dependent persons from one year to the next is not likely to be a constant. These proportions can be considered at best as very rough guesses. Moreover, the values are likely to vary across different planning regions and over time. Another problem with the prescriptive model is that it can be value laden, especially in those aspects of the model where little empirical data exist to guide the selection of various parameters. For example, treatment practitioners will have different opinions concerning how the demand population should be apportioned throughout the treatment syste.

Efforts have been made to minimise this subjective component. A comprehensive forecasting model for estimating the capacity of alcohol treatment services in Ontario, Canada (Rush, 1990) bases these estimates on six different sources of information: published research literature on patient characteristics; cost-effectiveness of treatment, and rates of completion of treatment; a preliminary client monitoring system for assessment and referral services; a detoxification reporting system; a triennial provincial survey of alcohol and drug programmes; informed opinion from clinical and research experts and an American forecasting model.

19/

Another significant problem with this prescriptive approach is similar to that identified for the more basic continuum of care approach. Specifically, the model will project needs only for services identified a priori as being key components of the ideal treatment system. This approach may restrict innovation in the planning and delivery of services for PSU disorders if an outdated, or otherwise inappropriately structured, treatment system is used as the foundation for model development.

# **Question 4**



# Are existing services co-ordinated and what is needed to improve the overall level of system functioning?

Workbook 4 provides information about process evaluation of treatment services and systems for PSU disorders. It includes a brief discussion of the evaluation of system co-ordination. The issues to be addressed, and the measures of co-ordination that may be used, are similar for process evaluation and community need assessment. System co-ordination is typically assessed using reports and ratings from directors or managers of agencies that are expected to work together in service planning and delivery. Ratings are typically given on:

- mutual awareness the extent to which staff know about each other and their respective programmes
- frequency of interaction how often key staff meet to discuss work-related issues
- frequency of cross referrals how often or how many clients are referred to and from different services in the network
- information exchange the extent to which services exchange information

- staff sharing or exchange staff of different services are permanently or temporarily shared or loaned
- other resource exchanges the extent to which services share funds, meeting rooms, materials or other resources
- consultations and case conferences exchanges that concern the treatment of specific clients
- overlapping boards the number of members in common to community boards of different services
- normalisation of agreements the extent to which services have developed formal agreements to co-ordinate activities

Specific measures of service co-ordination that may be used in a community needs assessment are not well-developed in terms of reliability and validity. One often takes a more qualitative approach based on key informant or focus group interviews. Such qualitative data collection procedures are described in Workbook 1.



### It's your turn

Put the information from this workbook to use for your own setting. Complete these exercises below. Remember to use the information from Workbooks 1 and 2 to help you complete a full evaluation plan. Review that information now, if you have not already done so.

#### **Exercise 1**

Think about your treatment programme.	Example: What types of services are
List five general areas in which you want	needed for cocaine users in the community?
to know more about the needs of the com-	1)
munity.	2)
	3)
	4)
	5)

#### **Exercise 2**

Assess the availability of existing records for each of the areas that you listed above. • number of patients receiving treatment within a certain area and/or treatment

Do you have access to:

 morbidity data
 morbidity data
 Your answers to these questions will help you to choose needs assessment that maximise use of existing data.

system

- mortality data

#### **Exercise 3**

Using the information provided in this workbook, make the following decisions:

- Decide what method you will use to collect the data (e.g., general population survey, mortality-based prevalence model). Review the information in this workbook as needed to help you decide.
- Choose a sampling procedure for choosing specific clients/data to survey
- Decide the timing of the evaluation
- Develop a procedure for ensuring confidentiality and promoting honesty
- Decide who will help you collect data

#### **Exercise** 4

You will need to prepare an introductory letter and consent form that explains the purpose of your study. Review Section 1A of Workbook 2, entitled, **Man**- **age Ethical Issues**, for more information about the important topic of participants rights in evaluation research. In general, all participants should be asked permission ahead of time before being enrolled in the study. When you do this, your should explain the purpose, nature, and time involved in their participation. No person should be forced or coerced to participate in the study.

The standard practice is to have each participant sign a consent form, which:

- describes the purpose and methods of the study
- explains what they will need to do if they participate
- explains that participation is voluntary

Example (from above):

#### **Introductory Letter:**

We are asking your help in understanding the needs of the community by filling out a 2 page questionnaire about your substance use patterns. The questions will ask about your substance use and any effects that it might have on your life. They will take about 10 minutes to complete. All information that you provide us will remain strictly private and confidential. If you agree to participate, please read and sign the consent form (attached) and return it in the stamped envelope with the completed questionnaire. Thank you for your time.

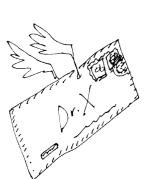
Sincerely, Dr. X

#### **Consent Form:**

You agree to participate in a survey of substance use patterns. You will complete a 2 page questionnaire, which will take about 10 minutes to complete. Your participation is completely voluntary. You can refuse to answer any questions and/or withdraw from the study at any time without a problem to you. All your responses will remain strictly confidential: your name will not appear on your questionnaire and your responses will not be linked to your identity at any time.

I have read the information above and agree to participate. Signature: Date:

Now it's your turn. Using the example above, and the information provided in Workbook 2, section 1A, write your own introductory letter and consent form.



#### **Exercise** 5

Run a pilot test of your evaluation measurement and procedures on 10-15 sample participants to ensure that everything runs smoothly. Review section 1c of Workbook 2 entitled **Conduct a Pilot Test** for specific information about how to do this. In general, pilot tests assess these questions:

• Do the questions provide useful information?

- Can the questions be administered properly? For example, is it too long or too complicated to be filled out properly?
- Can the information be easily managed by people responsible for tallying the data?
- Does other information need to be collected?



# Conclusion and a practical recommendation

EVALVATION ULTS RES NEEDED CHANGES HOWTO CHANGES AMPET

In this workbook, a wide range of methods have been described that address four questions that are commonly asked in a needs assessment concerning PSU disorders. These questions were:

- How many people in the region or community need treatment for PSU disorders?
- What is the relative need for treatment services across different regions or communities?
- What types of services are needed and what is the necessary capacity?
- Are existing services co-ordinated and what is needed to improve the overall level of system functioning?

For each type of question, there are choices to be made in selecting the specific need assessment models or methods. You must take into account the nature of the decisions to be made with the resulting information and the time, expertise, and resources available. Each model or method also has advantages and limitations that must be carefully considered.

After completing your evaluation, you want to ensure that your results are put to practical use. One way is to report your results in written form (described in Workbook 2, Step 4). It is equally important,

however, to explore what the results mean for your programme. Do changes need to happen? If so, what is the best way to accomplish this?

Return to the expected user(s) of the evaluation with specific recommendations based on your results. List your recommendations, link them logically to your results, and suggest a period for implementation of changes. The examples below illustrate this technique.

Based on the finding that over 1/4 of random sample community respondents had used cocaine in the past 90 days, and among those, 58% were interested in receiving treatment, we recommend that the programme institute a new cocaine treatment service. The service should begin in March, which is traditionally a low-census month for the programme, and would allow for extra start-up time.

Remember, needs assessments are a critical first step to better understanding the PSU treatment requirements of the community. It isimportant to use the information that needs assessments provide to redirect treatment services. Through careful examination of your results, you can develop helpful recommendations for your programme. In this way, you can take important steps to create a 'healthy culture for evaluation' within your organisation.

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# Comments about case examples

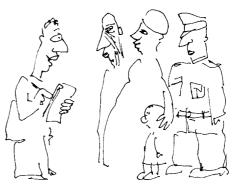
 
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The following case examples describe different types of needs assessments. As noted earlier in the workbook, most experts agree that a single, all-purpose needs assessment technique does not exist. This is because evaluation planners have different goals, and have different data resources available.

The first case example describes an evaluation of treatments for PSU dependence in Barcelona, Spain. Several computerised databases were already available, and were used by evaluators to estimate PSU prevalence and treatment needs within Barcelona. In this respect, this case is an excellent example of how existing data can be used effectively to conduct needs assessments. The overall evaluation is complex, and includes aspects of needs assessment, cost analysis (Workbook 5), and outcome evaluation (Workbook 7). The planners wanted to know trends in psychoactive substance use, characteristics of PSU users, costs of PSU treatment, and effectiveness of care. Other evaluators interested solely in needs assessment could use similar techniques in a narrower scope. To use this technique, computerised data must be available.

The second case presents a needs assessment that was conducted without the availability of computerised data resources. In this situation, evaluators wanted to know the service needs for a rural and underdeveloped area of South Africa. Official data were unavailable, so evaluators decided to use key informant surveys and focus groups as their primary mode of data collection. Through meeting and interviewing representatives from government, police, commerce, and the general community, evaluators were able to determine perceived PSU trends and treatment needs.

Of note, neither case relied upon client opinions to assess needs. Direct interviewing of PS users is another option for needs assessments, and can generate highly useful data. Of course, this type of data would be qualitatively distinct from computerised databases and community key informant surveys. There is no single right or wrong way to assess needs; each technique provides a unique and potentially useful type of data.



# Case example of a needs assessment



### Planning and evaluating outpatient care for drug dependent patients in Barcelona (Spain)

#### by

The authors alone are responsible for the views expressed in this case example.

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#### Who was asking the question(s) and why did they want the information?

This report is based on the research done on effectiveness of care programmes for drug dependents by the Barcelona municipal drug action plan (Pla d'Acción sobre Drogues de Barcelona) during the last decade. Thanks to Barcelona's Information Service data were available on the utilisation of outpatient facilities, as well as population morbidity and mortality statistics. The goal in analysing these facility and population statistics was to develop guidelines for programme improvement. The availability of a health information system incorporating data on both services and population should allow the assessment of accessibility, coverage and effectiveness of care.

The Care and Follow-up Centres (CFCs) pertaining to the City Council, have offered services since 1990, including the old drug-free programmes and substitution programmes with drug administration such as the methadone maintenance programme. Other therapeutical activities were offered including main health care, social, educational and support activities for families, as well as legal advice and attention. Even though Spain had developed a valuable information system on drug dependencies, the Sistema Estatal de Información sobre Toxicomanías (SEIT), the managers of care centres and programmes needed complementary local information. This included data obtained from patients' follow-up. Thus, a global perspective was adopted based on that proposed by L'ðnnqvist (1985), which starts with the classical analysis of structure, process and treatment results, concentrates on the assessment of objectives, coverage and effectiveness of care, taking into account its cost and secondary effects.

The information system on drugs of Barcelona, the Servei d'Información sobre Drogodependéncies a Barcelona (SIDB), set up in 1988 under the Pla d'Acción sobre Drogues de Barcelona, is a programme devoted to the systematic analysis of the size and evolution of drug abuse in Barcelona. It is designed to evaluate its size and evolution.

The observation of phenomena with stigmatising characteristics makes it difficult to develop direct measurement techniques used for other health problems. Therefore, it was necessary to create an information system that, using indirect indicators, could enable us to understand and monitor the drug addiction problem in Barcelona. The process of designing and implanting SIDB indicators began in 1988 following the general outline proposed by the National Drug Plan and the Drug Addiction Plan of Catalonia.

Main care objectives of the Pla d'Acción sobre Drogues de Barcelona were:

- a) to improve quality of life and life expectancy of Barcelona's drug addicts;
- b) to offer enough treatment services so that access could be guaranteed to every person asking for it;

c) to get the most out of activities favouring patient's contact with treatment resources as well as changes in addicts life style and risk behaviours.

Objectives of the evaluation study were to assess the efficacy and effectiveness of services offered in order to accomplish these main care objectives.

#### What resources were needed to collect and interpret the information?

The information system we used for measuring and evaluating the achievement of objectives set up by the Pla d'Acción sobre Drogues de Barcelona was the SIDB. The objectives of the information system had been already consolidated and validated and their widening was then considered. The additional objectives were:

- a) to identify trends in drug abuse in the city of Barcelona;
- b) to describe the basic characteristics of identified addicts;
- c) to support the management, evaluation and implementation of programmes.

The number of people detected by this Information System included, for 1995, data on people assisted at emergency room (3,519), treatment starts (4,119), overdose (150), and new identified drug users 2,495).

The global cost of this information system was 156,456 ECU for 1995.

# How were the data collected and analysed?

The SIDB is based on three fundamental indicators:

- Treatment starts: with information from first interviews (admissions to treatment) in Care and Follow-up Centres (CFCs) devoted specifically to the treatment of drug addicts;
- Drug-related emergencies the information of which is obtained from the Emergency Services of main urban hospitals in the different districts;
- Mortality from an acute adverse reaction to drugs or overdoses, recorded by the Anatomic Forensic Institute and by the National Toxicological Institute.

#### **Treatment starts**

Concerning first interviews, this indicator provides us with information about CFCs=ð activity carried out by ten city centres empowered by local authorities to care for addicts. These ten centres included four CFCs belonging to the City Council, and six sponsored by other organisations. Under **treatment start**, we mean:

a) first interview made to the centre by the person requesting its services;

b) new interview requested by a previous patient after having interrupted treatment for a long time and wanting to start treatment again at the same centre. A patient is considered to be **new** when he/she hasn't been to the centre for at least six months.

This information is gathered by means of a standardised survey in each first interview. CFCs collect all data in a systematic way in order to provide the SIDB as well as the SEIT, with data on their activity (type of interview, medical check-up, social and psychological follow-up and referrals) and characteristics of the users (demographic and socio-economical data, toxic habits and health characteristics). The amount of data gathered from this information network allows the municipal drug action plan to give priority to some activities, to evaluate and to control the management of those centres belonging to the City Council.

#### **Drug-related hospital emergencies**

The data are actively collected at the Emergency Services of the main district hospitals by the Epidemiology and Drug Service nursing team. The information comes from the assistance reports recorded by the Emergency Services. An emergency is considered to be drug-related when the discharge report either states the person is a user of illegal drugs or when the initials IDU or the words drug addictión appear on the report. In every identified case, a standardised form for data collection, including demographic information and circumstances of the incident, is filled in. The indicator refers to the number of episodes dealt with by hospitals and to the number of people being cared for because of this reason.

#### Mortality related to acute adverse reaction to drugs (overdose)

Information is obtained from the records of autopsies carried out by the Anatomic Forensic Institute. Data are collected monthly by the Epidemiology and Drug Service nursing team. A case is registered when the forensic surgeon reports that this death was due to overdose. The report includes the macroscopic pathology, the circumstances of death and eventual tools or objects found at the scene of death as well as any report given by family or friends of the deceased person. The toxicological findings are not taken into account. Besides this information about the general population, data from Barcelona's prison files have been collected since 1993.

All these data were processed in such a way that its validity and consistency could be assured:

a) the data collection was carried out by specially trained health professionals;

b) a protocol had been developed defining concepts and criteria for inclusion; and this was a reference protocol for all people working in the SIDB at any stage of the process;

c) there was a validated entry of data into the computer.

After examining the reliability and internal coherence of data gained from different recorded episodes using the chosen indicators, it was concluded that there was a need for an identifying element that could be used to link different registers together. The chosen element was the first three letters of both surnames (from father and mother), birth date and gender. Afterwards, we were able to use an algorithm for maximising the probability of unequivocal identification and matching every individual with episodes protagonised by himself. Validity confirmation was thus achieved in 97% of pairings, with sensitivity and specificity both over 95%.

#### Measurement of Activity, Productivity and Cost of Care

For measuring the activity of treatment centres, standardised measurement units were used for three types of activities: first interview, follow-up visits and methadone dispensation. The assessment of patients in current treatment has proven to be useful, taking into account the diversity of drugs involved and the necessity of assessing social priorities to be answered.

There has also been an attempt to develop a unit of analysis for alternative productivity, based on **product analysis** and an estimation of time assigned to professionals for different care activities. An interdisciplinary group defined the intermediate care **products** accomplished by the municipal CFCs, and mean time needed for every basic **product** was then calculated.

#### **Coverage evaluation**

An estimation of the target population was needed for evaluating the programmes' coverage. Otherwise, it would not be possible to ascertain if the programme were reaching only a small proportion of the population in need. The SIDB provided us with the data required to estimate coverage using capture/recapture techniques (Domingo-Salvany et. al.).

This kind of information is most useful for estimating the need for already existing services and for quantifying the volume of users in need of other care services. Given the chronic and relapsing nature of addictions and to evaluate coverage properly, it was important to differentiate between first treatment starts and patients who started again after drop-out, both among admissions and patients following treatment.

#### Assessment of Effectiveness

Various indicators, based on scales which match several variables in an accumulative way, had been proposed to measure the efficacy of care. One indicator could be the percentage of treated patients maintaining abstinence at twelve months follow-up. Nevertheless, the evaluation of effectiveness needs to be indirect, using such indicators as retention in treatment programmes; improve-

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ment in delinquency; overdoses and mortality because of acute adverse drug reaction; utilisation of other medical services: incidence of tuberculosis and AIDS. It has been suggested that people maintaining contact with care services use illegal drugs less, present less delinquency and are less involved in legal problems, even when they are not cured (Buning, E., 1994). Thus, we elected to measure the quality and effectiveness of care resources by measuring the retention rate in treatment programme. In recent years, a greater retention in methadone maintenance programmes compared to that in drug-free programmes had been proven. In our study we have compared the retention capability among four different municipal CFCs and between both types of treatment programmes (methadone maintenance and drug-free programmes).

Another approach to the measuring of effectiveness could be to register the evolution of happenings the avoidance of which is one of the treatment goals: petty crime and legal offences; utilisation of other care services (emergency room, etc.); AIDS and tuberculosis incidence; and overdose deaths. Actually, the SIDB provides us with data concerning overdose deaths, emergency room utilisation, etc., while data on AIDS and tuberculose incidence are provided by the Epidemiological Service. A deviation in expected trends concerning those items may be attributable to the impact of new policies and programmes.

To measure delinquency one could collect the reporting of criminal actions. Nevertheless this variable is liable to swings related to police policy or public opinion and attitude. To avoid this problem, surveys of representative samples of population have been and are still being carried out. The survey on victimisation and urban security is held on a periodical basis. It provides information on citizens=ð worries by two different ways: by an open question, with spontaneous answer, and by a list of topics proposed to the surveyed so that he/she could rate his/her level of worry related to each one. The follow-up and comparison of results among successive surveys (SabatJð et al., 1997) show interesting changes over the considered period of time, probably reflecting both the dimension of crime and people's perception of drug problems.

According to the last surveys, there is a growing understanding on the part of the population concerning drug addicts and the usefulness of rehabilitation policies. In the spontaneous statement about worries, the drug problem has been dropping steadily (from 10% to approximately 2%). Within the list of topics which might be cause for concern, drugs have also declined, even for people who continue to associate youth violence with drug use, when specifically confronted to this question. There is a trend towards the reduction of delinquency registered by the police parallel to the starting of methadone programmes (unpublished data).

#### What did they find out?

### Measurement of activity, productivity and cost of care

Table I shows defined intermediate products for classifying the activity of four municipal CFCs with concerted management, mean time estimated in each case and equivalence in care units for drug dependencies.

Table II shows care products and costs starting from an estimation of direct costs of treatment, without including either investments or indirect costs. Comparison of different products among centres showed the different way they operated. It also indicated that cost analysis centred in time assigned to care activities as well as that centred on drug dependence care units (DCUs), dramatically reduced the variability in estimation of unitary costs.

The mean annual cost per client was 365 EDU, within a large range, from 343 to 445 ECU among centres, reflecting different treatment models and the balance of therapeutic activities. The cost of a first interview lay between 49 ECU and 56 ECU. Methadone dispensation had a cost of 2.59 ECU.

Those centres with a lot of patients in low retention programmes had more clients at the expense of a bigger volume of not very active users, generating less mean costs, than those attending centres with more patients in high retention programmes.

#### **Coverage evaluation**

By means of capture/recapture techniques applied over six months, both to treatment admissions and to emergency visits and jail entrances, a prevalence of around 10,000 active opiate addicts could be calculated for 1993. From this information, we could estimate the percentage of those covered by treatment services. Based on the number of patients in treatment in our four CFCs, we were also able to estimate the volume of drug addicts attending treatment programmes in the whole city, thus including the remaining six CFCs of Barcelona. Concerning opiate addicts, 5,446 addicts living in Barcelona happen to be in treatment, which represents a 54% coverage of the target population (4,209 patients in municipal CFCs and 1,237 attending other CFCs).

# Table 1: Intermediate products defined for classifying the activity of four CFCs belonging to the City Council with concerted management. Estimated mean time and proposed equivalence in drug dependence care units.

Product	Annual activity	Meantime (in minutes)	Estimated activity minutes	Equivalence in drug dependence care units (DCUs)
First visit	2,015	50	100,750	1.00
Therapeutical (a) follow-up	15,258	25	381,450	0.40
Medical follow-up visit	18,442	15	276,630	0.40
Social follow-up	7,925	30	237,750	0.40
Therapeutical group for families	167	45	7,515	0.40
Therapeutical group for patients	549	45	24,705	0.40
Nurse interview	3,507	7	24,549	0.10
Drug dispensation	206,295	3	618,885	0.05

a) Therapeutical refers to any care offered within the recovery programme (mainly counselling and psychotherapeutical approach)

CFC: care and follow-up centre; DCU: drug dependence care unit

Table III (on page 36) presents this information related to municipal CFSs between 1991-1994. The number of people entering treatment for the first time went down during this period to about 25%, what could be attributed to a growing number of drug users getting in contact with the system.

#### Assessment of effectiveness

Clear differences could be observed among centres concerning their retention rate: after 2 year follow-up, retention was 77% for patients on methadone and 6% for those on drug-free programmes. These results should imply a substantial redefinition of goals and objectives for the centres, as well as a review of inclusion criteria for methadone programmes.

With respect to the general population, there has been a reduction in the percentage of people identifying drugs as one of the most important social problems (from 9.7% in 1991 to 2.7% in 1993). Coinciding with a stabilisation in victimisation, citizens tended to consider drug addicts as patients, demanding more treatment and care resources.

### Table 2: Activity and costs of the CFCs belonging to the City Council with concertedmanagement. Barcelona 1994.

Product	Centre A	Centre B	Centre C	Centre D	Total activity
First interview	684	631	353	347	2,015
Sucessive therapeutical (a) follow-up interview	6,053	3,020	2,429	3,756	15,258
Sucessive medical follow-up interview	7,057	3,692	2,708	4,985	18,442
Nurse interview	1,493	1,129	274	611	3,507
Social follow-up	713	4,376	1,422	1,414	7,925
Therapeutical group for families	65	37	38	27	167
Therapeutical group for patients	312	90	137	10	549
Drug dispensation Costs	57,617	55,986	49,627	43,065	206,295
Annual Cost (thousands of pts.)	76,460	74,259	48,019	54,205	252,943
Active users	1,342	1,314	813	740	4,209
Cost per user	56,975	56,514	59,064	73,250	60,096
Estimated minutes of care activity	513,037	475,286	320,329	363,582	1,672,234
Cost per care minute (pts)	149	156	150	149	151
Drug care units (DCUs)	9,394	8,029	5,555	6,638	29,617
Cost per DCU (pts.)	8,139	9,249	8,644	8,166	8,541

a) Therapeutical refers to any care offered within the recovery programme (mainly counselling and psychotherapeutical approach)

CFC: care and follow-up centre; DCU: drug dependence care unit

Product	Starting treatment for the first time	%	Total starts
1991	1,099	44.9	2,448
1992	1,243	47.2	2,633
1993	735	29.6	2,483
1994	695	25.4	2,736

### Table 3: Total treatment starts in four CFCs\* belonging to the City Council. Barcelona,1991-1994.

CFC: care and follow-up centre

The utilisation of hospital emergency rooms depends on several factors, including the kind of answer given by the patient. A service prone to administer or prescribe certain drugs will automatically increase its inflow of drug users. Regardless of the attraction exerted by each centre and the annual oscillations, Barce- Iona's hospital emergencies have reduced to around 20% between 1988 and 1993 (Table IV).

Tuberculosis and AIDS are monitored in the surveillance system, both diseases being strongly related. After an increase from 1988, tuberculosis and AIDS had both decreased. Tuberculosis in intravenous drug users (IDUs) increased 47% between 1988 and 1992 (from 155 to 228), descending again the year after. Prevalence of tuberculosis remained stable, showing a decrease in non-IDU population. In 1993, 177 new cases of tuberculosis were declared in IDUs (see Table V). Nevertheless, 314 IDU patients with tuberculosis were registered in Barcelona concerning chemotherapy administered to them during the year (part of them were patients notified the year before and currently following treatment; others were patients who had dropped out of treatment and were lost for follow-up). Information on tuberculosis in different population groups was gathered since 1987.

The spread of HIV infection among IDUs has partly been responsible for the increase in tuberculosis rates. Another consequence of this infection is obviously the rise in AIDS cases among IDUs declared in Barcelona residents. Between 1988 and 1993, while the definition of case by the

Table 4: Illegal drug-related emergencies attended by four university hospitals with permanent emergency ward. Barcelona, 1990-1993.

Year	Clinic	Sant Paul	Vall Hebron	Mar	Total starts
1990	1,099	1,099	1,099	2,318	5,065
1991	1,243	1,243	1,243	2,010	5,078
1992	735	735	735	1,832	4,520
1993	695	695	695	1,541	3,823

Evaluation of Psychoactive Substance Use Disorder Treatment

	Tuberculosis in IDUs		Total Tuberculosis	
Year	Cases	Rates	Cases	Rates
1987	87	5.1	854	50.2
1988	155	9.1	1,042	61.2
1989	161	9.5	923	54.2
1990	213	12.5	1,016	59.7
1991	216	13.1	1,129	68.7
1992	230	13.9	1,101	66.9
1993	177	10.8	999	60.8
1994	228	13.9	979	59.6
1995	165	10.0	899	54.7
1996	1,632		8,942	

#### Table 5: Tuberculosis incidence in IDUs (a) and main population. Barcelona, 1987-1995.

Rates for 100,00 inhabitants; (a) IDU: intravenous drug user

Centres for Disease Control (CDC) was still in force, AIDS cases soared. In 1993, 229 cases were declared in the city, 47% more than in 1988. In 1994, there was a top incidence coinciding with the change in AIDS definition, which meant the inclusion of new TBC cases as AIDS. Afterwards, there was a drop in incidence with a trend to stabilisation around levels of 1990 (Table VI).

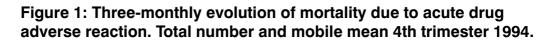
### Table 6: Annual evolution of AIDS cases in drug addicts and of total AIDS cases.Barcelona 1988 to 1995. Data by 30.06.1996

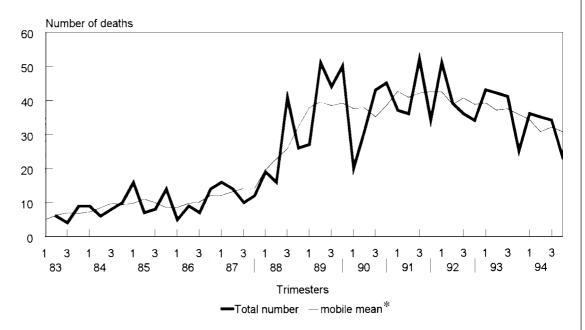
Year	AIDS causes in IDUs	Rates	Total AIDS cases	Rates	AIDS % in IDUs (a)
1988	156	9.1	267	15.7	58.4
1989	192	11.3	358	21.0	53.6
1990	239	14.0	434	25.5	55.1
1991	215	13.1	452	27.5	47.6
1992	249	15.1	505	30.7	49.3
1993	229	13.9	460	27.9	49.8
1994	385	23.4	667	40.6	57.7
1995	287	17.5	558	33.9	51.4
Total	2,051		3,918		52.3

IDU: Intravenus drug user; a) % related to the yearly total AIDS cases.

AIDS cases reflect infections received several years before. Therefore, it seemed better to analyse infections among cared patients. Recent estimations on HIV infection rates among drug dependents in contact with Barcelona's treatment centres, provided an incidence of 4.8 infection/100 people/year of follow-up. There has been a trend towards reduction: from an incidence rate of 6.24 in 1991 to a rate of 3.46 in 1995. These are big figures, but similar to those given by the USA in IDUs (4 people a year). Compared to rates calculated at an European level, ours are lower than those of Italy (7.4 among IDUs in treatment and lower than the annual HIV infection incidence rate (11.7) estimated for IDUs in contact with AIDS prevention programmes in Alicante (Spain) between 1987 and 1992. However, there is a need for critical appraisal when comparing data; indeed, several data sources suggest that, in every population, frequency of HIV infection goes down after a period of high incidence, even without preventive interventions.

Deaths because of overdoses increased between 1988-1994 and tended to decrease afterwards. Compared to mortality in other cities, Barcelona presented a higher frequency of overdose deaths; one possible explanation being our higher prevalence in intravenous administration (see Figure 1).





Source: Institut Anatomic Forense de Barcelona

(\*) Mobile mean: arithmetical average between number of deaths in the previous and following trimester

# How were the results used?

After analysing results, it was concluded that several changes had to be introduced. For example, it was seen as necessary to potentiate methadone programmes (number and availability: low threshold programmes, methadone bus, as well as every resource devoted to harm reduction (syringe exchanges, etc.) There was a need for potentiating medical care (vaccination, chemoprophylaxis, early treatment and follow-up) and social awareness had to be promoted so that patients and programmes (especially harm-reduction approaches) could be better accepted. Since 1995, programmes have been launched tailored for each urban district to answer their own and differentiated needs. The Plad'Acción sobre Drogues de Barcelona cares for the further development of this territorial project promoting the direct involvement of district authorities and neighbouring associations so that everybody is able to feel a personal participation and to make every step together.

A further change to be introduced was the model of contract, this time according to the delivered care services. This was placed under management of the Plan d'Acción sobre Drogues de Barcelona. A protocol was established devoted to the follow-up of the contract. This considers the different types of treatment programmes and the minimal capacity for patients to be cared. The various companies and NGOs based in Barcelona which are capable of offering treatment programmes for drug dependencies may opt for our contract by means of presenting their technical project to a public competition. This project has to be in agreement with the protocols established for each CFCs in the bases of the competition (specifications). Each treatment centre in the city has to take care of patients belonging to its area of influence, which has to be previously designated. According to the analysis made by means of the SIDB in those areas, each centre gets assigned its priorities on types of programmes and on the number of patients to be cared. The unit for the calculation of the budget in every single centre is established through the drug dependence care units (DCUs). This is a unit of productivity, calculated through the assignment of times for every therapeutical intervention according to the allotted programme and to the technical protocol which has been agreed upon (number of visits and recommended typology). On the other hand, the technical specifications lay down some quantity and quality standards (retention, coverage, etc.). Companies overcoming these standards may apply for a reward in the form of a greater payment every three months.

Only the high degree of development of the SIDB information system has allowed the working out of these technical contracts and their adjustment to the problems of each area of the city.



### It's your turn

What are the strengths and the weaknesses of the presented case example? List three positive aspect and three negative aspects:

#### Strengths of the case study

3	
Wea	knesses of the case study
1	
2	
Z	
3	
40	Evaluation of Psychoactive Substance Use Disorder Treatment

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# Case example of a needs assessment



A study to determine the welfare service needs in the Eastern Transvaal, Republic of South Africa

#### By

The authors alone are responsible for the views expressed in this case example. M. K. Christian Director: Professional Services National Deputy Executive Director SANCA National

# Who was asking the question(s) and what did they want to know?

The Eastern Transvaal region (now named Mpumalanga - one of the nine Provinces of the Republic of South Africa) is a very big and largely underdeveloped area. Outside of a few developed urban and industrial areas, there is a farming community and a tourist industry as this Province includes the famous Kruger National Park and a number of other scenic areas. Social Welfare Services and facilities were almost non-existent for the majority of the black population.

The responsibility for the area concerned fell under the Regional Welfare Board Eastern-Transvaal who according to the National Welfare Act (Act 100 of 1978) had to:

- **a** investigate the social problems which occur in its region and consider, plan and propose measures for the solution thereof;
- **b** determine of its own accord or on request the existing or future welfare needs of the inhabitants of the region or any part thereof;
- **c** plan and prepare a welfare programme with a view to future development or provision of welfare services/facilities which would be likely to be necessary to satisfy such

(i) identified needs,(ii) and to recommend the or der of priority in which such ser vices should be accorded;

**d** up to 1990, the local government, the Transvaal Provincial Administration (TPA) was the main role-player rendering only social welfare services at grass roots level. Specific Services in the fields of:

1) physical disability: blind, deaf, cripple;

- 2) care for the aged;
- 3) mental illness/health;
- 4) substance abuse;
- 5) child and family welfare;
- 6) offender rehabilitation

were almost non-existent because these were usually rendered by the Non-Government Organizations (NGOs/registered welfare agencies), who had neither the money or subsidised social work posts to carry out such services in the small widely separated communities, over such a large area.

In 1991, the Regional Welfare Board and the TPA invited the leading National Councils NGOs specialist-agencies providing specialist services, to participate in a think-tank and workshop, as to how to move away from grass roots social work, towards enabling and assisting NGO/specialist agencies to develop community structures and render much needed services. Following this historic meeting, the outline for a unique 5 year social welfare development programme was established. In this programme, various specialist NGO agencies would be assisted by the Regional Welfare Board and TPA to:

- investigate social problems and determine local welfare needs. Listen to the community members and involve them in welfare activities;
- act as facilitators to bring people or groups of people together, to address local welfare problems;
- 3 inform communities regarding welfare policy and other matters (e.g., registration and subsidisation of child welfare facilities);

- 4 act as a link between communities and specialist services;
- **5** co-ordinate welfare services locally.

In order to carry out the above mission, the TPA Social Work Services decided to draw in the NGO's initiative in the following manner:

- 1 Thirty one (31) additional social work posts would be made available. These social workers would be appointed by the TPA and would be employed by them;
- 2 The NGOs would then be allocated a certain number of posts and would be involved in the recruiting, training, supervision and evaluation of the social workers concerned;
- **3** It was envisioned that after 2 to 3 years, the social worker posts would be taken over by the agency concerned.

The Regional Welfare Board of the Eastern Transvaal initiated the need assessment involving the TPA and the SA National Council on Alcoholism and Drug Dependence (SANCA). This was conducted among the communities of the rural and underdeveloped areas of the Eastern Transvaal in order to assess, the role of alcohol and drug use within the broader issue of social problems identified. This information was not to be used in isolation of other problems but to become an integral part the planning of a 5 year welfare programme for the communities concerned. It was anticipated that the programme would move patiently through the following three phases:

**Phase 1 - social planning phase**: Community profile and needs assessment;

Phase 2 - the community development phase;

Phase 3 - the service development phase.

#### Time frame

Although it was planned that by 1996 social welfare programmes would be established according to the needs expressed, the phases could not be neatly boxed in time. The Social Planning phase would probably be ongoing while Community Development was being initiated. In the same way, the Service Development phase may begin during the continuation of the Community Development phase.

# What resources where required?

During the Social Planning phase each of the 8 agencies and 2 Government Departments participating, allocated official representatives who formed the core group together with the existing social work staff of the TPA community services - in all some 30 persons. Each group agreed to bear their own costs and provide specialist input. The TPA in Witbank agreed to provide the secretariat and co-ordinate the planning and follow-up meetings. Twelve social work staff were already doing community work, 10 more were selected and employed. Care was taken to employ workers who were familiar with the region and the various cultural groups and languages represented.

- 1 the social workers appointed were to be employees of the TPA and would receive their salaries from the TPA; the Community profile and needs assessment would be undertaken as a priority and as part of official duties;
- **2** the TPA would supply offices and vehicles;
- **3** the specialist agencies would be responsible for professional supervision and inservice training of the social workers.

The Community profile and needs assessment was to be given priority and carried out during the normal hours of employment and while social workers were visiting communities concerned. Therefore, cost were minimal and limited to training, where travel and accommodation were paid by the TPA.

#### Planning

**Phase I:** The social work section of the TPA Eastern Transvaal drew up the concept document of agreement between the TPA and the agencies - this was to be distributed before July 1991.

- **1** a concept service contract for the social workers was to be drawn up by the TPA regional office and distributed to the agencies concerned before July 1991;
- **2** all documents were to receive approval and clearance before commencing the needs assessment. The remaining posts would be filled at a later stage in the programme.

**Training:** A training programme was developed to provide specialist input from the various agencies. The group of 22 social workers met at a venue in Johannesburg for 6 days, additional training in community development was also given.

Except for the specialist input, all social welfare staff were employed to become an integral part of the entire social welfare programme, beginning with the community profile and needs assessment.

Further on in the programme and according to the needs/priorities identified a number of social work posts were actually allocated to the agencies - who then proceeded to provide special training to enable the workers to address the problems with the community. One social work post per 20 000 people was decided upon.

## How were the data collected?

The community profile and needs assessment questionnaire was drawn up, keeping in mind that unlike urban areas, official data was unlikely to be available and facts and opinions (quantitative/qualitative) would have to be combined with the questionnaires. All profiles, and completed questionnaires and reports would be in English. Group and individual interviews would be conducted in the language of choice: Zulu, Swazi, Ndebele, Sotho and Xhosa.

The region was divided up and various communities/townships were assigned to the 22 social workers. Accessing the community, identifying existing infrastructure and

key community members, professional and lay people who could provide information, kept the workers occupied for several months. Trust had to be built up as well. A community profile and needs assessment was to be completed for each community.

In all 15 communities that were surveyed over 3 years, more than 2000 structured interviews took place - finalising into 1 community profile with a detailed report and recommendations for each area.

Some information and statistics was obtained from visiting Town or Village councils, police stations, churches, clinics, schools and consulting records.

Other information had to be obtained through interviews with key people involved such as:

Magisterial District	Community/ Township	Population
Piet Retief	e-Thandukuyklamya	20000
Witbank	Thubelihle Kwaguqua	<b>6510</b> 158994
Bethal	e-Mzinoni	23286
Standerton	Sakhile Thuthukani	47744 9318
Wakkerstroom	e-Sizameleni	4600
Volksrust	Vukuzakhe Morgenzon	17000 4068
Perdekop	Siyazenzela	2670
Evander	Lebolanc e-Mbalenhle	57840 130048
Sabie	Simile	8000
Lydenberg	Mashishina	27300
Barberton	c-Mjindini	24504

#### Actual community Townships surveyed N=15

the local shopkeeper, shebeen owner (indigenous tavern), Induna (minor chieftain).

Community group meetings were held and discussions initiated - not only did a valuable community profile emerge, but facts and opinions were sought on a number of issues. Group meetings were popular providing an opportunity for Community to get together and enjoy refreshments (this was minor but a most important cost in the programme).

The questionnaire on alcohol and drug use was very comprehensive, target groups of respondents came from clinics, health care workers, nurses and doctors and other social workers, traffic departments, police, magistrate courts, teachers, ministers of religion and members of the community and youth. Sometimes the workers left a questionnaire to be completed - in most cases because of language and literacy difficulties, these were completed by the social workers. Availability and willingness of respondents to participate were the only criteria used. No resistance was experienced.

The social workers received regular supervision and encouragement's. Reports and completed work was finally co-ordinated by the TPA officials had core group.

# How were the data analysed?

A monitoring group was established and meetings were held every 6 months, to evaluate progress. Each worker was assisted to collate all documents pertaining to the Community profile. Gaps were identified for workers to proceed with gaining additional information.

Each worker was responsible for the final profile and report back on each community. In this regard the value of pretraining and the joint effort made in the preparation of the standard community profile, needs assessment and substance abuse questionnaire proved invaluable in being able to organise the final reports. Very often it was not possible to get statistics or concrete facts - only general perceptions and informed opinions. What was most important was that there was seldom any contradictions - opinions were firmly held.

Sophisticated computer analysis was not available and in many cases would not have been meaningful because of the nature of the data gathering. Individual completed profiles and reports were analysed as available by the core group and the recommendations of various community members and social worker concerned were taken into consideration for Phase 2 and prior to Phase 3.

### What did they find out?

The Community Profile and needs assessment was able to pinpoint very specifically:

- 1 the number of people involved and the requirements concerning the needs of the blind, deaf and physically disabled and mentally handicapped. This varied only according to the size of population.
- 2 In general however, no matter the size of the population, it became very clear that all communities share and identified the same social problems and that the underlying theme expressed over and over again was that of "unemployment, poverty and alcohol abuse were the social problems which go hand in hand".

#### Substance use/ abuse

There were two main substances used - alcohol and dagga (cannabis satavia). Glue and petrol sniffing were very minor.

#### Alcohol

Commercial products were very expensive and usually purchased from Bottle Stores or drunk in Taverns. Because of unemployment and poverty, cheap alcohol concoctions or home-made brews called SPION or MBAMBA were available at Shebeens. These are informal backyard type taverns, usually not registered. Shebeens are the most important adult recreational facility and a source of income for the owner. Youth also obtain their liquor from the shebeens in the afternoons after school, but do not drink on the premises. Women visit the shebeens in the late morning and early afternoon, while the men dominate the evening and night sessions. It was estimated that more than 60% of the population in all 15 townships were abusing alcohol and of this number, 40% were drinking at alcoholism levels.

### Problems of alcohol abuse in the community

Alcohol was abused over weekends and after working hours by youth, men and women between the ages of 20 and 50. The confirmed opinion is that more men drink than women, but that women are now drinking more than they used to, a home brew of soured milk or sorghum was considered an important part of the meal. Poverty prevented the woman from producing this, thus malnutrition was high.

- 1 wife battering and physical assaults were high
- 2 families kept impoverished through drinking and unemployment
- 3 most women do not recognise that a husband may have a problem. They live within the circumstance and accept the alcohol use/abuse as a way of life.
- 4 hospitals and clinics report high incidents of assaults.
- **5** most arrests are for assault, drunk and disorderly and theft.

- **6** there were very few cases of drunken driving, as there was little opportunity and few cars to drive.
- 7 drunken pedestrians caused accidents high incidence in rural and country areas.
- 8 schools report drinking among the high school groups where alcohol use is a source of entertainment and bought in the afternoons from the shebeens.
- **9** little or no drinking or drugging was observed in the schools, only 1 case was reported in all reports.
- **10** teachers however see neglect, malnutrition and signs of physical abuse, they hear about conditions at home and they are convinced that drinking is a serious.
- **11** the opinion most often expressed was that children from these families end up drinking themselves and not fit for the labour market.
- **12** most epileptics and tuberculosis patients neglected their medication because of the effort and distance to hospitals in urban areas and drank as a form of self medication.

#### **Dagga or Cannabis**

The dagga plant is indigenous to South Africa and easily grown for private use. In the communities surveyed, it was not grown commercially (but is elsewhere in South Africa). People were aware of the legal consequences. Informed community members and leaders spoke out in unison against legalising dagga as it was observed and an importantly held opinion that dagga use promoted the "deterioration of society". School children dropped out and led useless lives or landed in prison. Prison statistics clearly indicated that arrests and convictions due to dagga were significantly higher than those of alcohol and usually linked to crime. It was also noted that the sophisticated use of dagga and crushed mandrax (white pipe) as smoked in urban areas was virtually unknown in these communities.

Dagga is used more by youth as it is cheap (free) and exciting but is often continued into adulthood. Youth however, did not see dagga smoking as serious, starting fairly early between 10 and 20 years with most users between the ages of 20 and 30, mainly male.

Generally, people were unaware of services or programmes that could help reduce the use of alcohol and dagga and prevent the social and health problems occurring. When health and social functioning deteriorated, the community managed this within their ranks. In some of the communities, help was available and alcoholics/dagga addicts could be referred to Themba Centre or dealt with through local health clinics where some knowledge was beginning to filter through, TPA social workers throughout the region had a case load of less that 30.

#### Community problems evaluated

The most serious problems identified were:

- 1 Unemployment
- 2 Poverty
- **3** Lack of Infrastructure
- 4 Alcohol and Dagga Abuse

family and community being negatively influence by these.

In communities, a greater percentage of the children were in the care of grandparents who could not always provide control or for their financial needs. Child neglect and abandoned children were a further indication of poverty as parents left to go to the cities to look for work.

The lifting of the **influx control legislation** a few years earlier had a tremendous effect on the population in these communities, placing tremendous strain on the few existing resources, as people tried to get nearer to work opportunities. By 1994, it was estimated that 60% of the working population was unemployed and that the population had more than doubled the 1985 figures.

The political climate in communities and townships was as uncertain as the political development in South Africa. Where the traditional Induna systems were still in operation, there was strong willpower to organise themselves.

Schools were overpopulated and grossly under served - influencing future education and employment opportunities. Primary schools outnumbered high schools 6 to 1. In 4 areas there were no high schools. School was also very basic offering no additional skills or training.

Alcohol use was obviously an important part of entertainment, used by youth and adult members of the communities. This is seen in the extra-ordinary high number of shebeens (340), taverns (32) and beerhalls (6) around compared to shops (22) and churches (46). The community leaders, however, did view the drinking as a serious set back to development and requested awareness and education programmes as urgent.

Very limited sports (4) and recreation facilities (2) were found - usually only in the mining villages. Cinema and TV almost non-existent due to weak power supply and poverty.

Religion played a big role in keeping the community together and was very accepting of all conditions of life. Religious leaders still had the respect of the communities and even \political bodies and they were usually the backbone of those involved in problem solving.

The needs for adequate shelter, water, roads, electricity were expressed more urgently that the needs for services for physically disabled, etc. There was however, an expectation that there should be provision for these.



The youth, not affected by alcohol and dagga use, demonstrate a willingness to get involved with community issues as well as to organise their own entertainment. They appear to be impatient with older members of the community who demonstrate apathy to get involved with health and welfare issues, especially when there is no financial gain. In spite of this common trend, there are community members who do involve themselves, but require motivation and financial and practical support.

# How did they use the information?

For the first time in South Africa, the role of alcohol and dagga in keeping people and communities underdeveloped was demonstrated, both contributing to cause and effect of poverty, unemployment, etc. Large scale community development was required before the development of specialist services. However, community work intervention was urgently required and could be implemented. TPA social workers already involved in the needs assessment were allocated to specialist NGO agencies. SANCA was given 5 posts and one supervisor. These were now given specific training in substance abuse, product knowledge and prevention models and public speaking. The Community profiles and their own involvement with the communities concerned, already indicated suitable target groups.

It was felt that the most effective strategies to combat alcohol and drug abuse would be:

- to establish an action committee of concerned people. Such a committee would be informed and made aware of the findings of the community project and would be motivated to become part of the solution.
- 2 training in helping skills and early identification of users and people in need of help would follow. A core group would be

trained to assist at various levels in the community.

**3** awareness campaigns were planned for the youth between the ages of 12 and 25 to capture their interest. In a very short while, they formed into SANCA youth groups where attention was given to a comprehensive life skills programme aimed at their own stated needs.

The youth quickly cottoned onto the fact that a life of alcohol and drug use would only continue the misery for many other youth. Strategies now included training selected youth as peer counsellors who could work among the young people themselves, who could { promote a different lifestyle, give talks and workshops at schools, churches but more importantly in places where young people congregated.

Further training provided helping skills and early identification of substance abuse and a referral system of resources available elsewhere. Positive minded youth were targeted and the peer counselling movement had its origin in the Eastern Transvaal.

- 4 Where existing infrastructures such as clinics, hospitals were identified, the social workers visited to created awareness and offer a training package suited to their needs, or those of their clients, a common example was the pre-natal clinics visited by mothers-to-be.
- **5** Conditions were most often very simple and lacking any refinements, the social workers ' having to go well prepared to get the message over to a target group that largely lacked previous formal education and could not read.
- **6** Social workers had to be careful not to create unrealistic expectations in the community but to work with what was possible with maximum utilisation of com-

munity members, but at the same time arranging meetings and putting them in touch with prospective or available resources.

- 7 The youth to youth movement had opened up many more opportunities to combat alcohol and drugs and had assisted the social workers beyond the initial planned intervention.
  - a) on-going training and motivation was required and the development
    of a training curriculum;
  - b) when funds were available, identifying badges, caps and T-shirts were provided;
  - c) the slogan "say YES to life and NO to drugs" was adopted with the SANCA lo o.

At the present time and because of the flexible time-frame mentioned previously, all of the above steps have been taken and are being met at various levels in seven of the 15 communities.

Given time, the social workers will give less time to the established programmes and move into the next areas. There is now a waiting list of sorts, as more and more requests for similar programs to be established are being received in respect of Alcohol and Drug strategies already in operation. Other information generated by the community profile has led to Social Welfare programmes being developed to move, into Phase 3 in some of the communities concerned.

There was sensitivity to the fact that all the Community/Townships surveyed were underdeveloped, plagued by poverty and unemployment. Care had to be exercised, to avoid labelling the community in any manner. In the final analysis, it was the community members themselves who outlined and underlined and named their problems. All resource persons gave their names willingly and only a few respondents asked not to be named in person - this was respected. Social workers were well received as persons who were trying to help make a difference. No problems regarding the need assessment were encountered, only those of distance, long hours and the continual evidence of many needs to be met. Monitoring and support for the social workers were never neglected throughout the years.

The Eastern Transvaal Region has now become an official Province of the Republic of South Africa with its own Departments of Health and Welfare. All strategies and welfare programmes mentioned have been adopted and programmes continued in co-operation with the agencies concerned.

The model used for the community profiles and needs assessment will be carried over to other communities in Mpumalanga.

- 1 primary and secondary prevention strategies were recognised as a priority;
- 2 institutional treatment/rehabilitation regarding substance abuse already existed in the province. Awareness of the need for treatment and accessibility to the facilities however formed an important part of the strategy:
- **3** Reconstruction and Development Programme (the RDP) of the new Government structures has been assisting in the upliftment of these communities, but still has far to go.





### It's your turn

What are the strengths and the weaknesses of the presented case example? List three positive aspect and three negative aspects:

#### Strengths of the case study

1		
1		
Veal	aknesses of the case study	
/orki	kbook 3 · Needs Assessments	5

#### **References for case example**

- **1** Concept Document: 1991
- **2** Minutes of Meetings: 1991 1994
- **3** SANCA files on the 15 communities/ townships surveyed
- 4 Community Profiles and Reports: 1992 1994
- **5** Progress and Evaluations of Welfare Programmes initiated as intervention strategies (Alcohol and Drugs)
- **6** Model for Service Development (available on request)

All documents are the property of SA National Council on Alcoholism and Drug Dependence but may be utilised for scientific and academic purposes. Any further information can be obtained on request.

This case example is broader than a typical needs assessment. It also includes elements of process evaluations, cost evaluations, and outcome evaluations.