

Workbook 4

Process Evaluations

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WHO
World Health Organization



UNDCP
United Nations International Drug Control Programme



EMCDDA
European Monitoring Center on Drugs and Drug Addiction

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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 is about process evaluation. Process evaluation in-

volves assessing the extent to which your treatment service or system is serving the people for whom it was intended, as well as the processes involved in programme operation and delivery. The workbook focuses on evaluations that assess:

- who does or doesn't use your treatment service or system
- the way people become involved and enter treatment
- the intensity, quality and sequencing of treatment activities



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 process evaluation?

Process evaluations are aimed at enhancing your current programme by understanding it more fully. Process evaluations measure what is done by the programme, and for whom these services are provided. Ideally, process evaluations assist in the identification

of “active ingredients” of treatment, and assess whether a programme is meeting accepted standards of care.

In general, process evaluations pose questions in two areas: **coverage** and **process**.



Coverage

- What proportion of those who might need the service(s) actually used it/them?
- What were the demographic and clinical characteristics of clients?
- Has the service, or network of services served the intended clients?
- What proportion of clients completed treatment and what were the characteristics of those who dropped out?



Process

- By what route have clients entered treatment?
- How long was the waiting list and how has it been managed?
- What actually happened to clients in treatment and is this what was intended?
- Were treatment plans consistent with the results of assessment?
- What was the average length of stay or the average number of appointments kept?
- How were discharge plans developed?
- Were services within the community treatment network well-co-ordinated?

Coverage and process questions can be asked at different levels of treatment (see Framework workbook): activity, service, agency, or system levels. Procedures for different levels will be discussed in detail.

Test your knowledge. Write down whether each of the following questions is a *coverage* question or a *process* question:

- Is the programme serving clients it was intended to serve?
- How many direct contact hours does each client receive?
- What is the average age of programme participants from each referral source?
- What percent of clients complete the programme?

(Answers: coverage, process, coverage, process)



Why do a process evaluation?

Process evaluations are undertaken for a variety of reasons. They are most useful when clear objectives have been developed for the

evaluation and the intended users are involved at the planning stage. The main reasons for conducting process evaluations are:

Accountability



Is the programme accomplishing what it is expected to accomplish? Many groups want to know the answers to this question. Governments and social agencies that sponsor treatment for PSU disorders sometimes require recipients of funding to provide evi-

dence that the funds are being used as expected. Clients, their families, referral agents and the public at large expect managers of treatment services and systems to be accountable for their use of resources and level of service provision.

Programme development and improvement

How can the programme be improved? Process evaluations can provide in-depth information about the functioning of treatment services and systems, and pin-point

areas where improvements might be made. For example, a process study might show duplication in the assessment process.

To help others set up similar services or networks

How can the programme be expanded to other areas? If a service or treatment system achieves high rates of success with people with PSU disorders, it will be desirable to

replicate this service or system in other places. Information therefore will be needed about clients, staffing, and the inter-relationship of clinical activities.



How to do a process evaluation

When doing a process evaluation, it is important that you follow the general steps of evaluation planning and implementation as outlined in Workbooks 1 and 2. In addition, it is important to read through the

information here, to provide you with specialised details about conducting different kinds of process evaluations. Four categories of process evaluation questions are presented below.

1. Questions about coverage at the activity, service, or agency level

Example questions:

- What proportion of those who might need the activity, service, or agency actually used it?
- Has the activity, service, or agency served the intended clients?
- What were the demographic and clinical characteristics of clients?
- What proportion of clients completed treatment and what were the characteristics of those who dropped out?

When evaluating programme coverage at the activity, service, or agency level (see Framework manual for definitions), you typically include information on clients' age, gender, education and employment status, source of referral, place of residence, current PSU and related problems, participation in previous treatment and stability in various life areas. Information on these variables is required both to plan treatment services and provide accountability information.

There are no established guidelines for selecting other characteristics of clients to as-

sess for purposes of monitoring programme coverage. The range of information that you collect will depend somewhat on your level of resources (Step 2 of evaluation planning - Workbook 1). Regardless, it is important that you gather enough information to **compare** the characteristics of your clients to the type of client reflected in your programme objectives.

Specific instruments and items that can be used to measure variables related to programme coverage are identified in Table 1. Many of these instruments are in the public domain and are included in a Directory of Outcome Measures published by the Addiction Research Foundation (ARF) of Ontario, Canada. The address for the ARF and those measures considered most relevant for this workbook are included in Workbook 1, Appendix 2. The measures can be used to describe clients at the time of intake. Many can also be used at follow-up. Because most of these questionnaires were developed in Western countries, care should be taken to ensure that the questions are appropriate and understandable in your culture and setting.

It is important that you gather enough information to compare the characteristics of your clients to the type of client reflected in your programme objectives.

Table 1: Measures available for basic coverage variables

Variables	Measures
Age	Recorded in years
Gender	Male, female
Marital Status	<p>Typical items can be found in resources such as the ARF Directory of Outcome Measures (undated), the Resource Manual for the How Good is Your Drug Abuse Treatment Programme (NIDA, 1993), the Alcoholism Treatment Assessment Instruments (Lettieri et al., 1984), and the Drug Abuse Instrument Handbook (Nehemkis et al., 1976)</p> <p>Use of health and correctional services are captured by a Health and Corrections Utilisation Form appropriate for process evaluation and telephone follow-up (Workbook 1, Appendix 2). The Addiction Severity Index (ASI) has Legal and Employment Subscales (McLellan et al., 1988)</p>
Education	
Employment and financial status	
Source of referral	
Type of residence	
Involvement in health and justice system	
Involvement of other treatment services	
Treatment Unit Characteristics	Treatment Unit Form (available from EMCDDA)
Alcohol consumption	<p>Examples of quantity/frequency measures are included in the ARF Directory of Outcome measures (undated)</p> <p>Lifetime Drinking History (Skinner, 1979)</p> <p>Timeline Followback Method (Sobell and Sobell, 1988)</p> <p>Alcohol subscale of the ASI (McLellan et al., 1988)</p> <p>(see Workbook 1, Appendix 2 for a brief format (DHQ) that is useful for both process evaluation and telephone follow-up)</p>
Other PSU	<p>Examples are included in the ARF Directory of Outcome Measures (undated)</p> <p>Drug subscale of the ASI (McLellan et al., 1988)</p> <p>(see Workbook 1, Appendix 2 for a brief format (DHQ) that is useful for both process evaluation and telephone follow-up)</p>
Adverse consequences of alcohol use	<p>Examples of some approaches to measuring consequences other than dependence are included in the ARF Directory of Outcome Measures</p> <p>Short Alcohol Dependence Data (Raistrick et al., 1983)</p> <p>Alcohol Dependence Scale (Horn et al., 1984)</p> <p>Adverse Consequences of Alcohol Scale (Miller et al., in press)</p>
Adverse consequences of other PSU	Drug Abuse Screening Test (Skinner, 1982)
PSU, harmful use and dependence	<p>The AUDIT (WHO, 1992)</p> <p>The Composite International Diagnostic Interview (Robins et al., 1989)</p> <p>WHO-CIDI, M -CIDI (Witchen, 1994)</p> <p>Alcohol Dependence Scale (Horn et al., 1984)</p>
HIV-Risk behaviours	(see Workbook 1, Appendix 2 for a brief (DHQ) format that is useful for both process evaluation and telephone follow-up)
General mental health	<p>Symptom Checklist 90 (Derogatis, 1977)</p> <p>Profile of Mood States (McNair et al., 1971)</p> <p>Psychiatric Status subscale of the ASI (McLellan et al., 1988)</p>
Physical health	<p>Health Questionnaire (Brodman et al., 1949)</p> <p>Medical problems subscale of the ASI (McLellan et al., 1988)</p>
Motivation for treatment	<p>McArthur Scale (Gardner et al., 1993)</p> <p>Treatment Entry Questionnaire (Wild, 1996)</p> <p>(see Workbook 1, Appendix 2 for a brief questionnaire)</p>

Other client variables relevant to the evaluation of programme coverage are: situations associated with PSU, self-efficacy and coping skills, depression and other aspects of psychological well-being and social/marital relationships. Many of these

variables have been shown to influence treatment compliance and outcomes, and an assessment of these variables is recommended if resources permit. Instruments that measure these factors are noted in Table 2.

Table 2: Measures available for other client characteristics

Variables	Measures
PSU situations	Inventory of Drinking Situations (Annis et al., 1987) Inventory of Drug Use Situations (Annis and Graham, 1991)
Self-efficacy and coping skills	Drug Taking Confidence Questionnaire (Annis and Martin, 1985) Situational Confidence Questionnaire (Annis and Graham, 1988) Coping Behaviours Inventory (Litman et al., 1983)
Depression	Beck Depression Inventory (Beck et al., 1961) CES-D (Radloff, 1977)
Anxiety	State-Trait Anxiety Inventory (Spielberger et al., 1970)
Self-esteem/confidence	Rosenberg Self-esteem Scale (Rosenberg, 1965)
Family relationships/ functioning	Family Assessment Measure (Skinner et al., 1983) Family Environment Scale (Moos and Moss, 1986) Family/Social Subscale of the ASI (McLellan et al., 1988)
Marital relationships/ functioning	Dyadic Adjustment Scale (Sapinier, 1976)
Perceived support from friend and family	Perceived Social Support - Family and Friends (Procidano and Heller, 1983)

Example case: research about coverage at the activity, service, or agency level

This example programme is the prevention component of a youth PSU services agency. Clients range in age from 16 to 24, and are referred to the programme by a variety of sources. The four session prevention programme is designed for youth with a low level of PSU and PSU-related problems.

Research questions:

- 1) Has the number of referrals from schools and probation services increased from the previous year?
- 2) What percent of clients are ages 16-19?

- 3) What is the average age of programme participants from each referral source?

What resources were needed to gather this information?

Information is collected on an ongoing basis. The programme secretary spent about three hours entering information on 200 clients into the central database.

How were the data collected?

As each client is admitted to the prevention programme, counsellors record his/her sex, age, and referral source on a form. At the end of the year, all forms are forwarded to the secretary for tabulation.

How were the data analysed?

Number and percent of clients from each referral source was calculated and compared

to last year's figures. Average age overall was calculated, as well as average age from each referral source.

the 16-19 age group. The average age, overall, was 17.8 years. Average age did not vary greatly based on referral source.

What did they find out?

The results indicated that the number of referrals from the legal system and from schools has increased substantially from last year. Eighty-seven percent of participants were in

What will they do with this information?

The programme staff expects continuing increased number of referrals. As a result, they plan to expand their programme in the coming year.

2. Questions about coverage at the system level

Example questions:

- How many treatment programmes exist in the region?
- How many clients are seen by each programme in a year?
- Are there differences in the types of clients seen at each programme?

The analysis focuses on similarities and differences in client profiles across agencies.

Many variables of interest in coverage studies that involve networks of services are the same as those for studies of individual activities, services, or agencies. The analysis focuses on similarities and differences in client profiles across agencies. The profile of all clients served by the network is of considerable interest.

The scope of information collected to monitor coverage across a network of services will likely be smaller than that collected by any one service. This is due largely to the difficulty in achieving agreement among participating programmes on how key client characteristics should be measured. Practical issues of managing and analysing the information keep the data collection focused on critical pieces of information required for monitoring coverage of the overall treatment system.

As with the selection of variables within individual services, your selection at the system-level should be guided by objectives and inter-agency agreements. For example, your

treatment network may determine that clients with significant PSU and psychiatric comorbidity should be fully assessed and treated in particular facilities with adequately trained staff. Your system evaluation plan should then include routine monitoring of the flow of appropriate clients to these designated facilities. Similarly, a system with agreed upon admission and discharge criteria based on problem severity would routinely monitor the severity of clients' problems across all programmes in order to ensure that the appropriate match to treatment is being made and that the admission criteria are being followed system-wide.

Example case: research about coverage at the system level

A new detoxification programme was developed. The programme has 16 beds, and is allotted to clients from the outlying region. There are several other detoxification programmes within the city boundaries.

Research questions:

- 1) What percent of clients in the new detoxification programme lives in the outlying area, and what percent comes from within the city boundaries?
- 2) Are the clients from the different detoxification programmes different in terms of age, sex, or PSU?

What resources were needed to answer this question?

Managers from the different detoxification centres collaborated to devise a one-page data collection form. This form was copied and distributed to clinicians for use with all new clients.

How were the data collected?

Upon admission to each detoxification programme, the admitting clinician completes a one page form, which includes the client's age, sex, address, and a series of questions about current PSU: type(s) and frequency. These forms are forwarded to a central site, where they are recorded in a log book and maintained by the programme data manager.

How were the data analysed?

Clients' data were divided according to different detoxification sites. Within the new

detoxification site, clients' addresses were coded for (1) living within the outlying area, or (2) living within the city. The percentage of clients from each geographic area was calculated. Clients' ages, sexes, and PSU patterns were calculated across detoxification centres.

What did they find out?

The majority of clients in the new detoxification centre lived in the outlying area (87%). Clients from different detoxification sites differed according to age (23, 35, and 19 years) and percent male (66%, 53%, and 78%), but not by PSU type or frequency.

What did they do with this information?

Based on the results, administrators felt comfortable that they were serving the desired population with the new detoxification centre. No changes were implemented.

3. Questions about treatment process at the *activity, service, or agency* levels

Treatment processes in activity, service, or agency level evaluations include those that influence entry into treatment and the administrative and clinical activities to which clients are exposed while in treatment.

Example questions:

- By what route did clients enter treatment?
- What actually happened to clients in treatment and is this what was intended?
- What was the average length of stay or the average number of appointments kept?

Treatment processes in activity, service, or agency level evaluations include those that influence entry into treatment and the administrative and clinical activities to which clients are exposed while in treatment. Variables concerning treatment entry include the extent to which potential clients and referral agents are aware of the service in question and factors that influence one's decision to seek or recommend treatment. This includes

coercive factors in the justice system. Two questionnaires that explore these issues from the client's perspective are included in Table 1 (McArthur Scale (Gardner et al., 1993); Treatment Entry Questionnaire (Wild, 1996)). Other, more qualitative, questions for clients may be:

- How did you first hear about (name of services)?
- Who first suggested that you come to (name of service)?
- Why did you come to (name of service) as opposed to somewhere else?
- Are you under any pressure to come to (name of service), for example, from the courts, your employer, school or family?

Qualitative questions for community professionals about treatment referrals may be:

- How did you first hear about (name of service)?
- Are you aware of the services offered and the intake process?
- Have you referred clients in the past/do you intend to refer clients in the future?
- What types of clients do you refer/not refer and why?

Treatment process evaluations serve two important functions:

Active ingredients

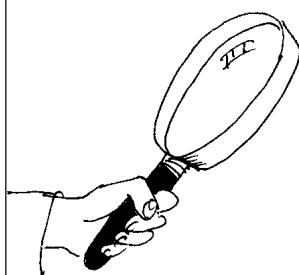
Evaluations of treatment processes are essential in order to identify the “active ingredients” of treatment. The clinical processes in many treatment services may be quite complex and encompass a variety of distinctive components. Such components

may include, for example, intake, assessment, group or individual treatment, discharge planning and follow-up.

Standards of care

Process evaluations also help to make judgments about the quality of administrative and clinical processes treatment services, against local or more widely used standards about what is expected in a “quality” treatment facility. Explicit standards for treatment services for PSU disorders have been developed in some regions. One set of standards has been developed by the World Health Organization (WHO, 1993). These standards are listed below. Example items may not be applicable to your specific settings, but general areas can be used as a guide for developing your own standards.

Basic standards are essential for any treatment organisation. Evaluation of adherence to these standards is an important type of process evaluation.



Basic standards are essential for any treatment organization.

WHO standards of care in PSU treatment

a) Standards on access, availability, and admission criteria

Examples:

- services are available irrespective of age or gender of all potential patients
- services are easily accessible with regard to location, travelling time, and transportation

b) Standards on assessment

Examples:

- An initial assessment is made in order to prioritise interventions in a coordinated treatment plan
- Methods for determining quantities of PS(s) ingested are available

c) Standards on treatment content, provision, and organisation

Examples:

- A record of patient management, progress, and onward referral is kept

and updated regularly to ensure continuity of clinical care

- The range of relevant treatment options available is described to the patient

d) Standards on discharge, aftercare, and referral

Examples:

- Discharge is based on determination of patient recovery status
- Attention is paid to further treatment and support which may be required

e) Standards on outreach and early intervention

Examples:

- There is promotion in settings other than health facilities (e.g., workplace, schools) of early intervention
- Primary health care, other health care, welfare staff, and police are trained dur-

ing their education in the recognition, basic management, and referral of individuals with drug-related disabilities

f) Standards on patients' rights

Examples:

- Patients are fully informed of the nature and content of the treatment as well as the risks and benefits to be expected
- Physical restraint is not used to detain or restrain patients who are legally competent to leave

g) Standards on physical aspects of treatment settings

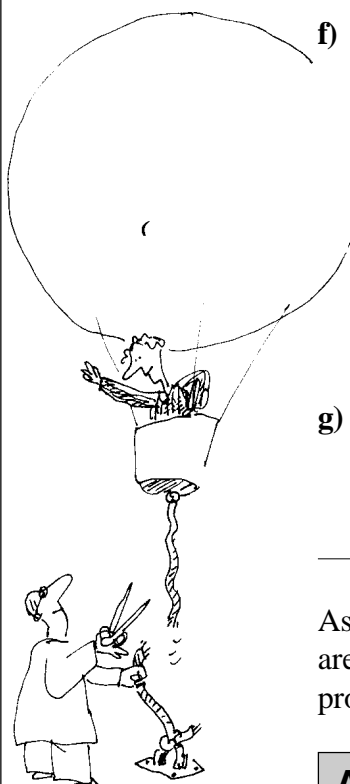
Examples:

- The physical environment is designed to protect the well-being of patients
- Patients being treated on an inpatient/residential basis have access to privacy and recreational facilities

h) Standards on Staffing

Examples:

- Appropriately trained staff are either available on site in treatment programmes, or are available on call at all times when treatment is being provided
- Staff have regular supervision by senior staff, peer review, and case conferences to maintain quality of service delivery



Assessment of adherence to basic standards are not the same as continuous quality improvement (Rush and Krywonis, 1996), in

which managers and staff seek to constantly improve programme performance. Some differences are listed on this page:

Assessment of basic standards	Continuous quality improvement
<ul style="list-style-type: none"> • assesses current practice against pre-established performance criteria or standards 	<ul style="list-style-type: none"> • is driven primarily by the goals of high customer satisfaction
<ul style="list-style-type: none"> • focuses on departments or individuals whose performance deviates from accepted values or standards 	<ul style="list-style-type: none"> • strives to raise the performance of everyone, not just the poor performers
<ul style="list-style-type: none"> • staff are not closely involved in setting the performance standards or assessing their achievement 	<ul style="list-style-type: none"> • process empowers staff to become involved and effect real change in their work environment
<ul style="list-style-type: none"> • occurs within specific departments and assesses the functioning of that department 	<ul style="list-style-type: none"> • focuses on the whole organisation – both within and across departments
<ul style="list-style-type: none"> • focuses on programme environment and activities; tends not to address client outcomes 	<ul style="list-style-type: none"> • focuses on prevention but employs a problem-solving approach using a wide range of tools and analytic methods to identify causes, understand processes, measure and track
<ul style="list-style-type: none"> • focuses on the quality of clinical care delivered by professionals and received by clients 	<ul style="list-style-type: none"> • focuses on the quality and inter-relationship of all services, products and processes for clients and other customers (e.g., families, staff). Looks beyond clinical staff to clients, their families, community stakeholders and internal staff. Everyone is a potential customer performance and monitor the changes to ensure gains are sustained

If your organisation uses a continuous quality improvement (CQI) approach, it is important that you consider how the evaluation relates to this broader process. CQI is not sufficient, in isolation, to make judgements about standards of care. Nonetheless, it is a useful option to consider for some agencies.

Creating a CQI Programme

If you are interested in initiating a CQI programme, a comprehensive approach is required. This includes:

- conducting self-assessments to determine organisational readiness to implement CQI
- developing a supporting organisational structure, culture and leadership
- understanding the programme's main functions, treatment processes and client;
- developing and training CQI teams and facilitators
- planning a reward and recognition programme
- designing and adapting CQI approaches and materials to meet the needs of the agency
- reviewing and/or designing information systems necessary to support CQI activities
- infusing a CQI philosophy that guides all the organisations and staffs actions and activities

It is important not to be discouraged with the scope of the task. Agencies must determine the rate of CQI implementation that is feasible within the context of available resources and other internal and external pressures. To be successful, implementation of a CQI programme needs to become part of ongoing strategic planning and management.

Example case: research about treatment process at the activity, agency, or service level

This example programme is a PSU assessment/referral service. The mandate of the programme is to perform a comprehensive assessment of every client and to refer clients to appropriate services within the agency to begin within 2 months of the intake.

Research questions

- 1) What was the average number of days between the intake and the first scheduled appointment?
- 2) What percent of clients did not show for their first scheduled appointment?

What resources were needed to answer this question?

In order to keep statistics on appointments and attendance, the programme secretary maintained the database on a weekly basis.

How were the data collected?

Attendance data were recorded on daily appointment logs kept by the assessment workers. The intake worker kept a record of the initial intake and the date of the initially scheduled assessment appointment. If a change was made in the appointment, the intake worker reported this to the secretary, who updated this in the database.

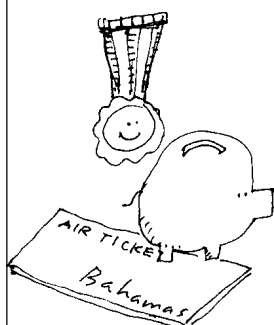
How were the data analysed?

The information required for the evaluation already existed in the database. The programme secretary completed the following descriptive statistics:

- 1) average number of days between intake and first scheduled appointment
- 2) percent of referrals who attended at least one orientation session

What did they find out?

There were 984 clients who scheduled at least one assessment appointment during the past year. The average length of time



between the intake and first assessment appointment was 67 days. Seventy-six percent of patients had their first appointment within 60 days of their intake. Thirty-nine percent of clients were “no-shows” for their assessment appointments.

What did they do with this information?

Based on the finding that 34 percent of patients were not meeting the mandated time frame of 2 months between assessment and

first appointment, and that about 40 percent were “no-shows” to their appointments, the agency decided to reorganise so that first appointments occurred on a specified day of the week at a specific time. Several staff members were on-call during that time frame to see people as they appeared for their appointments. With this new system, more patients could be scheduled earlier, and the inefficiency of staff waiting for “no-shows” was greatly reduced.

4. Questions about treatment process at the *system* level

... are concerned with co-ordination among specialised treatment programmes and between these programmes and other services that clients may need.

Example questions:

- Are different treatment programmes aware of one another?
- Do different treatment programmes refer clients to one another?
- What is the relationship between general medical services and specialised treatment programmes?

The study of PSU treatment systems is a new field of research and there is no agreement concerning the types of variables that should be considered in system-level process evaluations. One of the first steps in system-level evaluation is to define the boundaries of the system itself. You may choose, for example, to focus only on the specialised alcohol and drug treatment agencies in a particular jurisdiction. Increasingly, however, system-level planners and local providers are concerned with co-ordination among specialised treatment programmes and between these programmes and other services that clients may need (e.g. mental health services, employment services, services in the justice system) (Institute of Medicine, 1990).

Co-ordination can be defined as the degree to which agencies in a given network collaborate and exchange information and resources (staff, funds, material etc.). 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. The focus of these reports and ratings has been 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

5+	15.00	16.00	-3.0
8-	20.60	20.59	+3.9
11+	25.00	25.00	+4.1
2+	45.00	145.00	+2.2
6+	55.00	164.00	+1.9
8+	11.00	11.00	+22.2
9+	7.95	7.95	+1.9
10+	0.00	0.00	+18.7
11+	0.16	0.14	+28.5
12+	0.18	0.18	+12.7
13+	0.20	0.20	+20.2
14+	4.25	4.25	+1.27.0
15+	5.53	5.53	+1.145.0
16+	11.00	11.00	+1.164.73
17+	28.00	28.00	+1.7.82
18+	3.35	3.35	+0.19
19+	115.00	115.00	+0.14
20+	33.50	33.50	+6.0.17
21+	228.37	228.37	+0.19
22+	4.90	4.90	+4.25
23+	4.90	4.90	+4.05
24+	3.35	3.35	+3.3
25+	27.93	27.93	+1.1
26+	68.00	68.00	+3.3
27+	69.50	69.50	+115.0
28+	27.00	27.00	+110.0
29+	190.00	190.00	+33.7
30+	26.20	26.20	+6.6
31+	57.500	57.500	+1.500
32+	419.000	419.000	+5.750
33+	42.300	42.300	+1.0
34+	4.05	4.05	+0.20.700
35+	3.06	3.06	+1.64.0
36+	2.59.00	2.59.00	+0.0
37+	8	8	+13.000.00
38+	13.300.000	13.300.000	+0.0
39+	20.9.000.000	20.9.000.000	+0.0
40+	150.000	150.000	+0.0
41+	3.81	3.81	+0.0
42+	1.54	1.54	+0.14
43+	60.71	60.71	+0.80
44+	23.51	23.51	+0.16
45+	0.15	0.15	+0.75
46+	0.75	0.75	+0.16
47+	0.90	0.90	+0.32
48+	5.78	5.78	+5.9
49+	7.79	7.79	+7.7
50+	8.40	8.40	+8.77
51+	1.73	1.73	+7.98
52+	2.00.0	2.00.0	+1.69
53+	1.77	1.77	+1.80
54+	1.00.00	1.00.00	+5.15
55+	0.000.5	0.000.5	+6.65
56+	0.000.3	0.000.3	+1.72
57+	2.00	2.00	+0.0
58+	0.80	0.80	+5.60
59+	9.40	9.40	+9.40
60+	7.50	7.50	+87.50
61+	13.3	13.3	+1.3
62+	1.48.30	1.48.30	+0.45
63+	740.0	740.0	+1.03
64+	90.041	90.041	+0.04
65+	37.00	37.00	+1.0
66+	2.947.00	2.947.00	+1.53.55
67+	1.2	1.2	+68.5
68+	5.34	5.34	+4.2
69+	45.000	45.000	+0.0
70+	49.32.00	49.32.00	+0.0
71+	3.15	3.15	+0.0
72+	4.05	4.05	+0.0

- 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 their activities

Example case: research about treatment process at the system level

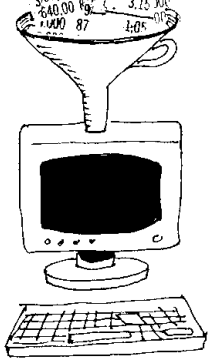
This example is a network of PSU treatment centres that are interested in knowing more about assignment to treatment for clients who have PSU problems. The network has centres in the city centre and in outlying areas.

Research questions:

- 1) For each centre, from where do referrals originate?
- 2) What is the waiting time for services within each centre?

What resources were needed to answer this question?

Case workers recorded referral information as part of their intake interviews. Consolidation of these data and tabulation of results were completed by one of the programme's secretaries on a monthly basis, taking about one hour per month. Each programme manager completed an interview and questionnaire that assessed current treatment services.



How were the data collected?

The data collection occurred in two parts. For the first part, assessing the referral source, case workers recorded this information as part of their intake interviews. Consolidation of these data and tabulation of results were completed by a programme secretary on a monthly basis. For the second part, assessing treatment services, two interviewers were dispatched to each programme to collect data on waiting times for current treatment services.

How were the data analysed?

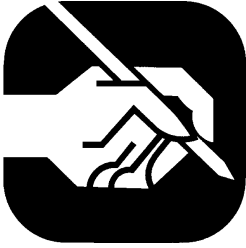
All information was entered by a programme secretary into a central records notebook. The secretary calculated the percentage of referrals from each referral source for each programme, and categorised waiting times for the different types of treatment services offered.

What did they find out?

For the downtown PSU programme, the greatest number of clients (37 percent) were referred by the local emergency department. However, the emergency department tended not to make referrals to outlying clinics, even for clients who lived in these regions. Most referrals from outlying clinics came from family members or were self-referrals. The outlying PSU programmes overlapped considerably with the downtown programmes, but tended to have shorter waiting lists.

What did they do with this information?

Researchers concluded that more education of emergency department staff about the outlying PSU programmes (including shorter waiting lists) was warranted. They instituted a brochure campaign and a series of presentations at emergency department staff meetings to accomplish this goal.



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.

- 1** Apply your knowledge. Write down two relevant examples of coverage questions and two examples of process questions for your own setting or treatment network.

Example: What is the average length of treatment for cocaine users vs. Opioid users?

- 1) _____

- 2) _____

- 3) _____

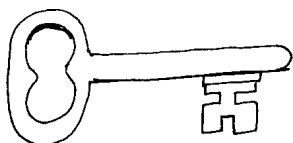
- 4) _____

Decide the most important question(s) to pursue in the evaluation (see Workbook 1 for guidance on how to do this).

- 2** Determine whether your setting has an information and/or data analysis system that routinely generates basic information on clients, services and discharge circumstances. This system could be computer-based or based on paper records. These records may be especially useful sources of data for your process evaluation.

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

Decide what method you will use to collect the data. Review the information in this workbook, and Workbook 1, to help you decide. For residential programmes, include number of days in residence. For non-residential services, include the number of sessions attended, and the number of appointments missed.



- 4** You will need to prepare an introductory letter and consent form that explains the purpose of your study (even for record reviews). Review Section 1A of Workbook 2, entitled, “Manage 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, you 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:

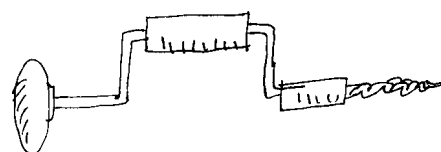
- describes the purpose and methods of the study
- explains what they will need to do if they participate
- explains that participation is voluntary

In some cases, existing databases may be accessed without formal permission from clients. Consult local advisors for guidelines in your institution and/or region.

Using the information and examples provided in Workbook 2, section 1A, write your own introductory letter and consent form.

- 5** Run a pilot test of your evaluation measurement and procedures on 10-15 patients 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, are they 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

In this workbook, we have outlined the basic principles and practices of process evaluation of PSU services and systems. With process evaluations, you are concerned with how people enter into your treatment service or system and what happens to them once there. The specific questions and issues that you explore will be dependent on your unique circumstances and cultural context. These questions and issues must be clearly identified through the evaluation planning phase as described in Workbook 1.

In undertaking process evaluation, it is essential that you pay close attention to the principles and practices of data collection and analysis as outlined in Workbook 2. Trade-offs have to be made as to the rigour with which you collect and analyse information to answer your evaluation questions, and the resources you have available. You must strive to achieve the best possible information with the time and resources available to you. You must carefully document the limitations of your findings and conclusions. With these principles in mind, you will be able to undertake practical and useful process evaluation of your treatment service or system.

After completing your treatment 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 research 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 60 percent of clients are waiting more than 2 months for an initial appointment, we recommend that the programme convert to a group assessment format that uses paper and pencil questionnaires as an initial screening tool.

Remember, process evaluations are a critical step to better understanding the day to day functioning of your PSU services. It is important to use the information that process evaluations 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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Appendix

Instruments in Appendix 1 are adapted from a data collection protocol for treatment process and outcome monitoring being developed by the Addiction Research Foundation, Ontario, Canada. Information about these instruments can be obtained from: Addiction Research Foundation, 100 Collip Circle, Suite 200, London, Ontario, Canada, N6G 4X8.

In addition to considering these instruments, a review of the ARF Outcome Measures Directory (undated) is highly recommended. This Directory contains many potentially useful instruments for process evaluation and discusses reliability, validity, and practical issues in administration.

Psychoactive substance use

Substance	Average quantity per day of use in past 90 days*	Used in past 12 months (1 = Yes / 2 = No)	Number of days used in past 90 (Days)	Use currently a problem? (1 = Yes / 2 = No)
Alcohol (beer, liquor, wine)				
Cocaine/ crack/ coke				
Amphetamines/ other stimulants				
Cannabis (hash, weed, grass, pot, marijuana)				
Benzodiazepines				
Barbiturates				
Heroin/ opium				
Prescription opioids				
Over-the-counter codeine preparations				
Hallucinogens				
Glue/ other inhalants				
Tobacco				
Other psychoactive substances				

* It may be difficult to quantify the exact amount for certain substances. Indirect estimates can be made from the number of times per day a substance is injected, inhaled, snorted, or smoked.

Risk behaviour

1 Thinking about your use of psychoactive substances, have you:

- Never injected
 Injected prior to one year ago
 Injected in the last 12 months
 Unknown

If ever injected, answer the following questions:

i) During the past 90 days, on how many days did you inject any kind of psychoactive substance? days

ii) Have you ever shared a needle, syringe, cooker/spoon or cotton/filter with anyone at any time in your life?

- Yes
 No
 No response

If **Yes**, during the past 90 days, on how many days did you share a needle, syringe, cooker/spoon or cotton/filter with anyone? days

During the past 90 days, with how many people have you shared? people

2 How often do you use condoms with your sexual partner or partners?

- Never
 Sometimes
 Always

During the past 90 days, how many times have you had unprotected sex? times

3 During the past 90 days, on how many days have you driven a motor vehicle or used a machine at the workplace while under the influence of alcohol or other psychoactive substances? days

Health and correctional service utilisation

1 Thinking about physical health problems, during the past 90 days, how many:

- times have you had to go to the emergency room times
- nights total did you spend in the hospital nights
- times did you have an outpatient surgical procedure times
- times did you see a doctor in an office or outpatient clinic times

2 a) Thinking about mental health problems, during the past 90 days, how many:

- times have you had to go to the emergency room times
- nights total did you spend in the hospital nights
- times did you see a doctor in an office or outpatient clinic times

b) Are you currently in any type of treatment or counselling for mental or emotional problems?

Yes

No

No response

3 Over the last 90 days, how many days have you received alcohol or substance use treatment at the following places?

- a hospital overnight for withdrawal or related problems days
- an inpatient substance use treatment facility (3 -90 days) days
- a long-term (3 to 12 months) residential program or therapeutic community for substance use disorder treatment days
- a methadone or other opioid treatment program days
- an assessment or outpatient substance use treatment facility sessions
- a mental health centre or facility as an outpatient sessions
- an employee assistance program sessions
- a family and/or marital counselling service sessions
- an emergency room days
- a private doctor's office visits
- a prison or jail days
- some other place (please describe _____) days

4 a) How many self-help meetings, (e.g., AA, NA, ACOA) have you attended for your substance use problem in the past 90 days? meetings

b) How many self-help meetings have you attended for issues other than substance use problems in the past 90 days? meetings

5 a) During the past 90 days, how many days have you been on probation or parole or been in jail or custody?

- Probation days
- Parole days
- Jail/prison/closed custody days
- Open custody days

b) During the past 90 days, how many times have you been charged for breaking the law (please do not count minor traffic violations)? times

Were you charged with:	Please check if Yes	# of charges in the last 90 days
• driving while impaired	<input type="checkbox"/>	<input type="checkbox"/>
• drunkenness or other liquor law violation	<input type="checkbox"/>	<input type="checkbox"/>
• possession, distribution, or sale of illegal substances	<input type="checkbox"/>	<input type="checkbox"/>
• sexual assault	<input type="checkbox"/>	<input type="checkbox"/>
• theft (including B&E, theft over and theft under)	<input type="checkbox"/>	<input type="checkbox"/>
• violence against family or others	<input type="checkbox"/>	<input type="checkbox"/>
• major crime	<input type="checkbox"/>	<input type="checkbox"/>
• Other (please describe _____)	<input type="checkbox"/>	<input type="checkbox"/>

Client Motivation

INSTRUCTIONS:
Please indicate whether you agree or disagree with each of the following statements by placing the number that best reflects your own personal opinion in the blank provided. Remember, there are no right or wrong answers, and your responses are completely confidential.

Treatment entry questionnaire: Use the following scale to make your ratings		Strongly Disagree	Strongly Agree
1	If I remain in treatment it will probably be because I feel that it's the best way to help myself.	1	2 3 4 5 6 7
2	I plan to go through with a treatment program because I'll hate myself if I don't get my habit under control.	1	2 3 4 5 6 7
3	I have agreed to follow a treatment program because I was referred for treatment by the legal system.	1	2 3 4 5 6 7
4	I plan to go through with a treatment program because it's a challenge to learn how to live without misusing psychoactive substances.	1	2 3 4 5 6 7
5	I plan to go through with a treatment program because my friends and family won't approve of me unless I do.	1	2 3 4 5 6 7
6	Being in a program is a way for me to avoid getting punished for my behaviours.	1	2 3 4 5 6 7
7	I decided to enter a program because I was interested in getting help.	1	2 3 4 5 6 7
8	I decided to enter a program because I won't like myself very much unless my substance use problem is under control.	1	2 3 4 5 6 7
9	I had no choice about coming into a treatment program.	1	2 3 4 5 6 7
10	I plan to go through with the treatment program because having a substance use problem makes it hard for me to do things I want to do.	1	2 3 4 5 6 7

	Strongly Disagree	Strongly Agree
11 My family made sure that I entered a program.	1 2 3 4 5 6 7	
12 If I remain in treatment it will probably be because others will be angry with me if I don't.	1 2 3 4 5 6 7	
13 I decided to enter a program because I really want to make some changes in my life.	1 2 3 4 5 6 7	
14 I have agreed to follow a program because I want others to see that I am really trying deal with my habit.	1 2 3 4 5 6 7	
15 I plan to go through with treatment because I'll be ashamed of myself if I don't.	1 2 3 4 5 6 7	
16 I decided to enter this program because no one other than myself can change the way I am.	1 2 3 4 5 6 7	
17 The reason I am in treatment is because other people have pressured me into being here.	1 2 3 4 5 6 7	
18 If I remain in treatment it will probably be because I'll feel like a failure if I don't.	1 2 3 4 5 6 7	
19 I plan to go through with a treatment program because I'll get into trouble with the law if I don't remain in treatment.	1 2 3 4 5 6 7	
20 I plan to go through with a treatment program because I have freely chosen to be here.	1 2 3 4 5 6 7	
21 If I remain in treatment it will probably be because people will think I'm a weak person if I don't.	1 2 3 4 5 6 7	
22 I decided to enter a program because it feels important for me personally to deal with my substance use problem.	1 2 3 4 5 6 7	
23 I have agreed to follow a treatment program because I'll get in trouble with my friends and family if I don't follow all the guidelines.	1 2 3 4 5 6 7	
24 I plan to go through with a treatment program because not having problems due to substances is a choice I really want to make.	1 2 3 4 5 6 7	
25 My friends strongly pressured me to come into a program.	1 2 3 4 5 6 7	
26 If I remain in treatment it will probably be because I'll feel very bad about myself if I don't.	1 2 3 4 5 6 7	
27 I have agreed to follow the procedures of the treatment program because it's a personal challenge for me to deal with my problem.	1 2 3 4 5 6 7	
28 I have agreed to follow a treatment program because I was pressured to come.	1 2 3 4 5 6 7	
29 I decided to enter a program because people will like me better when I have dealt with my habit.	1 2 3 4 5 6 7	
30 I was basically forced into a treatment program.	1 2 3 4 5 6 7	

Comments about case examples

Whereas the prior cases in this workbook presented evaluations related to either coverage or process, the following two cases incorporate questions related to both coverage and process.

The first case example describes the evaluation of an alcohol home detoxification service in the United Kingdom. The evaluator wanted to know about coverage issues, such as demographic and clinical characteristics of clients, and also wanted to know about process issues, such as number of completed detoxifications, client workloads for nurse practitioners, and average mileage accrued while driving to see clients. Aspects of cost evaluation (Workbook 5) and client satisfaction evaluation (Workbook 6) also were included. Of note, the case author/evaluator describes procedures for developing a new computer-based client tracking system. With no prior experience with the software, this task was completed in less than 24 hours. Evaluation efforts were worthwhile, as re-

sults were used to increase awareness of the detoxification programme and justify further funding.

The second case describes preliminary results from a Swiss evaluation of the medical prescription of narcotics for heroin-dependent people. Evaluators used a variety of data collection methods, including treatment programme records, patient interviews, and third party information. They assessed coverage issues such as participant characteristics, and also process issues such as adherence to treatment and safety of the narcotic prescriptions.

It is noteworthy that neither of these cases focused upon treatment efficacy or outcome. Rather, the main questions centered around the process of treatment itself. Evaluations of this type are important to establish confidence that treatment is serving the intended clients and being conducted in the desired manner.



Case example of a process evaluation

Process evaluation of alcohol home detoxification and assessment

The author alone is 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?

Alcohol home detoxification and assessment (AHDA) (or community detoxification) whilst not new, is a recent, expanding development in community service provision. A fundamental concept is that of thorough assessment of those individuals referred for treatment during alcohol withdrawal. An holistic and eclectic assessment addresses two key questions (Stockwell 1987):

- Is there a need for any medication to alleviate withdrawal symptoms?
IF YES:
- Are there any reasons for *not* keeping the individual within the home environment for detoxification?

Formally, the role of developing AHDA services lay with the statutory sector (National Health Service - NHS). However, over the last seven years, specialist voluntary sector services have looked towards

employing a qualified nurse(s) to develop and evaluate AHDA to:

- compliment the existing counselling services;
- provide an alternative to inpatient care;
- ensure that those who need inpatient care during alcohol withdrawal receive the appropriate intervention; those who need clinical supervision but do not require intensive inpatient supervision during alcohol withdrawal can do so within the home environment safely; and of significant importance, those who do not need medication or supervision during alcohol withdrawal receive the right level of intervention from appropriate sources without inappropriate use of limited resources.

This case study looks at the processes of evaluation used by a voluntary sector service (Suffolk Community Alcohol Service (SCAS)) during a three year AHDA pilot project (January 1994-December 1996). The case study will also briefly discuss the value of the Advantage SM database in AHDA evaluation (see Appendix 7).



About SCAS

SCAS functions as a central source of information, advice, training and education, counselling, organisation and collaborative work in the field of alcohol use throughout the county of Suffolk. The predominant part of the service facility is in East Suffolk. It became apparent in 1992 that during the six years of operation, SCAS had seen an increase of 296% in requests for help, advice and intervention. One consequence of the developing referral rate was that agency staff were increasingly being called upon to provide an alternative to inpatient detoxification for problem drinkers requiring short-term, intensive, specialist and clinical intervention (Cooper, 1992). In response to the increase in referrals, and the identified gap in service provision, SCAS proposed to establish a three year project to develop and assess the need for an alternative to inpatient detoxification (i.e., a AHDA service).

It was suggested that a Registered Nurse, specialising in home detoxification, could provide a cost effective alternative to in-patient care, and that the service would go some way towards meeting the present shortfall in service provision for problem drinkers in East Suffolk. A funding proposal was submitted, and approved, for joint social services and health authority funding for the AHDA East Suffolk project. SCAS provided, and managed, the AHDA project. The initiative came from the director, Mary Jeffries.

The alcohol home detoxification and assessment (AHAD) project accepted referral from any source, including self. The primary criteria for referral were that the individual required detoxification. The hypothesis was that:

- many individuals requiring detoxification were admitted to hospital unnecessarily for clinical supervision during the withdrawal period;
- those who were detoxicated at home were more likely to complete the detoxification;

- those who were detoxicated at home were satisfied with the service provided;
- many of the referrals received did not require inpatient or home detoxification.
- evaluation of the outcome of each referral and intervention would give some indication of the impact on other services, in particular the SCAS counselling service;
- a period of 6, 12 and 24 month follow-up would be beneficial in terms of service development. However, it was agreed that this information would not have any significant bearing on the effectiveness of alcohol home detoxification. It is generally acknowledged that other interventions would have a significant impact on long term outcome and that clinically supervised detoxification is a small (rather than the whole) part of any treatment package (Cooper, 1994).

What resources were needed to collect and interpret the information?

In order to assess the effectiveness of the service, SCAS needed to collect data capable of providing some answers to the previously mentioned issues and questions. A nurse practitioner (Registered Nurse) was appointed for the project whose areas of responsibility were:

- assessment and provision of clinical care to the client group;
- evaluation of the project; and,
- communication and public relations during project development.

It was agreed that two forms of data collection were required: (a) the means to collect individual data from the client, supporter and other professional and services involved in the care on an individual referral basis; (b) the means to bring together the data for purposes of collation and evaluation.

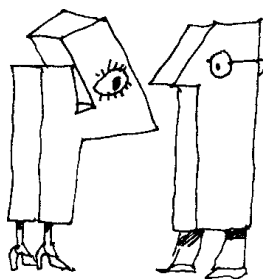
It was intended that the Nurse Practitioner (NP) would collect the data on an ongoing basis. The NP would have the support of a part-time (20 hours per week) Administrative / Research Assistant. At the end of the project, three months had been set aside for the NP to analyse and report the data. Data was in fact collected by the NP, but not systematically collated; hence, the subsequent hiring of this author to collage, analyse and report available data which was then recycled into the SCAS report quoted.

The work took eight very long working weeks (seven days per week)! It still is believed, as was recommended in the initial proposal for SCAS funding (prepared by this author), that the Nurse Practitioner and one part-time (20 hours per week) Administrative / Research Assistant and a computer with a compatible programme, could undertake this project.

How were the data collected?

Individual client record

The Individual Client Record (appendix 1) was a hand-completed form, which was the first stage in the tracking system of all referrals to the project. Each entry corresponded to the database entry used for the collation and evaluation of the data. As a numerical system was felt to be the most appropriate, a separate score sheet was produced as an aid to memory, on which the database would be designed (see appendix 2 for detailed description of coding).



Information recorded on the AHDA individual client record was entered onto the Access database manually using the AHDA code sheet to change responses into a numerical equivalent. For example, the source of referral could be a general practitioner (GP), coded as '1,' or a community psychiatric nurse (CPN), coded as '4.' A separate record of actual client contact was recorded in a diary and hand collated to allow for cross-reference.

Tracking system

The major part of the information required to monitor the effectiveness of the project was the tracking system. It was decided to use the Access database system, which forms part of the Microsoft Office Professional software package.

Client awareness

It was agreed that both the client and supporter should be fully informed of the purpose of the project, and that as part of the assessment process a full explanation of the purpose of the project would be given. Assurances relating to confidentiality of information collected for evaluation were made. It was explained that a refusal to allow such information to be passed on would NOT exclude the individual from treatment. The opportunity to decline or withdraw permission was also given at any time. No one refused permission.

Data collection

The nurse practitioner collected data from various sources. These data, together with the data from the client and supporter satisfaction questionnaire and GP questionnaire, was hand recorded onto the database by the author. Using a combination of computer aided collation, and simple hand analysis, a crude picture could be drawn as to the effectiveness of the AHDA project.

Client and supporter satisfaction scale

Recognised client and supporter satisfaction scales are already available and have established validity (Stockwell et al, 1990 - Appendix 3 & 4). Some minor modifications to replace the sliding scale with a numerical system for ease of evaluation were used.

Home detoxification follow-up: The Home Detoxification Follow-up from consisted of five active parts (appendix 5). The follow-

up agreed upon for the 6, 12, 24 months following detoxification was not designed to assess the success of the detoxification itself. It was introduced as an attempt to see if interventions following detoxification produced any significant changes in drinking pattern. It was merely a “*look and see*” exercise which may or may not assist in future service planning.

The data collected on the client (appendix 3) and supporter (appendix 4) satisfaction scale was first entered on a specially designed Access database using the numerical coding on the forms. The select button was used to draw out the relevant section of data which was hand collated using percentage and simple numerical comparison. The sections allowing for free comment were recorded in full with some minor discussion of content.

In order to balance out consistently high levels of satisfaction recorded in different settings, the neutral responses were regarded as possibly negative and therefore, positive ratings of below 75% was regarded as cause for concern (Pelletier 1985).

The scale would be applied only to those who completed a detoxification in the home. It was acknowledged that during a three-year period some individuals might require more than one detoxification. Therefore, only one questionnaire would be sent to the client and the supporter. All questionnaires would be sent at the end of the project in three waves.

Wave 1: A pre-coded questionnaire was sent individually by the nurse practitioner to each client and supporter. For those who had received more than one detoxification, a paragraph in the letter requested that the individual base the response on the last detoxification occasion. The letter also reaffirmed the purpose of the project and thanked the individual for his or her assistance. A stamped addressed envelope was included - addressed to the nurse practitioner. Returned questionnaires were logged on the '*Individual Cli-*

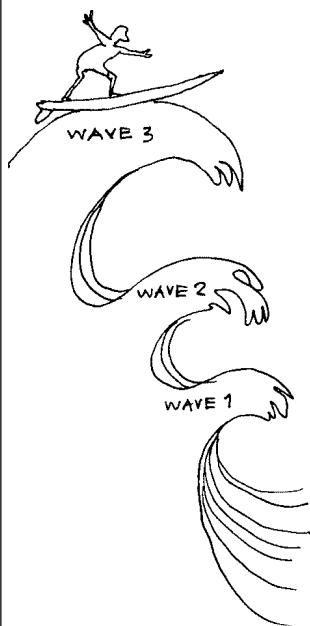
ent Record' (appendix 1). Those individuals refusing to complete the form were logged accordingly and no further contact was made.

Wave 2: Two weeks after the closing date for return of Wave 1 questionnaire, a second questionnaire was sent to non-respondents. Again the accompanying letter refreshed the reader to the purpose of the project and asked for assistance. This letter carried a paragraph that stated that as part of the survey process those who had not responded by the deadline date would receive a telephone call from the nurse practitioner. If the client or supporter did not wish to receive such contact, it was requested s/he returned the blank form in the reply paid envelope and no further contact would be made. The '*Individual Client Record*' (appendix 1) was updated.

Wave 3: Two weeks following the deadline, non-respondents received a follow-up call from the nurse practitioner. This was undertaken in a low-key fashion. It was felt important that the individual did not feel pressured. The approach was that if there was something wrong, it was important to us. The '*Individual Client Record*' (appendix 1) was updated, and completed.

The home detoxification general practitioner form

The Home Detoxification General Practitioner Questionnaire (appendix 6) was originally designed by Kaner & Masterson (1996) and was used with minor adaptations for local needs. Using a separate Access database, and the YES = 1, NO = 2 numerical system, it was possible to hand draw information from the computer for numerical and percentage analysis. The free comments were reproduced in full. The questionnaire was sent to every GP in the East Suffolk area and consisted primarily of Yes or No type responses (later converted to numerical equivalent for ease of collation).



How were the data analysed?

Operational activity

One area of interest to the service managers was how many actual clinical working hours were available to the nurse practitioner. From the gross operational days of the project, the following were deducted to produce a “*clinical operational time*”: annual leave; bank holidays; sickness; training sessions attended as a student; training sessions given to others; interim report writing; crown court attendance; clinical supervision; professional practice and team meetings; management supervision.

Most of this was taken from time sheets, the nurse practitioner’s personal profile and diary, and the clinical supervisor. Compilation was by pen and paper. By deduction of this data to establish a “*clinical operational time*,” it was possible to ascertain how many individuals received assessment, and detoxification supervision within the clinical operational time frame.



Mileage

East Suffolk covers a wide area. As such, it was felt to be of value if some emphasis was given to travel time as this does have an effect on the number of client contacts. This was completed at the end of the project by using the official monthly mileage returns. From these it was possible to establish: the total mileage; the average mileage per day; the longest day trip; the training mileage and the average trip.



Client contact

From the individual clinical records it was possible to establish the number of individual client contacts (how many times was an individual seen in total) made during the project. From this it was possible to calculate the average daily, weekly and monthly contact rate. Unfortunately this information only in-

cluded direct client contact and *not* indirect contact with the supporter, the referring agent, by telephone or activities involving mail, etc. This was a shortcoming in the planning process of evaluation.

Cost

A primary concern to all funders and service providers is “How much does it cost?” and “Is it cost effective?”. Interestingly, it was not possible to establish exactly how much it would cost to keep a patient for a 24-hour period on an acute mental health ward, this being the usual area for in-patient detoxification in the UK from the statutory sector - NHS. So it was agreed to use the bed occupancy figure established in the project proposal, on which the 3 year funding was based, and compare this with the total funding cost as at the project proposal, thus disallowing any built-in inflationary costs (Cooper, 1992).

Using the total completed detoxifications and the average duration of the home detoxification, with the average in-patient detoxification suggested by Cooper (1985, 1988), it was possible to provide a daily cost, and an individual client cost, for both in-patient and home detoxification and compare these.

Tracking system

As mentioned earlier, it was decided to use the Access database system, which forms part of the Microsoft Office Professional software package, because the design techniques were easy to follow. Individual fields were created on the database to correspond with the entries on the “*Individual Client Record*.”

Whilst it is possible to do some specific data collection with this package and with the sister program Excel, computer competence was limited in such techniques. The Access database allowed for simple numerical data entry, and by using the “button” filter system, supported by hand calculation, to bring together the essential data, it was possible to effectively evaluate the collated data. The

author, with no previous experience of the system, developed the database within 24 hours. Using this system, the following data were analysed:

- how many collective referrals were received;
- who made the referral;
- client gender;
- age range of clients;
- employment status of the clients;
- number of referral occasions the individual had;
- number of referrals received weekly and any increase or decrease;
- number of referrals received monthly and any increase or decrease;
- number of the referrals leading to full assessment;
- number of assessments undertaken weekly;
- number of assessments undertaken monthly;
- reasons for no assessment;
- number of referrals leading to detoxification;
- number of completed detoxifications commencing weekly;
- number of completed detoxifications commencing monthly;
- number of completed detoxifications;
- how long did (the completed) detoxification last and how much did it cost;
- reasons for no-completion of detoxification;
- due dates of the 6, 12 and 24 month follow-ups and completed or reasons why they had not been completed;
- completion dates for the client and supporter satisfaction scales for Waves, 1, 2 and 3, how many were completed, and at what wave did we get the response;
- the outcome of each referral or reason why we did not have a known outcome;
- the impact on other services as a result of referrals, assessment or detoxification;
- additional space was provided for any notes for information considered of value.

Client and supporter satisfaction scales

The client and supporter satisfaction scale data were compiled along with data from the *Individual Client Record* (e.g., age), and the nurse practitioners clinical notes (e.g., supporter relationship and sex), using a separate Access database within Microsoft Office Professional. Using a numerical system, responses to each questionnaire was entered on the database.

What did they find out?

The AHDA project had a total of 650 operational days (130 working weeks) of which 480 days (74%) were available for clinical operation. Forty-nine days (7.5%) were spent on clinical and managerial supervision and team meetings and 25 days (4%) divided evenly on education given and received by the Nurse Practitioner (Ayers, 1997).

Mileage accounted for some 19,334 miles, a mean of 36.8 miles per day, for the 27 months of available data. Given the size of the area, this figure was considered reasonable (Ayers, 1997).

As noted above, it was not possible to obtain an accurate cost for one, 24 hour, inpatient stay from the acute mental health unit. However, by using an agreed upon 1993 figure (£173 per day), it was possible to provide some crude cost comparisons. Of the 79 completed home detoxification stays averaging eight days, the mean cost per client was £1,474.93 or £184.36 per day. The results suggested that AHDA was slightly more expensive than the 1993 cost of £173 per day for in-patient detoxification. However, in terms of effectiveness, data collected enabled the project to claim:

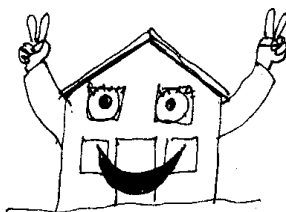
- that 90% of those individuals who required medically supervised detoxification did not progress to in-patient care. The figures available for inpatient bed occupancy



during the AHDA project indicated a gradual decline in demand;

- that less than 40% of those referred for detoxification, required a medically supervised detoxification;
- that home detoxification was more likely to be completed in comparison to inpatient detoxification;
- the average detoxification at home lasted 8 days in comparison to 12 days inpatient detoxification (Ayers, 1997).

The true value of any service lies in the satisfaction of the client and supporter. Forty-five (57%) of the 79 individuals who completed detoxification responded to the client satisfaction scale. Twenty-eight (35%) of supporters responded to the supporter satisfaction scale. The results suggested that overall, 78% of clients and supporters were satisfied with the home detoxification. Whilst there were some minimal comments in terms of over-or-under sedation, the level of dissatisfaction with medication was minimal. In general, it was the supporter who felt less supported and it has been agreed that information given to the supporter needs to be more overt in any future service development (Ayers, 1997).



The home detoxification follow-up questionnaire had some design faults. For example, a future questionnaire would need clarification that “supporter” referred to other professional or agency and not the family member or friend. The form also failed to account for changes in the client treatment goal, (e.g., whilst the individual may have stated total abstinence as the goal, during the 12 or 24 months, s/he may have commenced drinking at a socially acceptable level). However, the response on the questionnaire could not distinguish between trouble-free alcohol consumption and relapse.

These difficulties notwithstanding, the data suggested that those individuals who had completed detoxification at home, and had follow-up counselling from a SCAS counsellor appeared to maintain their chosen treatment goal longer than those with other professional support, or no intervention. However, this area would need a more scientific analysis before any significant claims could be made.

Seventy-seven percent (n=14) of rural and 85% (n=23) urban practices responded to the GP questionnaire, involving 47% (n=33) rural and 61% (n=75) individual GP's. Overall, 58% (n=60) had reported carrying out detoxifications at home, of which 45 GP's were in rural practices. Sixty percent of respondents had received a visit from the nurse practitioner of which 46% had referred one or more client to the nurse practitioner in comparison to the 20% from those GP's who had not received a nurse practitioner visit (Ayers, 1997).

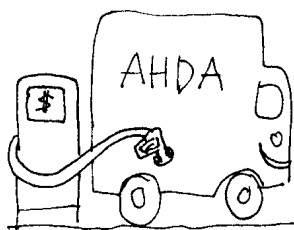
There were many accompanying letters and calls offering support for the project, and requesting personal contact. The questionnaire also acted as additional promotional material for the service project, prompting an increase in referrals from those who had previously not used the service. The data seemed to suggest that those GP's were the client outcome had been successful in terms of completion and reduced GP contact were more inclined to feel the value of the service in comparison to those GP's who had an unsuccessful detoxification referral. Overall, 67% of GP's were satisfied with the service. From the “comment” received, the information suggested a need for a concerted training programme for GP's in terms of the nature of alcohol related problems, and client expectation. Some GP's quoted a lack of motivation from the client, pressure of work and time, cost implications, and lack of knowledge as reasons for not engaging this client group.

How were the results used?

It is not possible nor practical to detail all the results from the AHDA project. Much of the data is confidential forming part of a report to the management committee. In today's highly competitive market within the UK NHS, such data is a valuable source of support needed to secure funding for subsequent next years.

As a result of the service evaluation some areas involving service development have become clear, and include:

- An increased level of public relations and training activity with the GP. Of the 267 referrals received, the Nurse Practitioner assessed 220 individuals, of which 117 were first time referral and 38 second. 87 were from GP's and 72 from the SCAS counselling service (Ayers, 1997). Many of the referrals would have been more appropriate, had the referring agent had more knowledge in the assessment of clinical intervention during detoxification. It is possible, that the large amount of referrals from the GP included some that were a means of side stepping the local hospital procedure.



- Waiting time was felt to be reasonable with 40% of individuals being seen within 48 hours. Some modification to the initial assessment intervention has been made by SCAS to improve on this figure.
- The AHDA has been funded for a further 18 months, whilst a review of all service provision for substance misusers in Suffolk takes place. The project will continue with an ongoing evaluation.

Acknowledgement

I am grateful for the co-operation received from the SCAS throughout the development of this case study. I am especially grateful to Ms Mary Jeffries, Director, SCAS, and Mr Colin Ayers, Nurse Practitioner without whose support the above would not have been completed. Also to Jo, who acted as proof-reader and sound board. Any errors and or omissions are the sole responsibility of the author.

- More attention to the supporters' individual needs will be given on each visiting occasion.
- All referrals to the AHDA project will have an initial telephone inquiry to aid filtering of inappropriate referrals. A full assessment would only be completed if there were strong indications that home detoxification was indicated. A trained administrative assistant, to free up the Nurse Practitioner's time would complete the follow-up questionnaire. The Nurse Practitioner would increase the role of consultant supporting and encouraging professionals wishing to supervise home detoxification. All clients would receive at least one daily visit, with clear written justification should this not be appropriate. A client checklist at salient points in detoxification, and care plan, would be maintained at the client home. More attention to the client's perceived level of comfort during detoxification would be given.
- A GP satisfaction questionnaire to be completed following each detoxification may be introduced.

This case study is believed to be representative of the type of information one could expect from a small, voluntary sector service. The SCAS evaluation aimed to provide sufficient information to satisfy the funding agent with a view to establishing continued financial support. It is sufficient to expect one or two members of staff to develop and maintain this information whilst undertaking clinical duties.

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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 _____

2 _____

3 _____

Weaknesses of the case study

1 _____

2 _____

3 _____

Case example appendix 1

AHDA Individual Client Record

Note ALL sections MUST be completed

File Complete?	Yes	No
-----------------------	------------	-----------

File Dead?	Yes	No
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Code	
-------------	--

HEADING	ENTRY	HEADING	ENTRY
Source		CssOcc1	
Sex		CssOcc1	
Age		DateCssOcc1	
Employment Status		Occ1Rtn	
Referral		Occ1RtnDate	
WkNoRef		State CssOcc1	
MthNoRef		CssOcc2	
Assessed		DateCssOcc2	
AssessDate		Occ2Rtn	
WkNoAss		Occ2RtnDate	
MthNoAss		State CssOcc2	
1 State		CssOcc3	
Detoxed		DateCssOcc3	
DetoxDate		Occ3Rtn	
WkNoDtx		Occ3RtnDate	
MthNoDtx		State CssOcc3	
DetoxEnd		Outcome	
DetoxLength		SssOcc1	
2 State		DateSssOcc1	
FUDue6/12		SupOcc1Rtn	
FUDone6/12		SupOcc1RtnDate	
DateFU6/12		State SssOcc1	
State 6/12		SssOcc2	
FUDue12/12		DateSssOcc2	
FUDone12/12		SupOcc2Rtn	
DateFU12/12		SupOcc2RtnDate	
State 12/12		State SssOcc2	
FUDue24/24		SssOcc3	
FUDone24/24		DateSssOcc3	
DateFU24/24		SupOcc3Rtn	
State 24/24		SupOcc3RtnDate	
		State SssOcc3	

Case example appendix 2

AHDA Code Sheet

Note ALL sections MUST be completed

HEADING	MEANING	CODE
Total	Total number of referral occasions	AutoNumber
Code	Client Number	Enter Client Number
Source	Who made the referral	1 GP 2 SCAS Counsellor 3 Self 4 CPN 5 SHO's 6 Relative/Partner 7 SSD (SW) 8 Probation 9 CDT 10 Age Concern 11 Employer 12 Psychiatrist 13 Registrar 14 Warden 15 General Hospital 20 Unknown
Episode	Is this the 1 st , 2 nd , 3 rd etc., referral	Number each referral - 1, 2, 3, etc.,
Sex	Client Gender	1 Male 2 Female
Age	Clients Age	Enter age 11 Unknown
Employment Status	Employment Status	1 Employed 2 Unemployed, 3 Semi-retired 4 Retired, 5 Houseperson 6 Unknown
Referral	Date Referral Received	Enter Date
WkNoRef	In what week number was the referral received, e.g., 1, 20, 52, etc.	Enter week number
MthNoRef	In what month number was the referral received, e.g., 1, 6, 12, etc.	Enter month number
Assessed	Was the client assessed?	1 Yes 2 No 3 N/A
AssessDate	Date of assessment	Enter Date
WkNoAss	In what week number was the assessment received, e.g., 1, 20, 52, etc	Enter week number
MthNoAss	In what month number was the assessment received, e.g., 1, 6, 12, etc.	Enter month number
1 State	Why was the referral not assessed?	State - use as few words as possible. This may be coded when we get an idea of type
Detoxed	Was the client detoxicated	1 Yes 2 No 3 N/A

HEADING	MEANING	CODE
DetoxDate	Date detoxication commenced	Enter Date
WkNoDtx	In what week number was the detox started, e.g., 1, 20, 52, etc	Enter week number
MthNoDtx	In what month number was the detox started, e.g., 1, 6, 12, etc.	Enter month number
DetoxEnd	Date detoxication ended	Enter Date
Detoxlength	For how many days did the detoxication last	Enter Number of Days
2 State	Why did you not detox the client	State - use as few words as possible. This may be coded when we get an idea of type
FUDue6/12	Date the 6 month follow-up due	Enter Date
FUDone6/12	Has the 6-month follow-up completed?	1 Yes 2 No 3 N/A
DateFU6/12	Date the 6 month follow-up completed	Enter Date
State 6/12	Why the 6 month follow up has not been completed	State - use as few words as possible. This may be coded when we get an idea of type
FUDue12/12	Date the 12 month follow-up due	Enter Date
FUDone12/12	Has the 12-month follow-up completed?	1 Yes 2 No 3 N/A
DateFU12/12	Date the 12 month follow-up completed	Enter Date
State 12/12	Why the 12 month follow up has not been completed	State - use as few words as possible. This may be coded when we get an idea of type
FUDue24/24	Date the 24 month follow-up due	Enter Date
FUDone24/24	Has the 24-month follow-up completed?	1 Yes 2 No 3 N/A
DateFU24/24	Date the 24 month follow-up completed	Enter Date
State 24/24	Why the 24 month follow up has not been completed	State - use as few words as possible. This may be coded when we get an idea of type
CssOcc1	Was the Client Satisfaction Scale sent at first posting?	1 Yes 2 No 3 N/A
DateCssOcc1	Date the Client Satisfaction Scale was sent at first posting?	Enter Date
Occ1Rtn	Was the Client Satisfaction Scale completed at the first posting?	1 Yes 2 No 3 N/A
Occ1RtnDate	Date the completed Client Satisfaction Scale was returned - first posting?	Enter Date
State CssOcc1	Why was the Client Satisfaction Scale not completed at first posting?	State - use as few words as possible. This may be coded when we get an idea of type
CssOcc2	Was the Client Satisfaction Scale sent at second posting?	1 Yes 2 No 3 N/A
DateCssOcc2	Date the Client Satisfaction Scale was sent at second posting?	Enter Date
Occ2Rtn	Was the Client Satisfaction Scale completed at the second posting?	1 Yes 2 No 3 N/A
Occ2RtnDate	Date the completed Client Satisfaction Scale was returned - second posting?	Enter Date
State CssOcc2	Why was the Client Satisfaction Scale not completed at second posting?	State - use as few words as possible. This may be coded when we get an idea of type
CssOcc3	Was the client contacted by telephone on the third occasion following none return on second occasion of Client Satisfaction Scale?	1 Yes 2 No 3 N/A
DateCssOcc3	What date did you make telephone contact?	Enter Date

HEADING	MEANING	CODE
Occ3Rtn	Did the client return the Client Satisfaction Scale on the third occasion?	1 Yes 2 No 3 N/A
Occ3RtnDate	What date was the Client Satisfaction Scale returned on the third occasion?	Enter Date
State CssOcc3	Why was the Client Satisfaction Scale not completed at third posting?	State - use as few words as possible. This may be coded when we get an idea of type
Outcome	If the client was not detoxicated following assessment what happened?	1 Inpatient care East Suffolk 2 Inpatient care outside 3 Inpatient rehab East Suffolk 4 Inpatient rehab outside 5 SCAS Counselling 6 No further action (NFA) Client request 7 Under care of CPN 8 Under care of CDT 9 Self referral - private care 10 Referred on CAT out of area 11 Unknown 12 Prison
SssOcc1	Was the Supporter Satisfaction Scale sent at first posting?	1 Yes 2 No 3 N/A
DateSssOcc1	Date the Supporter Satisfaction Scale was sent at first posting?	Enter Date
SupOcc1Rtn	Was the Supporter Satisfaction Scale completed at the first posting?	1 Yes 2 No 3 N/A
SupOcc1RtnDate	Date the completed Supporter Satisfaction Scale was returned - first posting?	Enter Date
State SssOcc1	Why was the Supporter Satisfaction Scale not completed at first posting?	State - use as few words as possible. This may be coded when we get an idea of type
SssOcc2	Was the Supporter Satisfaction Scale sent at second posting?	1 Yes 2 No 3 N/A
DateSssOcc2	Date the Supporter Satisfaction Scale was sent at second posting?	Enter Date
SupOcc2Rtn	Was the Supporter Satisfaction Scale completed at the second posting?	1 Yes 2 No 3 N/A
SupOcc2RtnDate	Date the completed Supporter Satisfaction Scale was returned - second posting?	Enter Date
State SssOcc2	Why was the Supporter Satisfaction Scale not completed at second posting?	State - use as few words as possible. This may be coded when we get an idea of type
SssOcc3	Was the supporter contacted by telephone on the third occasion following none return on second occasion of Supporter Satisfaction Scale?	1 Yes 2 No 3 N/A
DateSssOcc3	What date did you make telephone contact?	Enter Date
SupOcc3Rtn	Did the supporter return the Supporter Satisfaction Scale on the third occasion?	1 Yes 2 No 3 N/A
SupOcc3RtnDate	What date was the Supporter Satisfaction Scale returned on the third occasion?	Enter Date
State SssOcc3	Why was the Supporter Satisfaction Scale not completed at third posting?	State - use as few words as possible. This may be coded when we get an idea of type
Notes	General identifier	Additional comment which may assist recall at a later date - use as few words as possible. This may be coded when we get an idea of type

Case example appendix 3

Confidential Client Satisfaction Scale

Date: _____ Code: _____

These questions are designed to help us evaluate the detoxification procedure and its effectiveness. Please circle ONE number, per question, that is closest to your feelings.

Please answer ALL the questions

1 On the whole, how did you feel during your withdrawal from alcohol?

- a) Very comfortable Very uncomfortable
- b) Well supported Not well supported
- c) Not craving for alcohol Craving for alcohol
- d) Very calm Very anxious
- e) In control of yourself Controlled by others
- f) Very determined Not at all determined
- g) Not at all tempted Very tempted to drink
- h) Well informed Not at all well informed

2 Was the medication:

- a) Too much Too little
- b) Too long Too short

3 Were the visits from the nurse practitioner:

- Too frequent Not frequent enough

4 During the home detoxification, how helpful were the following:

- a) Support from your partner/friend Vital Unhelpful
- b) Support from the nurse practitioner Vital Unhelpful
- c) Support from other agency Vital Unhelpful
(Please state)
- d) Support from your GP Vital Unhelpful
- e) Visit from the nurse practitioner Vital Unhelpful
- f) Drugs prescribed by your GP Vital Unhelpful
- g) The physical check up Vital Unhelpful
- h) The breath analyser Vital Unhelpful

5 What did you like most, or find the most helpful about the home detoxification procedure?

6 What did you like the least, or find the least helpful about the home detoxification procedure?

Thank you for completing this form. Please check that you have answered ALL the questions

Case example appendix 4

Confidential Supporter Satisfaction Scale

Date: _____ Code: _____

These questions are designed to help us evaluate the detoxification procedure and its effectiveness. Please circle ONE number, per question, that is closest to your feelings.

Please answer ALL the questions

1 On the whole, how did you feel being involved in this home detoxification?

- a) Very confident Not at all confident
- b) Well supported Not well supported
- c) Well informed Not well informed
- d) Very calm Very anxious
- e) In control Not in control

2 Were the visits from the nurse practitioner:

- Too frequent Not frequent enough

3 During the home detoxification, how helpful were the following:

- a) The information sheet for relatives/friends Vital Unhelpful
- b) Support from the nurse practitioner Vital Unhelpful
- c) Support from other agency Vital Unhelpful
- (Please state)
- d) Support from the GP Vital Unhelpful
- e) Drugs prescribed by the GP Vital Unhelpful
- f) The breath analyser checks Vital Unhelpful
- g) Having a telephone number for immediate advice Vital Unhelpful

4 What did you find most helpful during this home detoxification?

5 What did you find the least helpful during this home detoxification?

Thank you for completing this form. Please check that you have answered ALL the questions

Case example appendix 5

Home Detoxification Follow-up

Code: _____

Date of Detoxification _____ Completed: _____

Date of follow-up 6/12 12/12 24/24

1 On completion of home detoxification did the client (circle)

Attend SCAS for counselling Yes No Attend a rehabilitation centre Yes No Attend A.A. meetings Yes No Receive any other support Yes No

If yes to .4. state: _____

2 During the past (circle): 6 months 12 months 24 months - did the client

Have an Antabuse programme Yes No Return to old pattern of drinking Yes No

If different drinking pattern, specify (circle):

a) Abstinence Yes No b) Social Drinking Yes No c) Controlled Drinking Yes No d) Relapse Yes No Relapse ++ Yes No

3 Please indicate original resolve (circle):

a) Social Drinking Yes No b) Controlled Drinking Yes No c) Abstinence Yes No

4 Has the client kept to the original resolve (circle): Yes No

5 Drinking status on day of follow-up (state): _____

Comments: _____

Note: Y = Yes, N = No

Case example appendix 6

Home Detoxication General Practitioner Questionnaire

General Practitioners Name: _____

Practice Address: _____

Note: Please circle (Y = Yes, N = No) or state where appropriate

Have you ever carried out a home alcohol detoxification? Yes No

How many times have you been involved in such a procedure during the past year? _____

Did you carry out the detoxification in conjunction with another worker? Yes No

If yes, what profession were they (Nurse, CPN, Health Visitor, other - please specify)

Did you engage the SCAS home detoxification nurse? Yes No

Did you feel satisfied with the outcome(s) of the detoxification(s) Yes No

Could you please say why?

What do you consider to be the main difficulty for a GP, treating patients at home for their alcohol problem?

Would it make it much easier for you to undertake more home based treatments for alcohol problems if:

There was somebody to monitor and visit the patient daily? Yes No

There were suggestions for appropriate medication? Yes No

There was guidance on the assessment of patients suitable for a home detoxification? Yes No

d) There was access to advice and information if uncertain about how to proceed? Yes No

There was information about follow-up counselling or support agencies for alcohol users? Yes No

f) Anything else?

10. Would you be interested to receive a visit from the SCAS nurse practitioner? Yes No

Case example appendix 7

AdvantageSM Software

AdvantageSM

The Alcohol Dependency System (ADS) and the Drug Dependency System (DDS) were comprehensive data collection systems produced by Miriam Healthcare, a private company established in 1992 (Yates, 1996). These packages were capable of supplying all the information outlined in this case study. They also provide the clinical records, client contact - direct and indirect - and various assessment tools and scoring systems, and produce reports in various formats including pie-charts and graphs, pre-formatted letters.

AdvantageSM is a much-improved version of the ADS & DDS system. In comparison to these software packages, this Windows 3:11 and 95 application offers significant improvement in terms of a practical, user-friendly, application. Without prior user knowledge of the upgraded system, manual, instructions or on-line support, the author quickly found his way around the programme, and input data (within the limitations of a demonstration disc). Anyone with knowledge of Microsoft applications such as MS Word, Access or Excel would soon find their way around the application.

Areas of significant improvement in terms of ease of use and access included:

- Ability to quickly update the picklists.
- Change the system access, and access level without compromising security.
- Screen-printing.
- Report printing, e.g., prescription-costing report.

- Prompts to save changes.
- The use of clear green “✓” and red “X” buttons.
- The database report
- Mail and contact addresses.
- Outcome measures.
- Graph with 3D application.

At the time of writing, the author understands that the revised version will also include a specific area to:

Record blood test results, e.g., blood alcohol concentration (BAC), Gamma GT, AST, ALT, and MCV, etc. Urine test results, and daily Breathalyser readings. Monitor and record observations, e.g., blood pressure, pulse, etc., and progress during detoxification and any daily modification of drugs used during detoxification.

The only area of concern was that included in the list of drugs used for detoxification was Heminevrin (chlormethiazole). The British National Formulary (BNF 1995), and the Committee on Safety of Medicines (1987) advise against the use of this drug for alcohol home detoxification.

One key problem to overcome with any software package is to convince the end user that the package is user friendly. The package was easy to use, and one quickly became familiar with the controls and commands. The picture, button and list support was clear. It was easy to get in and out of any area, e.g., from the client record file into subsections of the file, without any real

knowledge of the programme. The 'index file' appearance is familiar to most end users, as is the terminology used in each file and sub-file. Just as important is the ability to print off reports and charts quickly and effectively.

A key benefit of the software is that it could easily be used on a laptop computer, and taken into the client's home. This would obviously mean that input from the client, in relation to the completion of a questionnaire, could be directly applied with minimum supervision. Yates (1996) suggests that the client is more likely to respond truthfully to a computer questionnaire, and that computer software questionnaires be perceived to hold no threat, as long as adequate preparation has been given on the use of the programme. Thus, the client feels less inclined to give a response that will 'please' or influence the outcome.

Such systems, whilst expensive as an initial outlay, recoup the value quickly, in time, and man-hours saved, in collation and report preparation. However, a word of warning, Yates (1994) correctly suggests that the '*client [service provider] may hold unrealistic expectations and not appreciate the changes in work practice required to accommodate the new software.*'

If investment in staff training is not made, then the system will hold no value, however, with sufficient training and support such systems are invaluable to the service provider operational in the proactive field of service provision and justification. The alcohol dependency system (ADS), as a package, has an integrated monitoring and report process for alcohol home detoxification. **DISCLAIMER:** Whilst the author has evaluated the package, he is not an employee or agent of the organisation.

Case example of a process evaluation



Medical Prescription of Narcotics Background and Intermediate Results of a Swiss National Project

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

by
A. Uchtenhagen
A. Dobler-Mikola
F. Gutzwiller

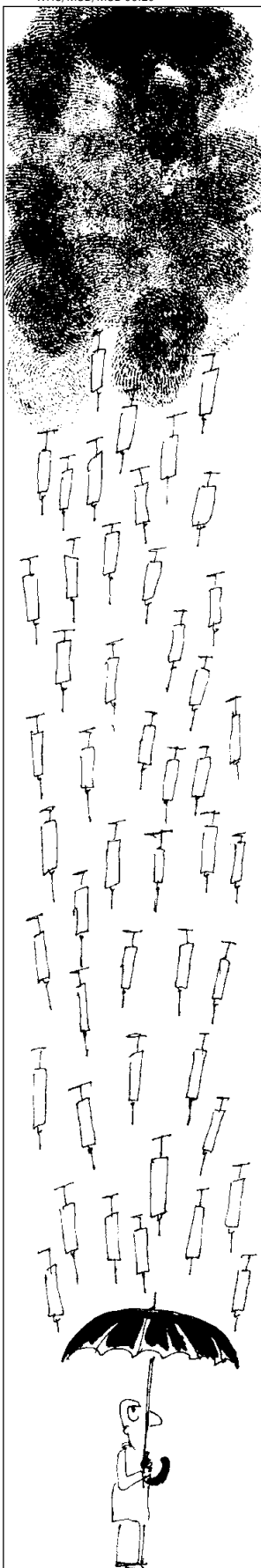
Who was asking the question(s) and why did they want the Information?

After a preparatory phase of about three years, a national project on medical prescription of narcotics started in Switzerland near the end of 1993. It was implemented by the Federal Office of Public Health, based on the Federal Government decree of 13 May 1992 on the "Advancement of the scientific related research for drug prevention and improvement of living conditions of drug addicts" (Verordnung des Bundesrates 1992). In the context of the official Swiss drug policy, the prescription project was only one in a number of initiatives to reduce drug related problems by preventive and therapeutic interventions (Bundesratsbeschluss 1991).

Controlled medical prescription has been part of the Swiss treatment system since the late seventies, but restricted to oral narcotics, mostly methadone. The new project included prescription of intravenous heroin, morphine and methadone. Especially the inclusion of heroin raised great interest, as only England

had a tradition in prescribing pharmaceutical heroin to heroin addicts, and only a few countries used it as a potent analgesic. The Swiss experiment reopened the debate on the eventual usefulness of prescribing heroin to heroin addicts in the framework of a therapeutic setting.

A standing National Expert Committee on drug problems commissioned a study to review all international experience with morphine and heroin prescription (Mino 1990). The study invited further consideration of a diversified prescription scheme, especially the experiment with intravenous morphine for a highly problematic group of heroin users in Amsterdam (Derks 1990, Van Brussel 1995). The diversified prescription of narcotics in Merseyside, England, also invited a reconsideration of prescription practices, although the original work of Dole and Nyswander demonstrated specific advantages of oral methadone in comparison to injectable heroin. Further, heroin prescription in British clinics was to a large extent replaced in the eighties by prescribing oral methadone (Gossop and Strang 1996). The expert committee recommended further experimentation.



The legal basis for an eventual experiment with heroin for heroin addicts was clarified by the Federal Department of Justice. The narcotic law of 19951 in its article 8 provides that heroin can be used for scientific purposes only. It was concluded that a scientific experiment would be justified.

The main objective was to involve, in a therapeutic programme, those heroin addicts who could not or not in a satisfactory way, be contacted by existing treatment programmes. This objective was in line with a policy designed to make treatment available for the largest possible proportion of heroin addicts. The reduction of risk for the spread of HIV-infections was the main motive in addition to a reduction in other types of problems.

Information on scope, size and main conditions of the project is summarised as follows:

Substances involved:

heroin, morphine, methadone

Application:

i.v., p.o., or smoked

Duration of project:

3 years (deadline Dec. 31, 1996)

Size of project:

original plan = 700 participants

(250 receiving heroin)

final plan = 1,000 participants

(800 receiving heroin)

Entry criteria:

- minimum age = 20
- heroin dependence = minimum of 2 years
- other treatment approaches failed
- social/health problems evident
- compliance with programme
- informed consent

Exclusion criteria:

- non-compliance with programme
- violence on the premises

Research agenda:

approved by National Government and by Ethical Committee of Swiss Academy of Medical Sciences

According to Narcotic Law, the project had to be a combination of a scientific and a therapeutic programme detailed as follows:

Therapeutic Programme:

- Comprehensive medical, psychiatric and social assessment
- Comprehensive medical and psychosocial care, including sheltered living (if needed)
- On-site controlled injections (no take-home of injectable substances)

Scientific Programme:

- Data collection from therapeutic programme (medical examinations, laboratory findings, daily dosages of prescribed substances, other treatment data, observations on behaviour e.a.)
- Data collection from independent interviewers (self-report data on social and medical history and status at regular intervals)
- Data collection from third parties (medical records, criminal records)

What resources were needed to collect and interpret the information?

A first proposal for such an experiment, including the original research plan, was prepared on behalf of the Federal Office of Public Health, and with the approval of the National Committee on Narcotics submitted to National Government, to the National Ethics Committee of the Swiss Academy of Medical Sciences and to the Federal Data Protection Officer (Bundesamt für Gesundheitswesen 1993). The objectives and the detailed working plan, being politically, ethically and juridically approved of, became officially acknowledged in a Federal Government's decree (Bundesratsbeschluss vom 13. Mai 1992). A research group headed by the authors was commissioned to conduct the evaluation research. The researcher's work was

to be supervised and accompanied by the interdisciplinary National Expert Group of the Federal Office of Public Health. This office also initiated the manufacture and control of the galenic forms (non-synthetic pharmaceutical preparations) required for the study. The International Narcotics Control Board, a United Nations body responsible for supervising the application of international conventions on narcotics, issued the permits for the importation of the required amounts of heroin. Approval procedures, operational security and logistics were discussed and organised in collaboration with chief medical officers, chief pharmacists and police authorities in cantons where a sub-project was to be realised.

How were the data collected?

A comprehensive study protocol included data to be collected from clinic staff, from interviews organised by an independent research group, as well as data from other sources such as medical records and criminal records (Uchtenhagen et al 1994). All data were rigorously protected: the identity of participants being known to the respective clinics staff and to controlling authorities (Federal Office of Public Health, Cantonal Chief Medical Officer) only. The research team worked with anonymised data coded for evaluation purposes. Data collection was organised in a standardised form in order to allow an analysis of both individual and pooled data. The range of research questions is shown as follows:

Patient-related items:

- Changes in medical/psychiatric status
- Changes in addictive behaviour
- Changes in coping behaviour including reduction of risk-taking

Substance-related items:

- Pharmacological/toxicological effects of prescribed substances
- Bioavailability of substances
- Therapeutic applicability of various galenic preparations

Service-related items:

- Feasibility of project
- Management of safety problems
- Cost-effectiveness of project

Global evaluation:

- Advantages/disadvantages in comparison to substitution with oral methadone
- Recommendations for therapeutic practice and legislation

Patient-related and service-related items were dealt with in a standardised format using questionnaires which to a large extent are compatible with those used in the evaluation of other methadone programmes and abstinence programmes. Substance-related data were partly collected in a standardised form for all participants, also, partly in specific studies with a special protocol to be used in subsamples.

As a comparison group, patients entering regular methadone programs were documented and followed-up on the basis of the same protocol. Not all sub-projects followed the same design, varying from double-blind and randomised allocation of substances to individual indications (Fig. 1).

Double-blind studies are designed in order to test effects of heroin against those of morphine, excluding subjective expectations and connotations. Rapid metabolism of heroin

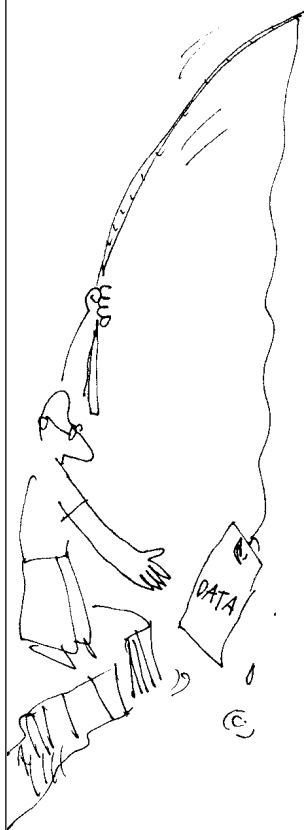


Figure 1: Original Research Plan

	Objective	Substances	Design	Controls
A	specific effects heroin-morphine	heroin i.v. morphine i.v.	double-blind	B
B	specific effects heroin-morphine	heroin i.v. morphine i.v.	randomised	A
C	substance-specific effects	heroin i.v. morphine i.v. methadone i.v.	randomised	D
D	substance-specific effects	heroin i.v. morphine i.v. methadone i.v.	individual indication	C oral methadone
E	effects of specific programme for women	heroin i.v. morphine i.v. methadone i.v.	individual indication	women from A-D oral methadone

to morphine in the human body makes this study especially interesting. The randomised studies respect the rules of trials according to good clinical practice, whereas individual indication mirrors therapeutic practice and therefore allows for comparisons especially with methadone programmes. One sub-project was designed to serve especially women (including sex-workers); its results should be compared to those for other female participants.

The original research plan was subsequently modified. The number of planned morphine treatment slots was reduced following a number of unfavourable experiences with prescribing intravenous morphine (frequent and clearly adverse effects, poor acceptance). For the same reasons, a similar reduction in the number of slots for intravenous methadone was decided. On the other hand, the Swiss Council of Minister's Resolution of 30 January 1995 permitted an increase in the number of heroine treatment slots to a maxi-

imum 500. In addition to these changes in sample size, the research record was supplemented by a comprehensive questionnaire on criminal behaviour (Killias et al 1995).

In May 1995, the Swiss Council of Ministers resolved to expand the programme with additional questions and sub-projects. Thus, the number of places for heroin prescription increased further to 800, and the overall number of participants to 1000. Special research records were used for the supplementary questions, so as to avoid having to alter the original research protocol. Additional questions regard the insertion of sub-projects into existing methadone clinics, and the treatment of patients with dual diagnosis.

What did they find out?

Intermediate results concern feasibility of the project and the multi-centre study, the effects and therapeutical applicability of substances, the characteristics of participants, their re-



tention and follow-up data. Two extensive reports on intermediate results have been published (Uchtenhagen et al 1996a, Uchtenhagen et al 1996b).

Feasibility

The results on aspects of feasibility can be summarised as follows:

- 7 out of 9 original sub-projects have been realised in 1994 (with different organisational structures and financial support)
- non-realisation of 2 sub-projects is due to low acceptance for morphine injections
- 8 additional sub-projects have been realised in 1995
- 4 referenda on sub-projects were held with positive results
- no negative impact of prescription clinics on neighbourhoods
- qualified staff recruited, low turnover
- no diversion of narcotic substances into black market
- no severe cases of overdose
- 1210 persons were recruited as participants (drop-outs were allowed to be replaced until January 7, 1996)

Two of the originally authorised sub-projects were not realised because the side effects of intravenous morphine injections resulted in a low acceptance for this modality and therefore two clinics which were foreseen to prescribe morphine only could not recruit enough participants. All the other sub-projects were realised with the support from the respective authorities in the cities of Basel, Bern, Fribourg, Olten, Thun and Zürich. According to police information, no negative impact on neighbourhoods was observed, in contrast to some negative expectations. While

the clinics were inserted into the existing therapeutic networks without difficulties; an eventual impact on other treatment approaches will have to be analysed. Due to the on-site controlled injections, no diversion of narcotics substances into the black market took place, and also no severe cases of overdose.

Additional sub-projects were realised in Genf, Horgen, Luzern, Solothurn, St. Gallen, Wetzikon, Winterthur and Zug. Referenda were held in Basel and Zug.

The findings for the substances involved are summarised as follows:

Morphine

- frequent histaminic-like reactions when intravenously injected, especially in females
- correctly identified by participants in double-blind trials due to side-effects
- low acceptance by participants
- long-acting oral morphine well accepted when oral methadone not applicable

Methadone

- untoward local effects when intravenously injected due to dosage
- low acceptance by participants
- oral methadone well accepted as basic substitution medication in combination with injectable heroin

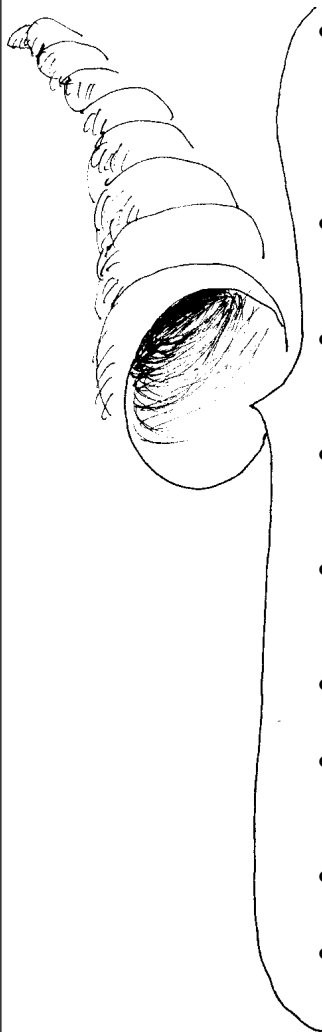
Heroin

- negligible side effects when intravenously injected
- stable dosages in most participants
- heroin cigarettes not satisfactory (low bioavailability, side effects)
- slow-release tablets in experimentation

Conclusion:

Heroin more applicable intravenously in comparison to morphine and methadone; oral application to be tested.

Intravenous morphine application was followed more frequently and more severely by histaminic-like reactions (local or generalised). The side effects are similar to



those already know in general medicine, but intensified due to the higher dosages needed in persons with fully developed opiate tolerance. The side effects are responsible for the mostly correct identification of morphine in double-blind studies, and also for a low acceptance by many participants (58% of those receiving morphine left the project or switched to heroin). MST continues, a long-acting oral morphine preparation, on the other hand, was well accepted and especially used when oral methadone is not applicable.

Rather surprisingly, intravenous methadone met a low acceptance as well. Side effects at the site of injection may explain part of it, probably also due to higher dosages (in comparison to British practice). However, we cannot exclude a psychological negative effect in those participants who expected to receive heroin but were given methadone in a randomised fashion. On the other hand again, oral methadone was well accepted by participants in combination with injected heroin, as it allows to reduce daily heroin injections from three or four to one, therefore reducing the need for multiple clinic visits each day and facilitating employment and other activities.

Heroin was also reported to have some side effects similar to those observed in intravenous morphine, but less severe. After an initial phase of several weeks, a stable dosage could be reached by most participants, and no unlimited increase of dosage was asked for. The specially prepared tobacco-free cigarettes, base on woodruff, standardised with heroin solutions of 50mg and 100mg proved to be not very satisfactory; up to 90% of heroin was destroyed in the burning process (tested in laboratory) and bioavailability is accordingly low. Other forms of galenic preparations such as slow-release tablets are therefore in experimentation.

Description of participants

To what extent participants correspond to entry criteria can be seen as follows:

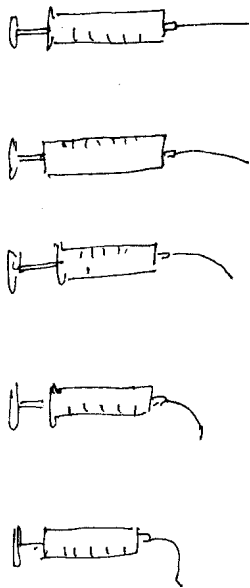
Anamnestic data and findings at entry, cohorts 1994 and 1995, participants receiving heroin, n=786.

- average age 30.7 years
- average duration of heroin dependence 10.4 years
- unstable housing condition in 39%
- unemployed 82%
- illegal activities in 54%
- minimal or no contact outside of drug scene in 39%
- court convictions in 84%, ever in prison 51%
- daily consumption of cannabis in 31%, of cocaine in 34%, of alcohol in 19%, of benzodiazepines in 25%
- former treatments: 91% methadone maintenance, 88% detoxification, 50% residential long-term treatment (mostly multiple treatments)
- somatic health impaired in 24%
- hepatitis in the past, 74%
- HIV seropositivity in 22%
- psychiatric hospitalizations in 48%
- suicidal attempts in 43%
- psychological health impaired in 42%

Conclusion:

Entry criteria are respected. Participants are older, with a longer history of heroin dependence, and more marginalized and impaired in comparison to other treatment populations.

These data concern all participants which entered the project in 1994 and 1995. This cohort is, on the average, older than most other treatment populations from residential and methadone programmes, with a longer duration of heroin dependence. The number of former treatments, the amount of social deficits including a high amount of delinquency, and also the amount of health impairment demonstrate to what extent the entry criteria have been respected. The target group for which the project was designed could effectively be reached, although a minority only was out of any treatment contact for the last six months before entry. This may be seen as an effect of a comparatively high



threshold due to the comprehensive therapeutic and scientific programme.

Follow-up results

Follow-up results on participants who entered the project in 1994, are summarised as follows:

Retention Rates and Drop-outs (Basis: 1994 cohort, participants receiving heroin, n=317.)

Retention rate:

- 82% during 6 months
- 67% during 15 months

Drop-outs during first 15 months:

- 54% of drop-outs changed to another treatment modality (45% to methadone maintenance, 9% to abstinence therapy)
- 35% discontinued treatment or were excluded for threat of violence or other serious misbehaviour
- 11% were hospitalised, moved or died (4 fatalities, no overdose)
- higher rate of daily cocaine use at entry among drop-outs
- drop-outs who were excluded were more marginalized at entry

Conclusion:

Higher retention rate in comparison to residential treatment, satisfactory in comparison to methadone maintenance.

Retention rate during the first 15 months of participation was higher than in most other treatment programmes for heroin addicts in the country. Half of those who dropped out during the first six months went back to another treatment modality, mostly to methadone maintenance. About 25% of drop-outs had to be excluded for intolerable behaviour. Four fatalities were recorded, mainly due to chronic infectious disease.

Entry data of drop-outs indicate that participants with daily cocaine use at entry, those engaged in prostitution and those with a history of aggressive acting-out behaviour were over-represented among drop-outs. For the

following tabulation, participants only who receive heroin, stayed for at least one year and were able to perform the second follow-up interview in time are included.

Basis:

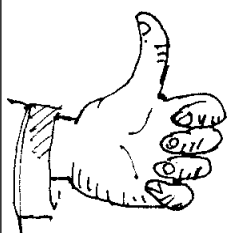
206 of 366 participants entering trials during 1994 and receiving heroin (self-report data, data from urine tests and police data; in brackets data at entry):

- housing situation stable in 70% (64%)
- employment, no contact with drug scene in 50% (16%)
- unemployed, frequent contact to drug scene in 14% (50%)
- unemployed without contact to drug scene in 36% (35%)
- illegal income in 14% (70%) according to self-report, significant reduction in delinquency according to police reports
- reduction of daily illegal cocaine use from 31% to 7%, but minimal reduction of cannabis use from 34% to 32% and of benzodiazepine use from 20% to 14% (self-report and urine tests)
- prostitution, peddling etc. in 7% (46%)
- somatic health improved (significantly reduced injection-related syndromes and troubles of the Autonomous Nervous System)
- psychological health improved (significantly reduced number of depressions and paranoid states)

Conclusion:

Participants showed significant changes in social and health status, including risk taking behaviour.

Changes in social status were observed regarding housing situation and, more surprisingly, employment rate. A reduction of illegal activities and of contact with other drug users was based on self-report-data and on police information (recorded delinquency before and after entry into project during 6 month periods). Urine controls documented a reduction of daily cocaine use, not of daily cannabis and benzodiazepine use.



Body-mass measures and injection-related syndromes improved significantly (according to number of abscesses and other dermatological scores), as well as depressive-suicidal syndromes and paranoid and anxiety states. Other somatic problems and also aggressive acting-out behaviour showed no significant changes.

Final comments

By these first intermediate results, the feasibility, safety and therapeutic applicability of heroin prescription to heroin addicts under adequate conditions are documented. Beneficial effects during the first 12 months of participation were also evidenced. This conclusion however cannot be generalised. It concerns a specific and most marginalized target population of addicts, and a prescription practice embedded into a comprehensive assessment and care programme.

Providing pharmaceutical heroin in this project permits to attract addicts who fail in multiple other treatment approaches and give them a new opportunity to take courage and to engage in a therapeutic and rehabilitation programme, without being forced to abstain from their preferred substance. It is not assured yet, however, to what extent positive changes in health and social status will continue over longer periods of time, and to what extent a drug-free lifestyle can be reached by participants in a later stage.

This experiment cannot be the basis for any claim to support “free heroin”, but it could - if the further evaluation results corroborate the preliminary positive findings - add a supplementary option for treating long-standing marginalized heroin addicts unable to profit from other treatment approaches. This implies that other treatment approaches have to be available in good quality and sufficient number, when such an additional option is considered.



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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 _____

2 _____

3 _____

Weaknesses of the case study

1 _____

2 _____

3 _____

