



# Monitoring *with* MAP the Maudsley Addiction Profile

*Broad-ranging yet brief with a research pedigree and tailor-made for Britain, MAP is arguably the gold standard in outcome monitoring. The chief MAPmaker describes his creation.*

by John Marsden

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In 1994 the Department of Health's task force on the effectiveness of addiction treatment<sup>1</sup> asked me to help them develop an outcome measurement instrument for the National Treatment Outcome Research Study (NTORS). With great wisdom, they agreed to adopt a broad conception of outcome covering drug use, health risk behaviour, health problems, and personal and social functioning (relationships, employment and crime).

We aimed to devise sound, reliable and valid measures for each of these four domains which could be administered in under an hour. In doing so, we were guided by the work of colleagues from the USA and Australia, particularly Tom McLellan's team in Pennsylvania who developed the Addiction Severity Index and Shane Darke and colleagues from Sydney who developed the Opiate Treatment Index.

However, there seemed a growing demand for a much briefer version which could be used not just for research but also in routine monitoring of treatment outcomes. Somewhat facetiously at the time, I called it 'MAP-lite', but everyone now just calls it the *Maudsley Addiction Profile* or 'MAP'. It is this shorter instrument which has the potential to become a UK-wide benchmarking tool enabling services to document client progress using a common measure of the core domains in which clients should benefit from treatment.

## Tailor-made for Britain

MAP is the first standardised instrument designed to measure treatment outcomes for problem drug and alcohol users in the UK. Its role as a national standard is facilitated by its status as a public domain instrument which can be obtained and used free of charge. Demand has been high: around 750 copies have been sent to services, commissioners and researchers.

As now commonly recognised, outcome monitoring is best thought of as reassessment. So the idea behind MAP is to have a small set of questions asked as a baseline before treatment and repeated later to assess outcomes. Score changes can then be attributed to therapeutic or other processes.

MAP involves directly asking a client how they are in either a personal or a telephone interview (or perhaps by self-completion), going beyond workers' impressions or case notes. Achieving this added objectivity takes time. However, we recognised that the burden on client and interviewer should be minimal and should not detract from clinical work. MAP goes beyond abstinence to measure the main harm domains across a range of indicators, but not so far that it cannot be completed in just 12 minutes. If you have 12 minutes to devote to assessing outcomes, these are the questions we believe you should ask.

Its brevity makes MAP suitable for use as part of a service's assessment and intake procedures and for treatment review and outcome monitoring. Incorporating MAP in these procedures might also have therapeutic benefits: feedback to the client can be a powerful motivator and is a key component in motivational interviewing.<sup>2</sup>

Brevity is no virtue if what is being measured is irrelevant. Our main concern was that MAP should be relevant to the clients seen by treatment services and to the major problems experienced by substance users. It also had to reflect the aims of treatment services. The measures have direct relevance for reporting under the UK's national anti-drugs strategies, a plus point for the drug action teams charged with reporting on progress. I've been especially pleased to have been able to help teams in York, Kent, Sussex and Wakefield to set up outcome monitoring initiatives based on MAP.

## Clearly sensitive

Any instrument must be able to demonstrate acceptable standards of validity (measuring what it is supposed to) and reliability (measuring it consistently). MAP has been

tested and found highly satisfactory on both counts in a report subject to the stringent peer review procedures of Britain's major addiction journal.<sup>3</sup>

Ultimately, measurement is about communication – between the instrument and the client, and between those interested in the outcomes. MAP's items were designed to be unambiguous, simply scored, and easy to relate to and communicate. Most use 'day units' readily communicated as a percentage of the last 30 days on which events occurred such as using certain drugs or feeling ill. Reporting in terms of the number of clients who are 'better' than when they came to the service, or using some obscure statistic distant from the behaviour at issue, is unlikely to convince funders. More persuasive is being able to tell them exactly how many fewer crimes are now being committed and how many fewer times clients have risked spreading infection.

Since measuring outcomes is about tracking change, measures must be sensitive to change. A scale which, for example, just offered the choice between 'using' and 'not using' would miss smaller but clinically important movements, and one which merged everything in to a single score would fail to reflect potentially significant changes in the profile of a client's problems. Such measures also miss opportunities for motivational feedback to the client.

## What does MAP measure?

MAP comprises an introductory section (information on the service, the client, and the interview point) and four outcome sections, a total of 60 items. Rather than recording whether behaviours have ever occurred or taking a clinical history, it asks about recent behaviour. For all the measures, the past 30 days (an average month) was set as the common recall period, a period used in a variety of studies and assessment batteries. It represents a compromise between a shorter period such as a week during which behaviour may have been atypical, and longer periods (such as six months) where recall may be a problem.

**CONTACT** MAP and its manual are available free of charge. E-mail John Marsden at J.Marsden@iop.kcl.ac.uk or write to Dr John Marsden, National Addiction Centre, 4 Windsor Walk, London SE5 8AF.



Substance use: how often, how much? The interview starts by informing the client about the purpose and structure of what is to follow and about the confidentiality of the information they provide. Then basic demographic characteristics are recorded including age, gender, and ethnic group. Before moving into the outcomes sections, the client is shown a calendar and the preceding month is identified, the period they will be asked to recall.

Drug use is measured first by a section which contains 22 items. In field testing at the Maudsley, eight substance-based categories were used, reflecting use patterns in inner south London: illicit heroin; prescribed and non-prescribed methadone; prescribed and non-prescribed benzodiazepines; cocaine base (crack); cocaine hydrochloride; and alcohol. However, the substance set can be altered to suit other populations and other locations.

The need to cover several substances demanded a quick method for recording extent of use. For each, three measures are taken. Firstly, as an index of *frequency*, the number of days on which they were used in the past month, excluding days when the client was not free to use drugs because they were in a restricted environment such as a rehab or a prison. To assist recall, clients are asked to choose one of seven options shown on a card ranging from only one day through to every day a week. Responses are transformed into the corresponding number of days over the month.

Secondly, a measure of *quantity* or intensity of substance use is taken by recording the typical amount consumed on a using day in the past month. For alcohol, the amount drunk is probed in terms of beverage type, alcohol content and the number and size of drinks. The client's answers are recorded verbatim and later converted into units of alcohol. When the amount of a drug used has varied, clients are asked for amounts used on the most recent two or three days; later these are averaged. Thirdly, with the exception of alcohol, the main *route of administration* during the past 30 days is recorded as either oral, sniff/snort, smoke/chase or injection into vein or muscle.

#### Related problems

The health risk domain is measured through five items reflecting *exposure to blood-borne viruses*. The number of days in the past month during which the client injected is recorded together with the number of injections on a typical day. If this number is variable the same averaging procedure is used as for variable substance use. Then the client is asked about the number of times they injected using a needle or syringe already used by someone else, and lastly the number of people with whom they had penetrative sex without using a

**MAUDSLEY ADDICTION PROFILE**

**SECTION A: MANAGEMENT AND OPERATIONAL INFORMATION**

**Programme/setting**

Community drug/alcohol team  Inpatient programme   
 Community detox.  Residential rehabilitation   
 General Practitioner  Prison programme   
 Advice, counselling and information  Other - describe   
 Harm minimisation

**Interview point**

Intake  Departure   
 3 months  + 3 months

**Assessor**

**Date of MAP interview**

DDMMYYYY

**Non-attributable client identifiers**

Initials: DD MM YY YY  
 Sex (✓): M F  
 Age: YY YY

Date of birth: DD MM YY YY

General practitioner: DD MM YY YY

First part of postcode: \_\_\_\_\_ Research ID: \_\_\_\_\_

Version 1.0 (07/98) 1 Add

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**SECTION B: SUBSTANCE USE**

(A) ENTER WHETHER USED IN PAST 30 DAYS  
 (B) [CARD 2] RECORD NUMBER OF DAYS USED IN PAST 30 DAYS  
 (C) ENTER AMOUNT USED ON TYPICAL DAY IN PAST 30 DAYS  
 (D) RECORD ROUTE(S) OF ADMINISTRATION

Note: record grams/money equivalent for amount consumed; probe fully for alcoholic drinks and record type(s), brand, size (e.g. small/large can; pint/half pint; size measures for spirits)

**FREQUENCY OF USE IN THE PAST 30 DAYS**

1 day only	2 days only	3 days only	Once every week	2 days a week	3 days a week	4 days a week	5 days a week	6 days a week	Every day
1	2	3	4	9	13	17	21	26	30

Oral 1 Sniff/sniff 2 Smoke/chase 3 IV 4 Inj 5

TYPE	✓ X	Days	AMOUNT ON TYPICAL DAY IN PAST 30 DAYS	Route(s)
1. Alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>
2. Heroin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>
3. Illicit methadone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>
4. Illicit benzodiazepine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>
5. Cocaine powder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>
6. Crack/rock cocaine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>

**SECTION C: HEALTH RISK BEHAVIOUR**

Injected drugs in the past 30 days?  X or ✓

IF NO INJECTING IN PAST 30 DAYS SKIP TO SEXUAL BEHAVIOUR ITEMS

1. [Card 1] Days in the past 30 days injected drugs  days

2. Times injected on a typical day in past 30 days  times

3. Times injected with a needle/syringe already used by someone else  times

Had penetrative sex in past 30 days and not used condom?  X or ✓

IF NO NON-CONDOM SEX IN PAST 30 DAYS SKIP TO HEALTH ITEMS

4. How many people had sex with and not used condom  people

5. Times had sex when not used condom  times

**SECTION D: HEALTH SYMPTOMS**

1. Physical health symptoms [Card 3]

Past 30 day frequency	Never	Rarely	Sometimes	Often	Always
a. Poor appetite	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Tiredness/fatigue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Nausea (feeling sick)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Stomach pains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Difficulty breathing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Chest pains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Joint/bone pains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Muscle pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Numbness/tingling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Tremors (shakes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Version 1.0 (07/98) 3 Addiction Research Unit, National Addiction Centre, London, UK

➤ In five pages MAP covers the main domains relevant to key national and local objectives. The first page collects data on the client and the service and the next two on substance use and health.

condom and the total number of times.

Physical and psychological *health problems* are measured through two scales of 10 items derived respectively from the Opiate Treatment Index and the Brief Symptom Inventory. The last outcomes section probes *personal and social functioning* through nine items in three sub-sections:

➤ Relationship conflict: the number of days

on which the client had contact with their sexual partner, relatives or friends, and for each the number of those days on which there was serious conflict.

➤ Employment: the number of days of formal unemployment in the past month, paid days at work as a percentage of days available for work, and unauthorised absence from work or days off due to sickness.



## FROM THE FRONT LINE



## How MAP can be integrated into service delivery

by **Michael Robinson**

Team Leader, Community Drug and Alcohol Team, Swindon

I have been involved clinically with MAP since its creation when I was working with the Maudsley Community Drug and Alcohol Team. Since then I have used it in methadone services, GP liaison teams, community alcohol teams, and now in a combined NHS community drug and alcohol team. For me its strength is that it can be incorporated into traditional assessment and review procedures.

MAP's role at the Priory Road Clinic illustrates how it has become integral to our services. The clinic marries specialist services and GPs to provide a one-stop shop for clients on a methadone prescription. All the clinic's clients have been 'MAPed' for a twelve-month period, enabling us to measure the outcomes and present this to funders. MAP enables us to produce reports summarising the outcomes of our services in various configurations, such as for different types of clients, different age groups, and different teams.

These are the roles one would expect of an outcome tool, but MAP is more. It is also a clinical tool – one which not just documents treatment benefits, but helps create them. I have been able to sell it easily to clients. For them it can help ground the service's work – "This is what we are able to offer you". We have used it to enhance clients' engagement in treatment and their commitment to change and to the maintenance of gains. Feedback to clients based on MAP provides an 'at-a-glance' summary of key problems and how these have changed or not over time. Administering MAP is not just a chore to satisfy number crunchers, but a motivating focus for the therapeutic relationship.

MAP's domains also provide structure and direction for clinical work. As a manager, I find it a useful way to let staff know where we expect to get results – "If it's in MAP, you do it; if it's not, you don't". During clinical supervision staff bring their 'MAPs' to me as a way of developing their interventions – "I'm struggling to make impact in these areas. What interventions would be useful?" Though MAP's headings were not devised to guide counselling, our counsellors have developed outcomes which they have bolted on to MAP.

The procedure at the clinic is that the full assessment has MAP embedded in it (it is even known as 'MAP 1'). Then the care plan is set using MAP headings: goals for drug use, for reducing risk behaviour, etc. At one month, 'MAP 2' is completed to review progress made in treatment as a routine element of the key-working relationship. This then drives the next care plan. Because the clinic's clients tend to be the more chaotic, they are 'MAPed' monthly, giving us a very clear idea of how they are doing and enabling us to track that over time.

We find MAP is easily administered. At first there was a heavy reliance on the cue cards but as we became more confident, these were resorted to less often.

*MAP is not just a chore to satisfy number crunchers but actually facilitates the treatment process*

file outcomes for different client groups, such as those with psychiatric problems, who are homeless, under court orders, or with high and low degrees of dependence. By just reporting MAP outcomes for clients in treatment, a service could look good if high drop out, discharge and death rates eliminated the more problematic clients. Services and commissioners will also want treatment process measures such as retention, the number of unplanned discharges and deaths in treatment.

For clinical purposes, MAP provides a useful harm profile across central domains, and we've heard positive reports of its use in care planning, but much more information is needed to plan appropriate interventions. Obvious missing elements include information on mental health and housing needs, on the family situation, and on employment/training ambitions and prospects.

### A flexible tool

However, MAP is designed so that other measures can easily be added to the core according to the client population and research, administrative or cost considerations. In this sense it offers a measurement *framework* (based on counting 'active' days over last 30 days and intensity of behaviour on a typical day) as much as it stipulates what is to be measured.

Some of this extra information is best collected outside MAP but some can be incorporated within it. At the National Addiction Centre we regularly add and sometimes subtract items according to the population and the issue being researched. Available on request are the versions we used to assess outcomes from injectable methadone maintenance and in a pilot drug treatment and testing order scheme.

In particular, MAP has been adapted for alcohol services, and arguably requires such adaptation.<sup>6,7</sup> We acknowledged at the outset that certain questions – notably on drug injection and acquisitive crime – would be unlikely to be relevant to people whose primary problem was drinking. Other domains are just as relevant for alcohol as for drug users (consumption, health and personal/social functioning) but may need fine-tuning. We have adapted the crime measures by adding public order offences ('drunk and disorderly'), driving over the limit, and violence at home.

In East Kent the health authority developed drug and alcohol versions of the MAP form which differ in several ways: the alcohol version includes questions about violence and driving while intoxicated, adds memory problems to the list of physical complaints, and asks about maximum daily alcohol intake; the drug version lists driving while taking drugs and retains injecting questions dropped from the alcohol version. Both use the MAP framework to

➤ Crime, subdivided into selling illegal drugs, shoplifting, and other crime. For the latter the client is prompted to recall various forms of theft and fraud/forgery. The number of days on which each type of crime was committed is recorded plus an estimate of the number on a typical day.

### Issues and caveats

MAP was designed as tool for quickly measuring core outcomes among problem drug and alcohol users. Across Europe it has been seen as meeting the basic and essential requirements for assessing treatment outcomes.<sup>4</sup> MAP's role as a common denominator is its strength, but entails limitations

in the comprehensiveness of its measures and in how applicable they can be to all services and all client groups.

### Not all you need

In the era of 'best value', comparability across services is important. We have comparability of costs in the form of £s per unit of care; comparability of benefits is a missing ingredient which can only be supplied by a standard measure such as MAP suitable for a wide range of settings.

However, MAP data must be set in the context of the nature of the service and the severity and type of problems seen in its clients.<sup>5</sup> This data could also be used to pro-





ask about housing, an important issue, particularly for street drinkers.<sup>8</sup>

Some of these and other topics were tested while piloting MAP but dropped. For example, we dropped questions about violent crime because no one would admit to it. We also found it difficult to devise a stable measure of housing status. For some clients the focus on paid work will miss important training, education and voluntary activities indicative of therapeutic progress, but we found that very few undertake such activities. Again, these topics could easily be added. Our pilot version included questions on overdoses but these happen so infrequently that to be useful the question would have to violate the 30-day common recall period. Again, this could be added in, but as a lifetime measure.

Standards are not person-centred MAP focuses on topics of greatest interest to service providers and commissioners. Their job is primarily to tackle problems/harm related to drug or alcohol use, so this what MAP asks about. The clients of those services probably also attend them mainly because they want help with the problems captured by MAP. There will be a large overlap between the priorities of the service, of its funders, and of its clients, but this is overlap is unlikely to be complete.<sup>9</sup>

For client-centred services MAP offers no way to address progress towards the individual client's goals. East Kent's drugs form tackles this by simply asking the client to rate their progress without identifying any criteria.<sup>10</sup> This illustrates the difficulty of individualising outcome monitoring in a way which reflects the client's personal goals, yet is capable of being aggregated across clients and compared across services. It is a gap, but a hard one to fill.

In particular, what is missed are the pluses of treatment outcomes, the 'quality of life' issues: not just, for example, the reduction in the number of conflicts with families and partners, but the joys of reconciliation; not just the alleviation of psychological distress, but the resurrection of the ability to enjoy life. We recognise this gap and are currently designing and testing a treatment improvement questionnaire and rating instrument which will capture positive improvements accompanying reduction in harms.

Time can still be a problem

For some services even an average of 12 minutes is too long,<sup>11</sup> particularly services whose contact with clients is very short or fleeting.<sup>12</sup> If your service already spends an hour assessing each client, an extra 12 minutes may seem worth the benefits. If the typical contact time is ten minutes then the extra time is a substantial burden, all the harder to justify if a high level of one-off

contacts precludes use of the data for outcome monitoring. Clinical staff may also take longer to administer MAP than researchers because they use it as a platform for further assessment and motivational enhancement – time probably well spent.

There is a case for arguing that any service with appreciable contact time with clients and which acts as an intake to the treatment system (as opposed to solely a referral option) should be collecting data of the kind systematised by MAP. Many probably already are, in which case using MAP may even speed up assessments.

Another time issue is training for staff in the MAP interview and in its scoring. In our validation study this occupied a single two-hour session, which also had to cover the study's procedures. We caution against simply getting the MAP form and going ahead; reading the manual and making sure you understand the questions are essential.

Probing private lives


For some clients, some questions will seem intrusive or unwelcome, particularly if asked at an intake interview when the interviewer and the service are unfamiliar. There is a risk of alienating potential clients. This has occasionally been a concern in Britain<sup>13</sup> and an issue in interviewing certain minority groups in Europe, for whom questions about sexual activity are especially sensitive.<sup>14</sup> Even in these cases pilot studies revealed high acceptability of the interview among clients and our piloting in Britain did not suggest that client resistance is a major issue. Again, intelligent application is at least a partial answer. Some questions may best be left to a later interview or rephrased in terms more acceptable or intelligible to individual clients or groups from specific cultural backgrounds, a flexibility recognised in the MAP manual





Truth too can be flexible

MAP is a self-report tool. Self-reports from substance users are generally valid and a more sensitive indicator of substance use and crime than indicators such as criminal records and urinalyses.<sup>15 16</sup> However, reports from more chaotic and disturbed clients tend to be less reliable<sup>17 18</sup> and (like the rest of us) clients may bend the truth when a great deal rides on their answers.<sup>19</sup> They are more likely to exercise selective recall when interviewed by staff with sway over their treatment than when interviewed anonymously by researchers. In at least one study, clients exaggerated drug use at intake and minimised it later in treatment, an effect which would overestimate treatment benefits.<sup>20</sup>

For outcome monitoring tool MAP is likely to be used by service staff, so such distortion is a concern, the more so since it may vary across services with more or less

to offer the client and which do or do not make this contingent on their behaviour. A prescribing service which discharges for persistent illicit drug use is likely to find this admitted to less often than a counselling service with no prescription to offer and which expects to work with people still using illegal drugs.

This difficulty is not specific to MAP but one faced by any assessment or client review procedure. The degree of difficulty is likely to vary with the degree of trust between the client and the service, the degree to which clients expect to be rewarded or punished for what they say, and the degree to which checks such as urinalysis reduce the client's scope for covering up the truth. Adjustments to these parameters rather than to the specific monitoring tool are the best way to address the problem. 

**LINKS**  [Oiling wheels](#), issue 4  [Outcome monitoring must be made easy](#), issue 3, p. 26  [How to show treatment works](#), issue 1  [Are we right to spend more?](#) issue 1

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