



European Monitoring Centre  
for Drugs and Drug Addiction

# PDU (Problem drug use) revision summary

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## Introduction

This document is a summary of the concepts and definitions in the revised area. Detailed background information about the process of revision can be found in two related documents (see footnote 3). The changes are, for the most part, related to the theoretical component of the indicator. Data collection recommendations will remain mostly unchanged, with two exceptions: the addition of intensive cannabis use data collection based on general population surveys methodology; and making provision for interested countries to report on other — including new — drugs. However, most of the existing work will correspond to a subset of the revised indicator area.

‘Prevalence of problem drug use’ was established as one of the five key epidemiological indicators to monitor the EU drug situation (EU Council CORDROGUE 67, 2001). Its purpose was defined from the beginning as: ‘to provide comparable, reliable estimates of the prevalence and patterns of more severe drug use’ (EMCDDA Management Board, 2001). The importance of and difficulty in finding a common definition of ‘problem drug use’ was understood from the beginning. In 2004 methodological guidelines<sup>(1)</sup>, a pragmatic definition applicable across diverse data sources was published: ‘Problem drug use is injecting drug use or regular and/or long-term use of opiates<sup>(2)</sup>, cocaine and/or amphetamines.’

The work under the indicator area relied predominantly on indirect statistical extrapolations from existing data sources. These often resulted in estimates of populations of heavy, mostly marginalised, opioid users.

The main motives for the revision of the key indicator were:

1. A changing drug situation and the increasing importance of knowing the prevalence of new, or newly increased in size, groups of users (such as those with heavy cannabis use and heavy stimulants use without the presence of opioids use, users of new drugs, etc.).
2. Changes in the nature and availability of data sources: more detailed information is now often available, which makes more specific estimates possible.

3. To establish a conceptual framework, linked with operational definitions.
4. To clear up confusion around the area name (including unintended labelling).

Additional issues that needed to be addressed are: the limited capacity of the content of the current area (i.e. available data, methods, etc.) to monitor adequately trends over time; and characteristics of the drug users in question.

The process of revision involved expert meetings and discussions, a first proposal in 2011<sup>(3)</sup>, an online survey in 2012, several bilateral discussions with experts and scientists and a finalised proposal at the end of 2012. This document, which represents a short summary of the revision, will be followed by the implementation of all changes into updated indicator guidelines and other indicator-defining documents (these can be located through <http://www.emcdda.europa.eu/themes/key-indicators/pdu>). These guidelines will set a minimum, core data set to be reported (which will remain to a considerable extent compatible with existing reporting) and will allow extra room to report additional data on a voluntary basis depending on each National focal point’s capacity, resources and type of drug scenario. For example, experts are welcome to work on severity levels of drug use (e.g. to add several dimensions of more frequent or severe drug use) or on more complex concepts of polydrug use where combinations of substances are understood as a factor to increase risk. (These were just two of the topics suggested in discussions related to the revision process.)

<sup>(1)</sup> EMCDDA (2004), *Recommended draft technical tools and guidelines key epidemiological indicator: prevalence of problem drug use* (<http://www.emcdda.europa.eu/html.cfm/index65519EN.html>).

<sup>(2)</sup> ‘Opiates’ were later changed to ‘opioids’.

<sup>(3)</sup> Detailed documents on these steps in the process are available from the EMCDDA: 1. ‘Principles of PDU revision’, February 2012; 2. ‘Problem drug use key indicator reconceptualisation/revision 2012: results of an online survey collecting comments on the process from all EMCDDA Member States and some independent scientists’, May 2012. These documents also include the discussion on other, alternative concepts that were suggested and discussed in the process of revision.

## The PDU indicator (revised): high risk drug use

The revised indicator area focuses on 'high-risk drug use' (HRDU). The term 'high-risk drug use' means 'recurrent drug use that is causing actual harms (negative consequences) to the person (including dependence, but also other health, psychological or social problems) or is placing the person at a high probability/risk of suffering such harms' <sup>(4)</sup>.

The principal task of this indicator area is to estimate annual prevalence of high-risk drug use, or the sizes of populations with high-risk drug use. These estimates are calculated and reported to the EMCDDA in a standardised way (according to existing guidelines on local and national prevalence estimation).

At the same time, more emphasis than in the past will be put on increasing the ability of the indicator area to report on trends in high-risk drug use. This is, however, still a developmental area (see below).

Another important task is to give some insight into the characteristics of these populations by utilising information through collaboration with the Treatment demand indicator (TDI), which collects standardised data on the characteristics of a broad sample of high-risk drug users and also data from diverse studies using non-treatment data sources (currently reporting the results through annual National reports). Incidence of this behaviour, estimated in scientific studies, is also a useful element to complement the understanding of the situation.

Substances included in the monitoring are the most harmful and sufficiently prevalent illegal/illicit substances, i.e. those that are causing most harm (predominantly to an individual user, but also at the population level depending on the intensity of harm and prevalence of use). Potentially harmful but rarely used (i.e. with low prevalence on the national/sub-national level) substances are excluded from the monitoring (please refer to the EU Early warning system for these).

The studies indirectly estimating the sizes of populations with high-risk drug use, which are at the core of the indicator, should be planned and conducted bearing in mind their utility for informing policy about the need for

drug treatment (defined in a broad way — see below). It is important to explicitly formulate this, because to some extent it determines the data sources and case definitions that need to be used in prevalence studies.

The drug treatment definition spelled out in the TDI protocol <sup>(5)</sup> (and also EMCDDA Treatment cross-unit project) is: 'Drug treatment is defined as an activity (activities) that directly targets people who have problems with their drug use and aims at achieving defined aims with regard to the alleviation and/or elimination of these problems, provided by experienced or accredited professionals, in the framework of recognised medical, psychological or social assistance practice.'

The conceptual framework translates into a definition, further operationalised by drug, which suggests how to measure 'high-risk drug use': 'High-risk drug use is measured as the use of psychoactive substances <sup>(6)</sup> by high-risk pattern (e.g. intensively) and/or by high-risk routes of administration in the last 12 months.'

Note: 'Intensively' is further defined by drug under 'case definition'. The main point of these case definitions is to filter out experimental and occasional users who have a lower risk of harms and are not the core population for the assessment of treatment need <sup>(7)</sup>.

Three elements of the final revision proposal are developed in the following sections:

A — Estimates of prevalence of high-risk drug use

B — Monitoring of characteristics of high-risk drug users and trends

C — Opioid substitution treatment (OST) clients in the revised indicator

### A — Estimates of prevalence of high-risk drug use

#### A1 — Common estimates

The following estimates are to be derived at national — and if possible sub-national <sup>(8)</sup> — level and reported to the EMCDDA by all EMCDDA Member States. Their

<sup>(4)</sup> The text in quotation marks can be considered a theoretical or conceptual definition of the area. This broad definition implies appropriate flexibility in reporting. Periodic revisions of the area should follow in order to determine if new categories (drugs, patterns of use, specific populations) need to be included and reported.

<sup>(5)</sup> See 'TDI standard protocol 3.0: guidelines for reporting data on people entering drug treatment in European countries', EMCDDA, Lisbon, September 2012 (<http://www.emcdda.europa.eu/publications/manuals/tdi-protocol-3.0>).

<sup>(6)</sup> Excluding alcohol, tobacco and caffeine.

<sup>(7)</sup> Please see the report/technical paper 'Literature review to support PDU revision' (to be published in 2013) for more details on the scientific evidence used to suggest the present definitions.

<sup>(8)</sup> See 'Indirect prevalence estimation guidelines' for more information (<http://www.emcdda.europa.eu/themes/key-indicators/pdu>).

selection is based solely on the current epidemiological data, suggesting that they have a significant presence in all countries, and is not necessarily related to their level of harmfulness.

**1. High-risk opioid use** (comparable to what was previously called 'problem opioid use')

**1.1 Methods and data sources:** Indirect estimates with their respective data sources (see indirect methods guidelines).

**1.2 Case definition at the level of the data source**, in order of preference:

Recall period: last 12 months.

1.2.1 Use of opioids, including opioid medicines, weekly or more frequently for at least six months of the past 12 months (alternatively can be measured as 26 days or more in the past 12 months), not according to medical prescription.

OR

1.2.2 A medical diagnosis according to current DSM or ICD criteria, e.g. 'harmful use or dependence on opioids or opioid use disorder' (diagnosed in the past 12 months)<sup>(9)</sup>.

OR

1.2.3 Any other best proxy of the above that can be collected at the level of the data source.

Note: opioid users who are stabilised on opioid substitution treatment (OST) are, if possible, reported separately. See section on the handling of OST cases.

## 2. Injecting drug use

**2.1 Methods and data sources:** Indirect estimates with their respective data sources (see indirect methods guidelines).

**2.2 Case definition:** injecting use of any psychoactive substance(s) not according to medical prescription in the last 12 months.

Recall period: last 12 months.

OPTIONAL: breakdown by injected substances.

## 3. Frequent and high-risk cannabis use

Synthetic cannabinoids may also be reported if this is possible and relevant for country's drug situation.

**3.1 Methods and data sources:** At present, two separate estimates are foreseen, based on general population surveys and school surveys<sup>(10)</sup>.

a) An estimate of the number of daily, or almost daily users, in the last 30 days (see case definition 3.2.1).

b) An estimate of the prevalence of 'cannabis use disorders'. This applies only to countries with sufficient cannabis use prevalence and/or sufficient sample size in the general population survey and/or school survey (guidelines in preparation). It is obtained by means of incorporating short cannabis scales in the general population surveys (see case definition 3.2.2).

**3.2 Case definition** at the level of data source:

Recall periods: last 12 months, last 30 days.

3.2.1 Use of cannabis daily, or almost daily, in the preceding 12 months; for general population surveys or school surveys this will be approximated by use of 20 or more days in the 30 days preceding interview (or similar).

3.2.2 Medical diagnosis according to current DSM or ICD criteria, e.g. cannabis harmful use or dependence or cannabis use disorder diagnosed in the past 12 months. For the purpose of monitoring this phenomenon at the level of general population surveys and school surveys, this will be approximated by short psychometric scales (see the respective upcoming guidelines).

## A2 — Country-specific estimates

The following estimates are to be calculated and reported to the EMCDDA only in cases where this is relevant for a country's specific drug situation and is feasible:

**1. High-risk cocaine use** (comparable to what was previously called 'problem cocaine use')

**1.1 Methods and data sources:**

a) Indirect estimation methods with their respective data sources (see indirect methods guidelines), new data sources to be sought and tested (e.g. emergency room visits, probation data, etc.).

b) Alternative methods for more socially integrated parts of this population — developmental work in progress with the general population surveys experts, other possibilities to be explored (e.g. wastewater analysis combined with modelling, incorporating information from targeted surveys).

<sup>(9)</sup> In practice, frequency of use threshold and medical diagnosis might not point to the same cases and another proxy might again select a different set of cases. However, they were chosen as wide pragmatic case definitions, most frequently available at the existing data sources of different countries.

<sup>(10)</sup> However, this does not limit the possibility to use any other methods, including indirect methods, at the national or subnational level.

**1.2 Case definition** at the level of the data source, in order of preference:

**Recall period:** past 12 months

1.2.1 Either of these two conditions justifies the case definition:

a) Use of cocaine weekly or more frequently for at least six months of the past 12 months (alternatively can be measured as 26 days or more in the past 12 months).

b) Recurrent crack cocaine use.

OR

1.2.2 A medical diagnosis according to current DSM or ICD criteria: 'harmful use or dependence on cocaine or stimulant use disorder'.

OR

1.2.3 Any other best proxy of the above that can be collected at the level of the data source.

**2. High-risk amphetamines use** (amphetamine and methamphetamine: comparable to what was previously called 'problem amphetamines use')

**2.1 Methods and data sources:**

a) Indirect estimation methods with their respective data sources (see indirect methods guidelines), or possibly new data sources.

b) Alternative methods to be explored (e.g. wastewater analysis combined with modelling, general population surveys, possibly combined with targeted surveys).

**2.2 Case definition** at the level of the data source, in order of preference:

**Recall period:** past 12 months.

2.2.1 Use of amphetamines weekly or more frequently for at least six months of the past 12 months (alternatively can be measured as 26 days or more in the past 12 months).

OR

2.2.2 A medical diagnosis according to current DSM or ICD criteria: 'harmful use or dependence on amphetamines/ other stimulants or stimulants use disorder'.

OR

2.2.3 Any other best proxy of the above that can be collected at the level of the data source.

### 3. High-risk use of other substances

High-risk use of other substances (according to national or regional need for the estimates): cathinones, GHB, benzodiazepines, volatile substances, other.

This is a broad group of substances, thus definite case definitions cannot be formulated, however as a general rule, it is possible to apply a case definition similar to those outlined for the previous substances. E.g. at least weekly use of a substance for 6 months or more, or a medical diagnosis or a nearest proxy of those.

### A3 — Elements to understand polydrug use <sup>(11)</sup>

The following data is to be reported to the EMCDDA through national reporting. Only the first element is common for all countries; the other two are optional.

#### 1. Overlaps between the above-mentioned groups, accounting for polydrug use

The above-mentioned figures by substance are to include all users of the drug in question who have the specified pattern of use, regardless of whether they use other drugs or not. Thus, there will exist overlaps between the previously mentioned estimates.

All significant known overlaps (for example, cocaine users who also use heroin) should be reported through the National reports (see national reporting guidelines). In addition, their size should be estimated, where possible.

The estimates of sizes of the overlaps may be derived from existing surveys, out-of-treatment studies or treatment data, in cases where it is impossible to include them in the prevalence estimation study per se.

**2. High-risk use of opioids, cocaine and/or amphetamines** (i.e. total after accounting for overlaps, equivalent to what was previously called 'PDU total')

Optional.

#### 3. Estimate of polydrug use where breakdown by used substances is not available

Optional, and where applicable.

e.g. F19 in ICD-10

In cases where this component is used, there should be a reason to believe that the users included in the estimates have a high-risk pattern of drug use falling under the indicator area, i.e. that the combinations of substances do not solely include substances that are not subject to EMCDDA monitoring (e.g. alcohol and tobacco).

<sup>(11)</sup> Polydrug use has been chosen by the EMCDDA as a broader term, including shorter and longer time-periods in which two or more substances have been used. Thus it would be broader than terms such as 'multiple drug use', 'concurrent drug use', etc. and include them.

## B — Monitoring of characteristics of high-risk drug users and trends

### Incidence of high-risk drug use

Studies of incidence of drug use mainly describe a possible epidemic curve from a long-term perspective, and the current state within it, and thus are very important elements in the interpretation of long-term trends and service coverage. Possibilities for prediction are limited but exist.

A requirement is not foreseen for incidence estimates to be constructed and regularly reported by each EMCDDA Member State. On the other hand, it is foreseen that EMCDDA, with its external contractors, if budget available, will assist interested countries in computing these from routinely collected data (TDI) periodically.

### Characteristics of high-risk drug users and options for better understanding of current, possibly new, trends

Besides knowing the prevalence of the phenomenon of high-risk drug use, having an insight into the characteristics of users (for example, their age distribution, gender, other demographic data, drugs used, patterns of use, mental/physical health, social and legal problems) will be valuable. This is important not only to understand the drug situation but, even more so, in order to plan (an improvement of) public health interventions.

This component will utilise: (i) data collected within the framework of the TDI as this represents best available data that can be considered as a broad sample of high-risk drug users; and (ii) data/information collected by existing studies of data sources other than drug treatment (for example, seroprevalence studies, surveys at low threshold facilities, street population studies and other studies in out-of-treatment settings).

The EMCDDA is preparing an inventory of larger, and sometimes at national level, studies of drug using populations sampled from non-treatment data sources, more or less regularly conducted in most countries. These provide insight not only into the characteristics of HRDUs, but also into (new) trends in these groups.

Moreover, the characteristics of individuals attending these two different settings (treatment and out-of-treatment settings) can be compared, taking into account the complexity of the dynamic process of the natural history of drug use including treatment entry, times in and out of treatment and active and inactive drug use state, and so on.

Standard data collection in standard tables (ST) or structured questionnaires (SQ) is not foreseen at the moment, but national reporting guidelines should be enhanced to improve the collection of this existing data through the yearly National reports. The ST7 Fonte template is expected to include space for references to these studies (primarily those in relation to data sources used in the regular prevalence estimation).

Other approaches should be tested, for example building the information on change directly into all collection and estimation procedures (i.e. collecting data from drug users on their drug use not only in the last year but also in the year before). Waste water analysis can serve as a basis for information on community drug use, but research work and especially triangulation with other data is necessary to have a better idea how to interpret these.

## C — Opioid substitution treatment (OST) clients in the revised indicator

The PDU indicator aimed to include all regular and/or long-term opioid users, including those on OST, which has been implemented in Member State countries to a varying extent.

The issue of including OST clients in high-risk drug use prevalence estimates has a 'philosophical' and a methodological dimension. Philosophically, some argued that it is not correct from the perspective of client motivation and rights to call them 'problem drug users' if they are stabilised, (almost) abstinent from illicit substances and perhaps also socially integrated. On the other hand, treatment coverage calculations — which include substitution treatment as an important element — in general need to have a denominator including OST cases.

The methodological dimension becomes problematic only if the registry of OST clients — as opposed to solely new entries (e.g. in a given year) to OST — is used to calculate HRDU prevalence (e.g. in a capture–recapture study). This is because of (more serious) violation of homogeneity of capture assumption, as long-term stable clients might have close to zero probability of appearing in other data sources, for example police data. Merging them with non-stable clients will thus result in a heterogeneous population.

On the other hand, non-stable and/or new OST clients will naturally appear in HRDU estimates, even if non-OST data sources are used or if entry to OST treatment instead of the full OST registry is used.

A solution was sought to overcome the problems of violation of homogeneity assumption, and the need for treatment coverage calculations. It was thought that, as a first step, it would be useful to gain a better understanding of the present situation. This should be achieved by adding some questions to ST7/Fonte, along these lines:

- Is the OST data set used in estimation?
- Are OST clients de facto included in the resulting opioids estimate, or a part of them included?

- If only a part of them is included, what is the definition of those included/excluded (this can be on the basis of case definition if part of OST data set is used or follow from methods and data sources used)?
- What is the size of OST population in the country and which part of it is included in the high-risk opioid use estimate (overlap between OST total and the high-risk opioid use estimate)?

As HRDU by definition does not include individuals who are on opioid medication used according to a doctor's prescription and do not use other drugs in a high-risk way, in the future, data collection and reporting should be streamlined and improved in line with this. This means in practice that:

1. In cases where the OST registry is used in estimation exercise (and not only entries to OST treatment in that particular year), a case definition/inclusion criteria are needed. This has to be developed in the near future.
2. In order to calculate OST coverage correctly and void of the above-mentioned methodological problems (violation of the homogeneity assumption), three elements (counts) will be needed: opioid HRDUs not in OST treatment; opioid HRDUs in OST treatment; and stabilised OST clients. It is foreseen that the work will be done with the Health and Social Responses monitoring team to agree how to best collect these data/elements.
3. Some countries report that in their programmes (nearly) all OST clients are still HRDUs or that data collection following a specific case definition is currently not possible while the use of the OST registry in estimation is currently unavoidable. There will remain space for them to report in the best achievable way. Information on the used procedures/case definitions will be collected in ST-7.



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