



## An overview of the problem drug use (PDU) key indicator

### Summary

This document summarises the general context, purposes and activities of the EMCDDA's problem drug use (PDU) key indicator. It provides a concise overview of the indicator and the related guidelines for estimating the prevalence and incidence of problem drug use at the local and national level within the European Union. Problem drug use is defined as 'injecting drug use or long-duration/regular use of opioids, cocaine and/or amphetamines'. These patterns of drug use are usually not effectively explored by the population surveys used within the population prevalence indicator. The information within the indicator is often derived from the results of research studies where prevalence estimation methods are applied. There are three main categories of methods: multiplier methods, the multivariate indicator method (commonly used to estimate national prevalence) and the capture-recapture method (commonly used to estimate local prevalence), although other methods have also been used. Information on the incidence of problem drug use or drug injecting is also part of this indicator. The main development of the PDU indicator has been the refinements of the various methods and the stimulation of their application in an increasing number of settings.



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### **About this document**

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The information contained in this document may be cited provided there is a clear indication of the source.

## Contents

Introduction to the PDU key indicator .....	3
Purpose of the key indicator .....	4
Methodology .....	4
EMCDDA monitoring standards.....	4
Methodological approach.....	5
Key references.....	5

## Introduction to the PDU key indicator

Problem drug use prevalence is one of five key epidemiological indicators used by the EMCDDA to monitor aspects of the drug use phenomena across the European Union. The implementation of the EMCDDA's five key indicators is supported by resolutions of the Council of the European Union. As opposed to indicators such as the drug-related death indicator or the drug-related infectious diseases indicator, this indicator measures a specific pattern of drug use, rather than a health or social consequence of drug use. In contrast to the 'Drug use in the general population' indicator, it focuses on the more problematic patterns of drug use, such as heroin use or injecting, which cause most harm to the individual and society. The EMCDDA has an operational definition of problem drug use, however the actual definition of the estimates used to inform this indicator often differ across the countries of the European Union and are dependent on the methods used (and the contributing data sources).

The problem drug use key indicator has been developed over time. The development has occurred through an increasing use (and increasing refinement) of a small number of prevalence estimation methods. The methods are often applied in specific research studies (unlike the general population surveys or other key indicators). The focus of the development of the PDU indicator has therefore to stimulate the application of the prevalence estimation methods, to refine the methods and to increase the coverage of the areas where the methods have been applied.

## Purpose of the key indicator

The PDU indicator captures information on the more problematic patterns of drug use that are not effectively captured by the 'Drug use in the general population' indicator, such as frequent or prolonged use of heroin, amphetamines or cocaine (or the injecting of such drugs). The problem drug use indicator is also useful in putting other key indicators into context, for example by considering treatment demand data to examine treatment penetration, or to act as a denominator for the drug-related death indicator or the drug-related infectious disease indicator. The purpose of this key indicator, at EU level, is to obtain reliable and comparable measures of the prevalence of problem drug use and injecting drug use at local and national level across Europe. Nationally, governments can use prevalence estimates to examine the effectiveness of policies aimed at reducing levels of drug use and health and social consequences of problem drug use. The local estimates can also be used to allocate resources effectively across areas within a country.

The key indicator can be subdivided in two ways; the geographical level at which the methods are applied (either the local level or the national level) and also the case definition of problem drug use. In terms of case definition, the injecting of drugs is examined separately from the wider problem drug use case definition. Furthermore, the problem opiate or problem stimulant use part of the indicator (as opposed to the injecting sub-definition) can be split into problem opiate use, problem stimulant use or problem opiate and problem stimulant use.

Local level prevalence estimates can be used to compare patterns of problem drug use within countries, whereas local and national level prevalence estimates can be used to make comparisons across countries. Successive prevalence estimates over time can be used to examine trends (increases or decreases in prevalence).

Incidence estimation is an important part of this indicator. Information from treatment data sources, along with estimates of the 'lag' time between someone beginning to use drugs and their first treatment demand, can be used within statistical models to describe past incidence and predict future prevalence.

## Methodology

### EMCDDA monitoring standards

The EMCDDA collects data on the problem drug use indicator via a standard template within an online data collection system Fonte ('standard table 7 and 8').

Ideally, new national prevalence estimates should be derived annually, however the minimal standard is that national estimates should be updated at least every three years. All updated local prevalence estimates

should be reported to the EMCDDA when available. The Reitox focal points should stimulate local and national prevalence estimation studies using the EMCDDA's recommended methods (multiplier methods, the multivariate indicator method and capture-recapture methods) and a meeting of relevant experts within each country should be convened each year. The EMCDDA also convenes a problem drug use key indicator meeting once a year, with representatives of all Member States.

The standard template in Fonte summarises information from prevalence estimation studies, such as the nature and extent of the contributing data sources (including the problem drug use case definition implicit in each source), the geographical coverage of the estimates, the methods used, the point estimate (both in terms of the estimated number of problem drug users and the problem drug use prevalence rate per total population and the population aged 15 to 64), and some measure of the reliability of the estimates, such as 95 % confidence intervals or the results of sensitivity analyses. The tables also allow for estimates to be presented by gender and by age group (15 to 24, 25 to 34 and 35 to 64 years of age). If the national estimate can be broken down into local estimates, these lower level estimates should also be provided. Although part of the key indicator, any available estimates of the incidence of problem drug use are not currently provided to the EMCDDA through a standard template.

## **Methodological approach**

The development of this indicator has been intrinsically linked to the development of prevalence estimation methods and their expanding application across the European Union. There are two main methods that are commonly used. The multiple (multivariate) indicator model (MIM) has been used to estimate prevalence at the national level whereas the three- or four-sample capture-recapture method (CRC) has often been used to estimate prevalence at the local level. The two-sample capture-recapture method and multiplier methods have also been used to estimate prevalence, primarily at the local level but often sometimes also at the national level. Guidelines for the use of the various methods have been developed over a series of EMCDDA projects since 1997. More recently, incidence estimation guidelines have also been produced.

## **Key references**

Further information on the PDU key indicator, including methodological guidelines and country or city examples can be found on the EMCDDA website (<http://www.emcdda.europa.eu>).