General-Directorate for Intervention in
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Persons Who Inject Drugs estimation

Summary
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Introduction

Intravenous drug use is one of the consumption patterns that integrates the key indicator **high risk drug use/problem drug use**, from the European Monitoring Centre of Drugs and Drug Addiction.

This indicator has the main goal of contributing to an increased knowledge on the dimension and characteristics of drugs consumption patterns that involve a higher risk of negative consequences to the user.

As such, the conceptual definition established for high risk drug use is: "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" (EMCDDA, 2012, p. 27).

Using the intravenous route of administration to use drugs represents a particular risk, concerning, for instance, the probability of overdose and of dissemination of infectious diseases transmittable through blood

Given its potential risk, the operational definition, for a period of 12 months is just:

→ Intravenous use of any psychoactive substance without medical prescription.

At european level, as at national level, the estimation of the dimension of this more intensive consumption, as well as its characterization, have as a main guideline the adaptation of policies and interventions to the needs of the individuals, namely in respect to the prevention of the development of more intensive consumption patterns, reduction of risks related to consumption, dependence treatment and harm minimization.

Even in the specific context of problematic drug use, intravenous use represents a portion of this population with a more intensive consumption pattern and a higher potential of harms associated. If the information about high risk opioid use and high risk cocaine use is sparse, when intravenous use is considered, the sources of information are even fewer.

As such, the challenges pointed to the estimation of frequent opioid/cocaine use represent an added limitation in respect to intravenous drug use:

- It is a behavior with low prevalence, which means that it is difficult to capture through the general population surveys, even those being probabilistic and based on large samples;
- It involves a high level of stigma, being, as such, difficult to report in a survey, even an anonymous one;
- A proportion of opioid users is not easily contacted through surveys based on household contacts;
- A proportion of opioid users does not contact any specialized services (namely dependence treatment) and, as such, is not registered in any list of services clients, lists that are important to make indirect estimations;
- Finally, the application of indirect methods of estimation depends on a set of pre- requisites in more than one information system, which are difficult to implement.

Intravenous drug use in Portugal

In the general population survey the participants with heroin, cocaine or amphetamines use experience are asked about the use of this route of administration. The more recent published data about this aspect refers to the survey implemented in 2012.

In this study it is possible to verify that this is not a predominant form of administration for any of these substances. Comparing its use between substances, this route is more used by heroin users and less used by amphetamine users.

In any case, it should be emphasized that, event in the context of this type of survey, about one third of heroin users and almost one quarter of cocaine users reported that already used this route of administration at least once.

In the prison population, 20% of the inmates that already used illicit substances in their life reported having used this route at least once.

Lifetime intravenous drug use (%)	
General Population Survey 2012 15/64 years	
Heroin users (LT)	37,2*
Cocaine users (LT)	21,1*
Amphetamine users (LT)	14,3*
Nat. Surv. on Addictive Behaviours in Prison Settings 2014 - inmates 16 years or more	
Illicit drugs users (LT)	20,3

LT –life time *Intravenous use of this substance

Source: Balsa, Vital & Urbano (2014); Torres *et al.* (2015).

The second type of data available refers to patients in dependence treatment, outpatient and inpatient systems, and, also, from the clients of harm reduction interventions (2011).

Generally speaking, about 20% of treatment patients report having used this route in the year before, being this prevalence higher in the clients of harm reduction interventions (although it is important to have in mind the temporal differences in data: 2011-2015).

In this context, it is particularly relevant to emphasize the distinction between, by one side, the prevalence's of intravenous use in outpatient *readmitted*[1] patients, patients in detoxification units and harm reduction clients, and, on the other side, *new*[2] patients in the outpatient system. In this last subgroup the prevalence is lower.

Intravenous drug use in the previous 12 months (%)	
Patients that started treatment in the year (new and readmitted – outpatient) - 2015	
New	3,4
Readmitted	19,4
Patients from Public Detoxification Units – 2015	21,3
Patients from Private Detoxification Units – 2015	27,4
Patients from Public Therapeutic Communities – 2015	15,5
Patients from Private Therapeutic Communities – 2015	19,0
Harm Reduction Clients – 2011	31,8

Source: SICAD (2016); Carapinha (2012).

According to the data published in the Annual Report about the Situation of the Country concerning Drug Use and Drug Addiction – 2015, in treatment patients, the prevalence of HIV, Hepatitis B and C is higher in people who inject drugs. Hepatitis C is particularly common in this subgroup of users: three quarters are positive for HCV.

HIV+ in treatment patients with intravenous drug use ever in life (%)	
Patients from the outpatient system/Public Network - 2015	
In treatment in the year	25
New	5
Readmitted	13
Patients from Public Detoxification Units – 2015	16
Patients from Private Detoxification Units – 2015	27
Patients from Public Therapeutic Communities – 2015	21
Patients from Private Therapeutic Communities – 2015	27

[1] Patients that returned to treatment after a period of absence of 12 months.

[2] Patients that start treatment for the first time in these services.

Hepatitis C (HCV+) in treatment patients with intravenous drug use ever in life (%)	
Patients from the outpatient system/Public Network - 2015	
In treatment in the year	89
New	73
Readmitted	85
Patients from Public Detoxification Units – 2015	80
Patients from Private Detoxification Units – 2015	76
Patients from Public Therapeutic Communities – 2015	74
Patients from Private Therapeutic Communities – 2015	66
Hepatitis B (AgHBs+) in treatment patients with intravenous drug use ever in life (%)	
Patients from the outpatient system/Public Network - 2015	
In treatment in the year	6
New	2
Readmitted	8
Patients from Public Detoxification Units – 2015	1
Patients from Private Detoxification Units – 2015	11
Patients from Public Therapeutic Communities – 2015	..
Patients from Private Therapeutic Communities – 2015	4

Source: SICAD (2016).

As already said, in each survey and each subset of services clients one has access to a subgroup of persons who inject drugs from the total population in Portugal.

As such, the estimation of what should be the total number of persons who inject drugs must be based on indirect methods, which use data from one or more available information systems and, in the case of the multiplier method, involve data collection from local samples of this type of users.

In Portugal, some exercises have been made concerning the estimation of the number of problem drug users at national level, referring to 2000, 2005 and 2012.

Being based in different estimation methods and, sometimes, in different definition-cases, any comparison of figures between years has limitations.

In the last exercise, based on 2012 data, this estimation was based on two types of data:

- proportion of intravenous drug users among opioids, cocaine and/or stimulants users patients of the treatment system, in the previous 12 months - 2012

- estimated number of opioids, cocaine and/or stimulants users in the previous 12 months – 2012.

The calculation of the number of people who inject drugs consisted in the application of the referred proportion to the estimated number of opioids, cocaine and/or stimulants users in the previous 12 months (Ribeiro, *et. al*, 2014).

The dataset features and the information available didn't change meanwhile, still being the Treatment the only source of information with lists of patients with intravenous use. With the purpose of mitigating the limitation of a possible dependence between data sources, in the last estimation, developed with 2015 data, the Treatment information was organized in 3 datasets.

Intravenous use estimation – 2015

Capture-recapture method with 3 data sources:

- Treatment: outpatient * – 1st semester (N =368)
- Treatment: outpatient * – 2nd semester (N = 520)
- Treatment: inpatient (N = 557)

*New and readmitted patients in the year

Estimation of the number of persons who inject drugs – 2015 -

Definition-case: Intravenous use of any psychoactive substance without medical prescription in the last 12 months (15-64 years) /Continental Portugal

Total population estimated = 13 162 (6 416 – 28 497)

Rate / 1000 inhabitants = 2,1 (1,0 – 4,5)

*Implementation of generalized linear models for the calculation of the population not present in any of the 3 sources, including intersections in the analysis. For 95% confidence interval the more adjusted model was based on the intersections between the 2 semesters of the outpatient system (1st semester and 2nd semester) and between outpatient system (1st semester) with inpatient system.

The majority of people who inject drugs (PWID) are male. It is estimated that

for 25 male PWID there is one female PWID.

Total population estimated = 12 466
(5 633 – 29 230)

Rate / 1000 inhabitants = 4,0 (1,8 – 9,5)

Total population estimated = 498
(184 – 3 220)

Rate / 1000 inhabitants = 0,2 (0,1 – 1,0)

Since the estimation is based exclusively in treatment data, it should be considered that the estimated number revers to people who inject drugs interested in treatment.

This estimation has some limitations:

1) For 95% confidence, the confidence interval is quite wide;

2) The three sources of information used are from the treatment system, 2 of them, from the outpatient system;

3) The information about the outpatient system refers to patients that started treatment in the year (new and readmitted), having in mind its actuality.

Syringes distribution to people who inject drugs

According to the Annual Report 2015 – Responses and Interventions in the context of Addictive Behaviours and Dependencies (SICAD, 2016a), in 2015 were exchanged/distributed 1 004 706 syringes through the Needle Exchange Program. Bearing on the PWID estimation presented, this corresponds to 76 syringes/year for each PWID.

Trends

Having in consideration the effect of the sources and methods of estimations used in the estimated numbers produced, the comparisons between years should be carefully analyzed. In this context, the trends analysis that offer a higher confidence are the ones that are supported in similar methods and sources.

In comparison to 2012, in 2015 it was used a distinct method of estimation, although, also based on treatment sources. However, for validation purposes, and in order to support a trend analysis, the method implemented to 2012 data was also repeated with 2015 data. Based on this, the resulting estimated number was similar to the other method implemented, about 13 500 intravenous users. In 2012 the estimated number was 14 426.

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