Opioid use

Summary
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SICAD

Serviço de Intervenção nos
Comportamentos Aditivos
e nas Dependências

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Introduction

High risk opioid 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).

For possible operational definitions, for the period of last 12 months, the consensus was:

→ Opioid use, including non-prescribed opioid medicines, with a weekly frequency or more in the last 12 months, for at least 6 months (in alternative, 24 days or more in the last 12 months) or;

→ Medical diagnosis according to DSM or ICD criteria, for instance, harmful use, abuse or opioid dependency or opioid use disorder, in the last 12 months, or;

→ Any definition approximate to the two before that can be collected through the available data sources.

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.

Estimating the number of frequent opioid users (weekly frequency or more) represents an important challenge, which probably explains why, at European level, most of the estimations produced concern opioid use generally, irrespective of the frequency.

This challenge results from a series of factors, mainly:

- 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.

In Portugal, within the National Information System on Psychoactive Substances, Addictive Behaviours and Dependencies, several indicators are systematically collected, in the domains of demand reduction and market, which allow a broad description of the national situation concerning this type of substances, related problems and markets. This description is presented every year in the Annual Report on the Country Situation on Drugs and Drug Addiction, with a trends analysis.

Opioid use in Portugal

As already stated, in the last Annual Report on the Country Situation on Drugs and Drug Addiction, it is presented the more recent national information on opioid use, problems related and markets in Portugal.

In this context, it is important to notice that, based on the general population survey (15-74 years), any other illicit substance than cannabis has a lifetime prevalence with a maximum value of 1,1% (corresponding to cocaine), being the lifetime prevalence of **heroin 0,5%**, higher than the prevalence of LSD use, hallucinogenic mushrooms and amphetamines, and lower than the prevalence of cocaine and ecstasy.

The majority of lifetime heroin users didn't use heroin in the year before the survey. The 12 month prevalence is 0,1%, which corresponds to a consumption's continuity rate of 11% (Balsa, Vital & Urbano, 2017).

Being in the general population or in several specific populations studied, the heroin prevalence has a predominant trend of decreasing/stabilization (SICAD, 2016).

Considering the more recent data from national surveys, it should be emphasized that in the general population survey, heroin prevalence in young and young adult populations (15-34 years) is lower than in older groups (35-74 years).

On the other hand, when more specific population surveys are considered (with larger samples of specific populations), the prevalence's are higher.

For instance, in the national survey implemented in the National Defense Day, all young people that do 18 years in the same year are contacted. In 2016, about 80 000 youngsters participated.

In the population surveyed in justice settings, the prevalence is quite higher.

	Lifetime heroin use (%)
General Population Survey 2016/17 15/74 yearss	0,5 (12M – 0,1)
General Population Survey 2016/17 15/34 years	0,3 (12M – 0,0)
National Defense Day Survey* – 2016 18 years	3,0
Survey on Tobacco, Alcohol, Drugs Use /other ABD 2015 – students 13-18 years	0,7-1,2
Health Behaviour School aged Children 2014 - students 8th and 10th grade	2,0
Nat. Surv. on Addictive Behaviours in Prison Settings 2014 - inmates 16 years or more	26,0
Nat. Surv. on Addictive Behaviours in Custodial Facilities 2015 – young offenders 14-20 years	7,0

*Heroin and other opioids

Source: Balsa, Vital & Urbano (2017); Calado & Carapinha (2017); Feijão (2016),Matos *et al*. (2015); Torres *et al*. (2015), Carapinha *et al*. (2016).

In the european study with data comparable between countries concerning 16 years old students (*European School Survey Project on Alcohol and other Drugs* – 2015; The ESPAD Group, 2016) the lifetime heroin prevalence among Portuguese students is similar to the european average (1%).

Concerning indirect data, heroin and other opioids stand out from other substances in indicators that refer to problems related with drug use, for instance, treatment demand and mortality, although their importance has been decreasing in the last years when compared with other substances.

In this way, although heroin keeps being the substance more indicated as the main drug[1] by patients in treatment[2] and by readmitted patients[3], in the public outpatient network for dependence treatment and, also, in detoxification units, that is not de case for new patients in the outpatient system and for patients in therapeutic communities.

[1] The one which, in the perspective of the person, causes more problems to him.
[2] With at least one appointment in the year.

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

Still, half of drug related deaths are related to opioids (General Registers of Mortality), being three quarters the proportion of overdoses that involve opioids (Specific Registers of Mortality).

On the other hand, the proportion of administrative proceedings for heroin possession for personal consumption is 5% of the total proceedings, figure that has been decreasing over the years.

Finally, concerning potential harms due to heroin use, it is important to notice that, at market level, there is a trend toward higher purity, while the average price is stable (SICAD, 2016, 2017).

It is possible to identify the frequency of heroin use in the surveys addressing general population, in the information system about treatment patients and in the surveys addressing prison populations. Although less updated, there is also information from the last national study addressing clients from harm reduction interventions.

Opioid use refers, essentially, to heroin use. No matter the population group, the more common frequency of use is weekly or more, which means that, broadly speaking, the estimation of opioid use refers largely to the estimation of high risk opioid use.

In the subgroup of 18 years old (National Defense Day survey) the proportion of participants that indicate this frequency is inferior but it is important to notice that the reference period here is 30 days and that the figure refers to daily/almost daily use.

Opioid frequency of use	
(% among users in the indicated reference periods)	
General Population Survey 2016/17 (Heroin) 15/74 years	
Weekly frequency[1] or higher in the previous 12 months	60,0
National Defense Day Survey – 2016 18 years	
20 or more days in the previous 30 days	39,0%
Patients that started treatment in the year (new and readmitted – outpatient) - 2015	
Heroin (N=1 777, 1 034 with information) Weekly frequency[1] or higher in the previous 7 days	85,1
Non-prescribed methadone (N=64, 54 with information) Weekly frequency[1] or higher in the previous 7 days	85,1
Non-prescribed buprenorphine (N=67, 56 with information) Weekly frequency[1] or higher in the previous 7 days	85,7
Patients from Public Detoxification Units – 2015 (Heroin)	
Weekly frequency[2] or higher in the previous 12 months	75,0
Patients from Private Detoxification Units – 2015 (Heroin)	
Weekly frequency[2] or higher in the previous 12 months	75,4
Patients from Public Therapeutic Communities – 2015 (Heroin)	
Weekly frequency[2] or higher in the previous 12 months	57,7
Patients from Private Therapeutic Communities – 2015	
Heroin (N=1 102) Weekly frequency[2] or higher in the previous 12 months	68,1
Non-prescribed methadone (N=91) Weekly frequency[2] or higher in the previous 12 months	35,2
Non-prescribed buprenorphine (N=92) Weekly frequency[2] or higher in the previous 12 months	48,9
Nat. Survey on Addictive Behaviours in Prison Settings 2014 - inmates 16 years or more (Heroin)	
Weekly frequency[2] or higher in the 30 days before current reclusion	87,2
Harm Reduction Clients – 2011 (Heroin)	
Weekly frequency[2] or higher in the previous 12 months (except previous 30 days)	86,7

[1] 2 or more times/week [2] 1 or more times/week

Source: Balsa, Vital & Urbano (2017); SICAD (data *ad hoc*); Torres *et al*. (2015), Carapinha (2012).

In the studied subgroups, the majority of heroin users are high risk users.

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

As such, the estimation of what should be the total number of opioid users 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 high risk 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, it was applied the capture-recapture method with 2 data bases:

- Central Register of Administrative Offenses for drug possession for personal use
- Treatment database, resulting from the merge of the database from outpatient treatment with the 4 databases from inpatient treatment.

Based on this exercise it was possible to estimate, for the first time at a national level, the number of opioid users (in the previous 12 months) (Ribeiro, *et. al*, 2014).

The dataset features and the information available didn't change meanwhile, reason why the capture-recapture method remains being the more appropriate. With the purpose of mitigating the limitation of a possible dependence between data sources, in the last estimation, developed with 2015 data, the method was applied with 3 data sources: 2 from Treatment and 1 from the Central Register of Administrative Offenses.

Opioid use estimation – 2015

Capture-recapture method with 3 data sources:

- Treatment: outpatient (N =1 866*)
- Treatment: inpatient (N = 1 653)
- Justice: Central Register of Administrative Offenses (N = 664)

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*New and readmitted patients in the year

Estimation of the number of opioid users – 2015

Definition-case: opioid use (heroin, non-prescribed methadone/buprenorphine, other) in the previous 12 months (15-64 years) / Continental Portugal

Total population estimated = 33 290 (24 070 – 48 565)

Rate / 1000 inhabitants = 5,2 (3,8 – 7,6)

*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 outpatient and inpatient system and with the Central Register of Administrative Offenses.

The majority of opioid users are male. It is estimated that

for 19 male opioid users there is one female opioid user.

Total population estimated = 27 934

(19 724 – 40 246)

Rate/1000 inhabitants = 9,0 (6,4 – 13,0)

Total population estimated = 1 465

(1 207 – 1 823)

Rate/1000 inhabitants = 0,4 (0,4 – 0,6)

This estimation has some limitations:

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

2) Two of the three sources of information are from Treatment, although from different systems (outpatient/inpatient);

3) The information relative to the outpatient system concerns patients that started treatment in the year (new and readmitted), having in mind its actuality;

4) The source relative to the administrative offenses concerns individuals in the possession of opioids, from which it is inferred its consumption in the previous 12 months;

5) The estimation is about the number of opioid users, irrespective of frequency of use.

Opioid users in treatment

In 2015 were in treatment[4] in the public network specialized in treatment dependence – outpatient system – 16 913 patients for problems related with drug use, that identified opioids as the main substance (the one that, in the perspective of the user, causes more problems) (SICAD, 2016). In turn, 17 011 were in Opioid Substitution Programs, in different structures.

As stated, it is estimated in 33 290 (24 070 – 48 565) the number of opioid users in this year.

Facing these figures, the proportion of opioid users in treatment is 51% (35% - 70%).

51% of opioid users are in treatment in the outpatient system.

The proportion of opioid users in Substitution Programs is the same.

In the analysis of this coverage it is important to consider that it is based in figures that, by one side, may have de effect of overestimation, while, on the other side, may have the effect of underestimation.

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[4] With, at least, 1 appointment in the year.

The figure estimated includes as a source of information the patients in treatment in the inpatient system, while the coverage is calculated to the outpatient system (numerator), which may produce an underestimation effect. Also, the figure estimated as the administrative offenses register has source of information, database that can include opioid users in no need for treatment. This too can cause an underestimation effect of the coverage.

On the other hand, data from the outpatient system that is used has source includes only patients that started treatment in the year, while the number of patients in treatment used for coverage determination includes all. This can have the opposite effect, of overestimation.

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