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NATIONAL DRUG REPORT 2019 *(OVERVIEW)*

THE DRUG PHENOMENON IN THE GRAND DUCHY OF LUXEMBOURG: TRENDS AND DEVELOPMENTS

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THE DRUG PHENOMENON IN THE GRAND-DUCHY OF LUXEMBOURG: TRENDS AND DEVELOPMENTS 2019

This factsheet presents an overview of the drug phenomenon in Luxembourg, covering drug policy, drug supply and demand, drug use patterns, health consequences and responses, as well as drug markets and crime. The statistical data reported relate to 2018 or the most recent year for which data are available and were provided to the Luxembourg Focal Point of the EMCDDA (PFLDT) by the RELIS network, unless stated otherwise.

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1. DRUG POLICY

1. DRUG POLICY

1.1. NATIONAL DRUG STRATEGY

The National Strategy and Action Plan on Drugs and Addictions is based on a holistic approach and addresses illicit drugs, alcohol, tobacco, psychotropic drugs and behavioural addictions. It is built on two pillars; namely, drug demand and drug supply reduction, and four cross-cutting themes: harm reduction, research and information, international cooperation and coordination. Its overall objective is to contribute to achieve a high level of protection in terms of public health, public security and social cohesion. This overall objective relies on six sub-objectives across the strategy's pillars and transversal axes.

The National Strategy and Action Plan on Drugs and Addictions 2015-19 aimed to contribute to preventing drug use and addictive behaviours, developing and maintaining diversity and quality in care and treatment offers, and reducing drug use prevalence among the general population and high risk drug use, as well as minimising the negative health and social consequences generated by illicit drug use and drug trafficking. The Action Plan's priorities include universal, indicated and selective prevention, diversification and decentralisation of care provision, the further development of substitution treatment, specific care for ageing drug users, supervised housing offers, the fight against infectious diseases among drug users and responses to new psychoactive substances (Ministère de la Santé, 2015).

Luxembourg evaluates its drug policy and strategy by means of routine indicators' monitoring and specific research projects. An external mixed-methods evaluation of the 2015-19 national strategy's implementation was performed in 2019 and its outcome has been used in the development of the new National Strategy and Action Plan on Drugs and Addictions 2020-24.

1.2. LEGAL PENALTIES FOR PERSONAL DRUG POSSESSION AND USE

In 2001, cannabis use and possession for personal use were decriminalised at the national level and are now punishable only by a fine. Prison sentences are foreseen in case of aggravating circumstances (e.g. use in schools or in the presence of minors). Penalties for possession and use of controlled substances other than cannabis include imprisonment between 8 days and 6 months and/or a fine. Prosecution may be halted or penalties reduced if a drug user has taken steps to seek specialised help.

The national legislation does not differentiate between small-scale and large-scale drug deals or distribution. Sentences for both currently range from 1 to 5 years' imprisonment and/or a fine, while a prison sentence of 5-10 years can be imposed if the distributed drug has caused severe damage to health. If the drugs have fatal consequences for the user, punishment for the distributor can be increased to 15-20 years' imprisonment.

New psychoactive substances (NPS) are regulated and controlled by the same legal instruments as other controlled substances.

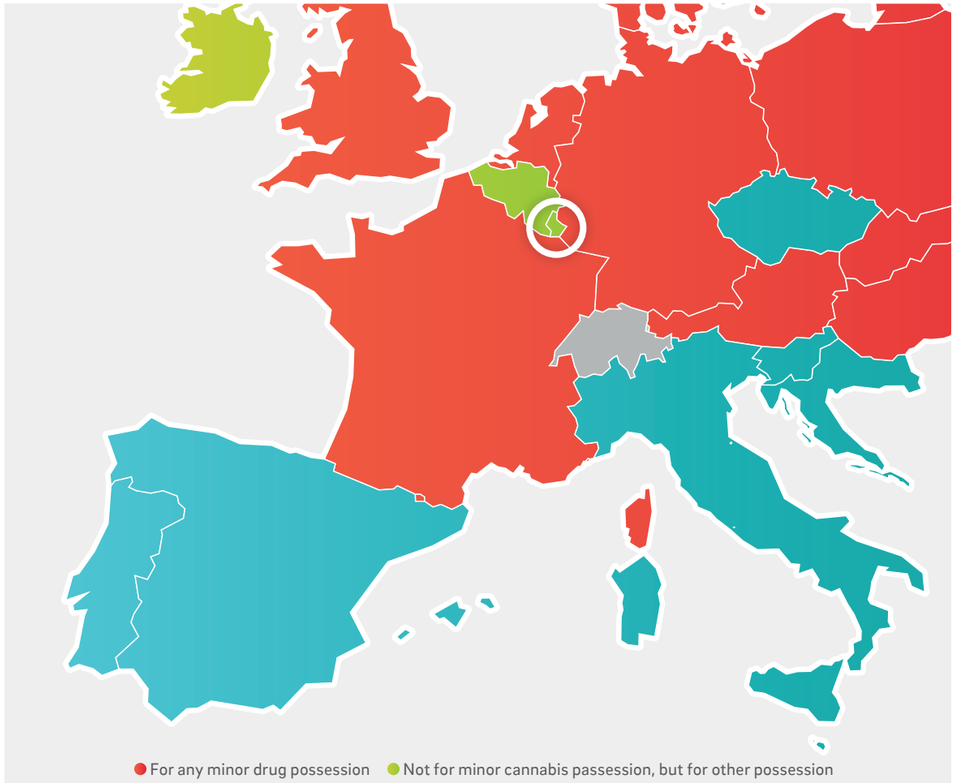


FIGURE 1. Legal penalty of incarceration foreseen for possession of drugs for personal use (minor offence) (EMCDDA, 2019)

1.3. NEW DEVELOPMENTS REGARDING CANNABIS FOR MEDICAL AND NON-MEDICAL PURPOSES

CANNABIS FOR MEDICAL PURPOSES

Legal access to cannabis for medical purposes has been regulated in the Grand-Duchy of Luxembourg in 2018. The respective law (« Loi du 20 juillet 2018 modifiant la loi modifiée du 19 février 1973 concernant la vente de substances médicamenteuses et la lutte contre la toxicomanie ») was modified and entered in force on August 1st 2018. The grand-ducal decree (« Règlement grand-ducal du 21 août 2018 déterminant les modalités de prescription et d'accès à l'usage de cannabis à des fins médicales, ainsi que le contenu et la durée de la formation spéciale pour les médecins-spécialistes ») defining the medical prescriptions modalities and respective conditions, as well as the training to be pursued by medical doctors entered into force on September 28th, 2018[1].

1 Règlement grand-ducal du 21 août 2018 déterminant les modalités de prescription et d'accès à l'usage de cannabis à des fins médicales, ainsi que le contenu et la durée de la formation spéciale pour les médecins-spécialistes et modifiant :
1° le règlement grand-ducal modifié du 19 février 1974 portant exécution de la loi du 19 février 1973 sur la vente des substances médicamenteuses et la lutte contre la toxicomanie ;
2° le règlement grand-ducal modifié du 18 janvier 2005 déterminant le modèle du carnet à souches prévu à l'article 30-1 de la loi modifiée du 19 février 1973 concernant la vente de substances médicamenteuses et la lutte contre la toxicomanie.

REGULATION OF LEGAL ACCESS TO CANNABIS FOR NON-MEDICAL PURPOSES

By the end of the year 2018, the coalition agreement of the government included a chapter on a future regulation on legal access to cannabis for non-medical purposes. More specifically, the coalition agreement of the government states that the main purposes of regulating legal access to cannabis for non-medical purposes are to regulate, under conditions yet to be defined, the domestic production as well as the purchase and possession of cannabis for non-medical use for the personal needs of residents of the Grand-Duchy of Luxembourg who have reached the age of majority. The objectives mentioned in the coalition agreement for regulating legal access to cannabis for non-medical purposes are to reduce the illicit market, to reduce the psychological and physical dangers linked to its use, and to fight crime at the level of supply. The coalition agreement also mentions that to this end, a State controlled chain of production and national sales will be set up, guaranteeing the quality of legal products. Proceeds from the sale of cannabis will be invested primarily in prevention, health promotion and education, and treatment in the broad area of dependence. Discussions and preparations towards regulating the legal access to non-medical cannabis are currently ongoing within an interministerial working group.

2. PREVALENCE, PATTERNS AND DEVELOPMENTS IN DRUG USE

2. PREVALENCE, PATTERNS AND DEVELOPMENTS IN DRUG USE

2.1. DRUG USE IN THE GENERAL POPULATION

Drug use among the general population in Luxembourg is measured through the cross-sectional population-based survey "European Health Interview Survey (EHIS)". A module covering the topic of illicit and NPS has been added by the EMCDDA Luxembourg Focal Point (PFLDT). This non-mandatory module allows to assess the lifetime prevalence (LTP), the last year prevalence (LYP) and the last month prevalence (LMP) of use of several illicit drugs. The EHIS is implemented in all European Union (EU) Member States and is conducted every five years according to the Regulation 1338/2008 on Community statistics on public health and health and safety at work. The data presented below are based on the 2014 EHIS wave. The target for illicit and NPS' use was the general population aged 15-64 years, and a total number of 3,421 valid questionnaires from respondents of this age category could be retained. The most recent wave of the survey was conducted in 2019. Results will be available by the end of 2020.

OVERVIEW

- Cannabis is the most commonly used drug nationally. It is used at least once a year by 4.9% of the total population (15-64y), by 9.8% when considering young adults (15-34y) and by 11.1% when considering young scholars (15-18y) (Figure 2).
- Following cannabis, cocaine is the most prevalent drug among the general population (15-64y): 2.5% used it at least once in their lifetime, 0.4% used it at least once during the last year and 0.2% during the last month. Amphetamines (ATS) and ecstasy/MDMA (XTC) use is also prevalent, particularly among young adults (15-34y), while hallucinogens (LSD[2] and magic mushrooms) are preferred among adolescents (15-18y) (Figures 4, 5).
- In Luxembourg, illicit drug use in the general population is below the EU average for all the substances.

CANNABIS USE

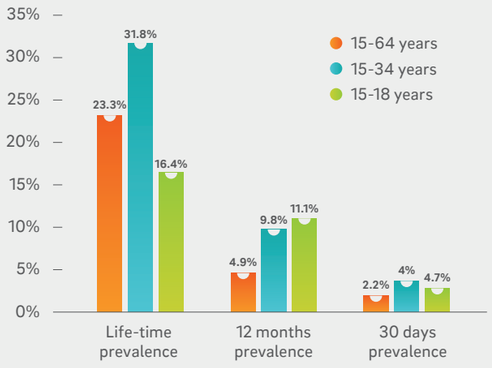


FIGURE 2. Lifetime (LTP), last year (LYP) and last month (LMP) prevalence of cannabis use by age groups (valid %) (EHIS, 2014 - Origer et al., 2016)

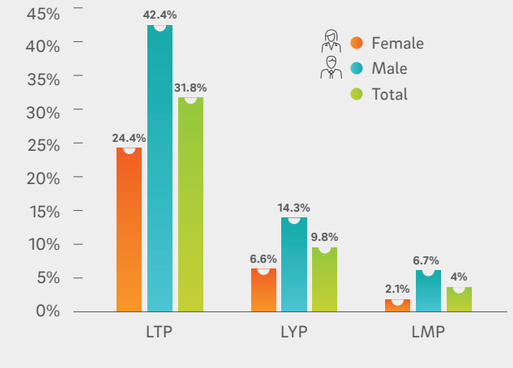


FIGURE 3. LTP, LYP and LMP of cannabis use by gender (valid %) (EHIS, 2014 - Origer et al., 2016)

- As regards the total population, LTP (15-64y) of cannabis use is 23.3% revealing that the consumption of this substance is below the EU average (EMCDDA, 2019). Current (LMP) and recent (LYP) cannabis use are more common among adolescents (15-18y) and young adults (15-34y) (Figure 2).
- Recent cannabis consumption (LYP) among young adults (15-34y) situates at 9.8%, also markedly below the EU average of 14.4% (EMCDDA, 2019) (Figure 2). For each prevalence rate, consumption is more common among men then among women (Figure 3).
- First use of cannabis occurs on average around the age of 19 years, and first use of cocaine occurs around the age of 25 years (EHIS, 2014 – Origer et al., 2016).

OTHER ILLICIT DRUGS USE

Lifetime use (at least once in a lifetime)

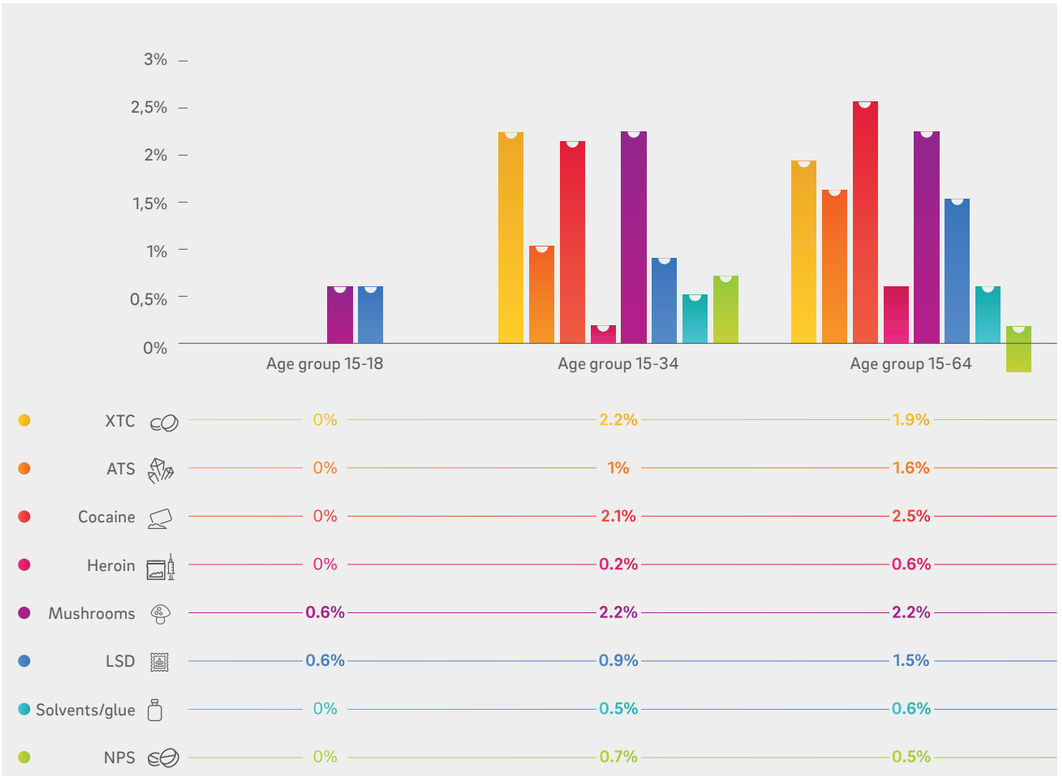


FIGURE 4. Lifetime prevalence (LTP) of illicit drugs' use by age groups (valid %) (EHIS, 2014 - Origer et al., 2016)

- After cannabis, cocaine is the most prevalent drug – used by 2.5% of the general population at least once in their lifetime. Other hallucinogens such as magic mushrooms are also prevalent (2.2%).
- Young adults (aged 15-34y) use preferably magic mushrooms and ecstasy/MDMA followed by cocaine.
- Among adolescents (aged 15-18y), other drugs besides cannabis are not or only marginally used (magic mushrooms and LSD) (Figure 4).

2 LSD = Lysergic acid diethylamide

Recent use (during last year)

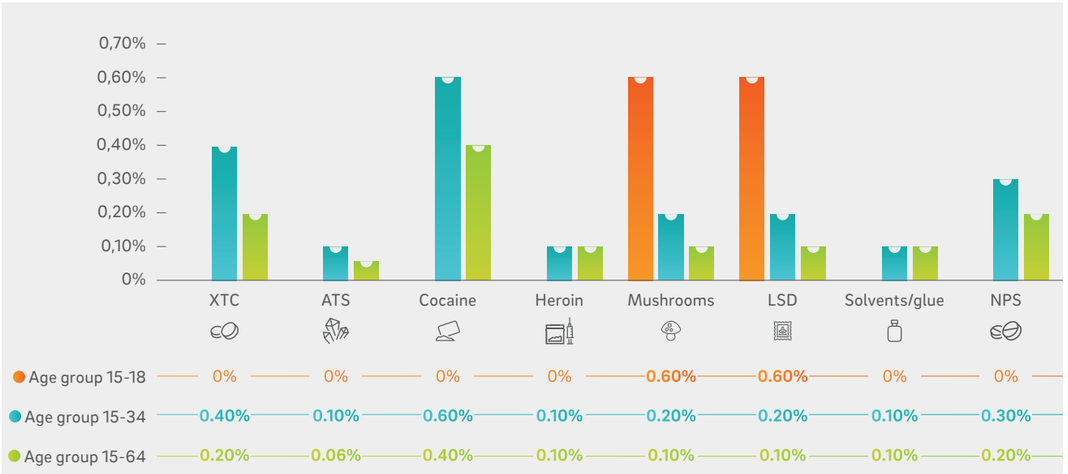


FIGURE 5. Last year prevalence (LYP) of illicit drugs' use by age groups (valid %) (EHIS, 2014 - Origer et al., 2016)

- Globally (15-64y), cocaine is the most commonly used illicit drug during the last year (0.4%).
- Young adults (15-34y) tend to use more cocaine (0.6%) than other age groups, followed by ecstasy/MDMA (0.4%). These prevalence rates are below the EU average – 2.1% for cocaine and 1.7% for ecstasy/MDMA (EMCDDA, 2019).
- Among adolescents (15-18y), magic mushrooms (0.6%) and LSD (0.6%) are the most popular drugs besides cannabis (Figure 5).

Current use (during last month)

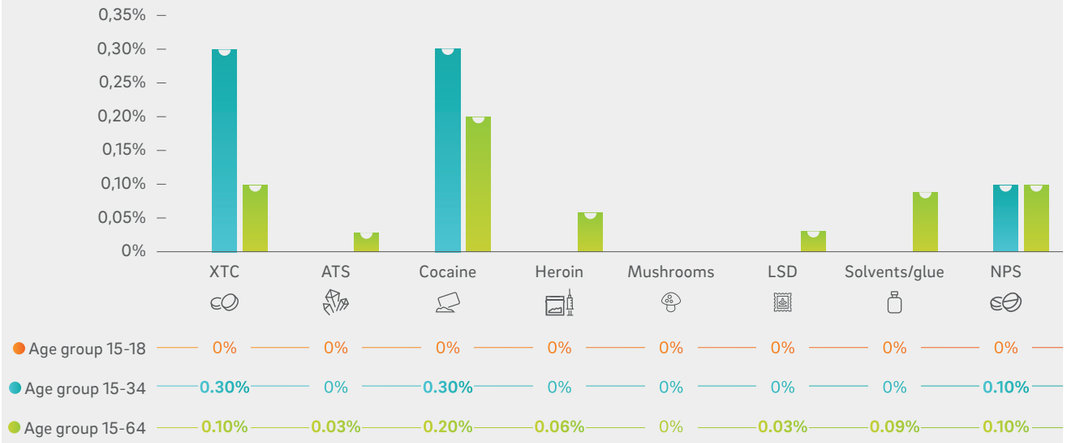


FIGURE 6. Last month prevalence (LMP) of illicit drugs' use by age groups (valid %) (EHIS, 2014 - Origer et al., 2016)

- Besides cannabis, use of other illicit drugs has not been observed among adolescents (15-18y).
- While cocaine is the most prevalent used drug (0.2%) among the total general population (15-64y) besides cannabis, current use of cocaine and ecstasy/MDMA are equally predominant (0.3%) among young adults (15-34y) (Figure 6).

2.2. DRUG USE AMONG YOUNG SCHOLARS

Drug use among young scholars is assessed through the representative cross-sectional survey "Health Behaviour in School-Aged Children (HBSC)", which is conducted every four years – the first in 2006. The University of Luxembourg is responsible for the scientific coordination of the HBSC survey in Luxembourg. The data on cannabis presented here are derived from the latest HBSC Luxembourg trends report (Heinz, van Duin, Kern, Catunda, & Willems, in press). Data on other illicit substances are based on the 2018 National Drug Report (Berndt, Seixas, & Origer, 2018). Throughout the past four waves of the HBSC survey, 11 to 18 year old adolescents in secondary schools were consistently asked if they had ever taken cannabis in their life and in the past 30 days. Previous waves of the HBSC survey also addressed the use of other illicit drugs. Whereas a total number of 8,732 pupils aged between 11 and 18 participated in 2018 wave of the HBSC survey, the results below present the prevalence rates of cannabis use among young scholars between the age of 15 and 18 years (n=4,154).

CANNABIS USE

- The proportion of 15 to 18 years old scholars who report having used cannabis at least once in their lives (LTP) has remained largely stable over time (around 30%) and a slight decrease was observed in 2018 (27%).
- While there was a small decrease in lifetime use (LTP) of cannabis from 2006 to 2018, its current consumption (LMP) increased (Figure 7).

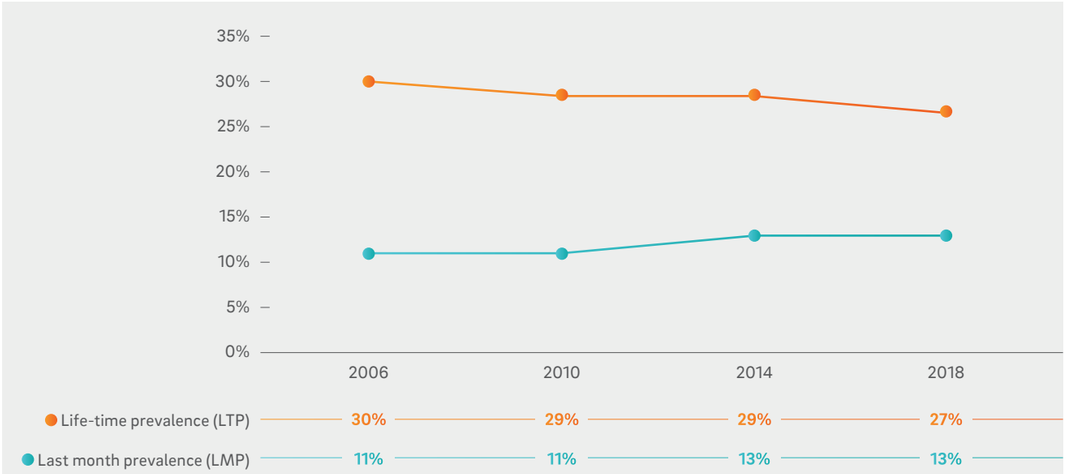


FIGURE 7. LTP and LMP of cannabis use among young scholars (15-18y) (valid %) (HBSC, 2018 - Heinz et al., in press)

- The proportion of ever (LTP) and current (LMP) cannabis users is slightly higher among boys than among girls.
- For both boys and girls, a slight increase in current (LMP) cannabis use has been observed from 2006 to 2018.
- Moreover, while the proportion of boys who ever used cannabis during their lifetime has slightly decreased over the past years, the proportion of girls who ever used cannabis remained largely stable.
- In 2018, 10% of girls reported current use of cannabis (LMP) compared to 8% in 2006 (this increase is statistically significant). Among boys a similar increase between 2006 (14%) and 2018 (16%) has been observed (this increase is statistically non-significant) (Figure 8).

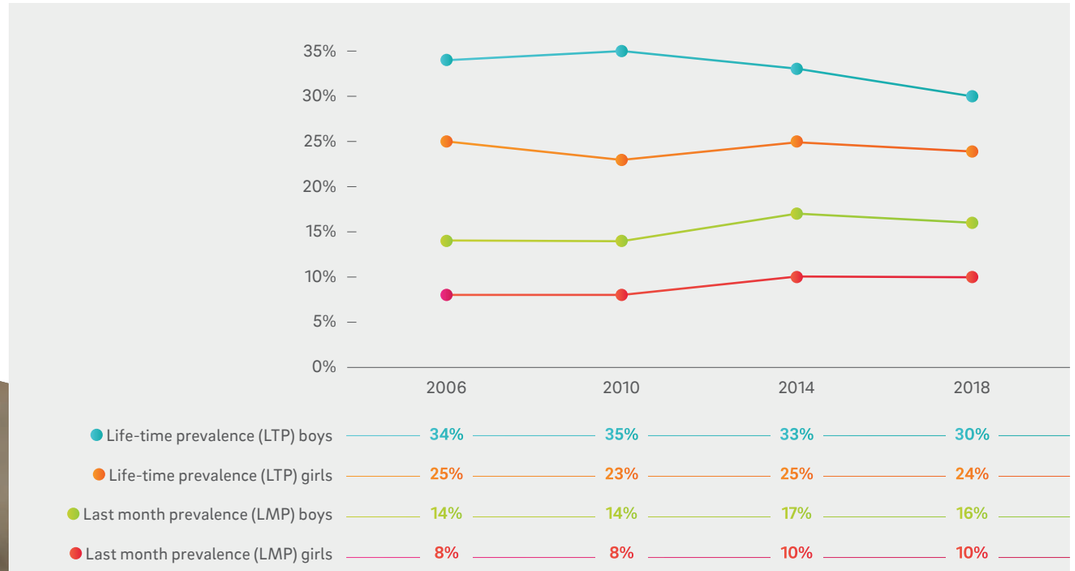


FIGURE 8. LTP and LMP of cannabis use among young scholars (boys and girls) (15-18y) (valid %)
(HBSC, 2018 - Heinz et al., in press)

- Lifetime use of cannabis is less meaningful than recent and current use of cannabis as it covers both experimental and regular use. While there is a mixed picture regarding the use of cannabis, the proportion of young scholars (boys and girls) who claim to use cannabis currently (during the last month) has risen overall.
- However, an analysis by age group shows that there has been a shift in age: for both boys and girls, use has decreased among younger scholars and increased among older ones, respectively (Figures 9, 10).

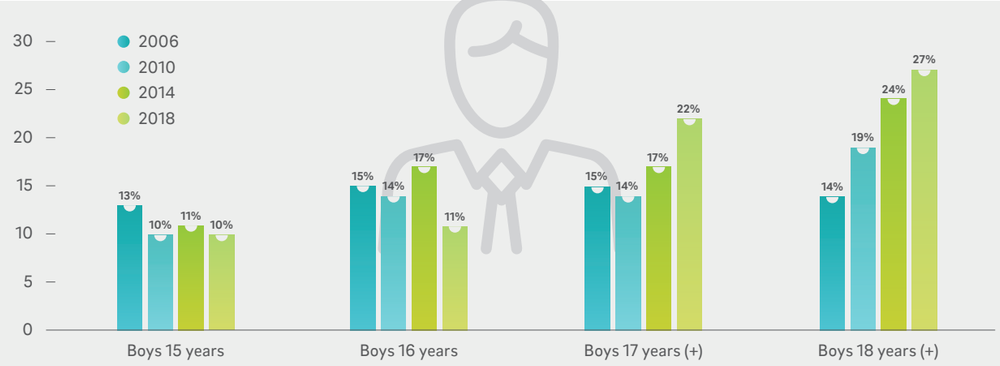


FIGURE 9. LMP of cannabis use among boys across different ages (valid %)
(HBSC, 2018 - Heinz et al., in press)

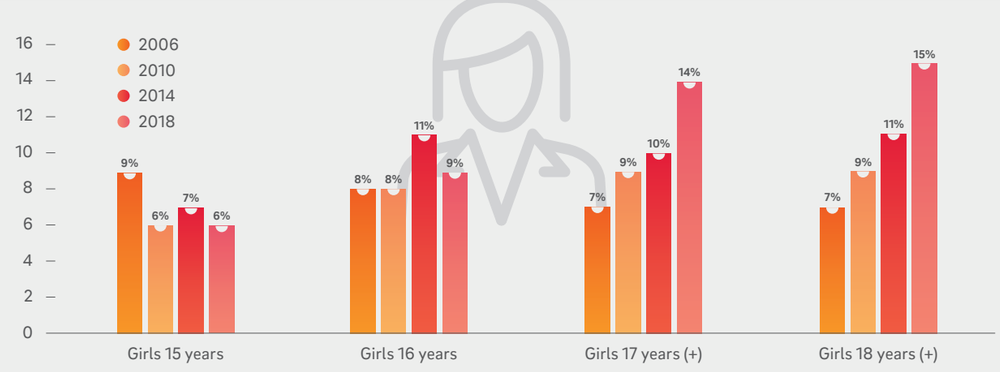


FIGURE 10. LMP of cannabis use among girls across different ages (valid %)
(HBSC, 2018 - Heinz et al., in press)

- The 2014 survey also enquired if young scholars had used cannabis recently (in the last 12 months; LYP). The findings of lifetime, recent and current cannabis use across different age groups (13-14y, 15-16y and 17-18y) are presented in Figure 11.
- According to the HBSC 2014, prevalence rates of cannabis use are consistently higher among the older age groups than among the younger age groups.

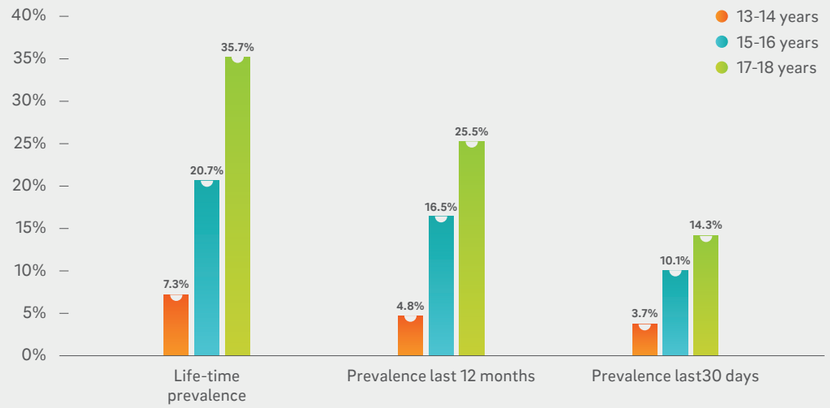


FIGURE 11. LTP, LYP and LMP rates of cannabis use across different age groups (valid %) (HBSC, 2014 – Berndt et al., 2018)

OTHER ILLICIT DRUGS USE

- Lifetime use of illicit drugs (LTP) other than cannabis has been assessed in the 2006, 2010 and 2014 HBSC waves.
  - LTP of illicit drug use in young scholars (13-18y) decreased between 2006 and 2014 for a great number of substances – cocaine (2006: 2.1%; 2014: 1.8%); MDMA (2006: 1.7%; 2014: 1.3%); amphetamines (2006: 1.6%; 2014: 1.1%); magic mushrooms (2006: 2.1%; 2014: 1.4%); and opioids (2006: 0.9%; 2014: 0.8%) (Origer, Lopes da Costa, & Diederich, 2008; Origer, Lopes da Costa, Diederich, & Schram, 2012; Berndt et al., 2018). However, in which regards LSD and "abuse of medication to get high" increases were observed during this period – LSD (2006: 0.7%; 2014: 0.9%); "abuse of medication to get high" (2006: 1.9%; 2014: 2.5%).
- Regarding recent use (during the last year; LYP) of other illicit drugs, the data available date from the 2006 and 2010 HBSC waves.
  - After cannabis, cocaine was the most prevalent drug used by young scholars (13-18y) – used by 2.1% of the scholars in 2006 and by 1.7% in 2010. Amphetamines, hallucinogens (such as magic mushrooms) and MDMA use were also reported, although with low prevalence (Origer et al., 2008; 2012).

2.3. HIGH-RISK DRUG USE

Some drug users develop more severe forms of use, defined by the EMCDDA as 'high-risk drug use'. High-risk drug users (HRDUs) are considered those persons whose recurrent drug use 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, 2019). Data on HRDU originate from the national monitoring system RELIS, which encompasses both treatment demand and law enforcement contact data.

NATIONAL ESTIMATION OF THE NUMBER OF HRDUs

- The annual number of HRDU person-contacts indexed by the national institutions (treatment demand and law enforcement) figured 5,154 in 2018 (multiple counts included) (5,285 in 2017).
- According to the last estimation based on incremental OST multiplier method (IOMM), the national prevalence of HRDUs situates around 2,257 persons (prevalence rate: 5.79 per 1000 inhabitants aged 15-64y), which suggests a decreasing trend since 2003. Among the HRDU, 1,738 are high-risk opioid users (OU) (prevalence rate: 4.46 per 1000 inhabitants aged 15-64y) and 1,467 are injecting drug users (IDUs) (prevalence rate: 3.77 per 1000 inhabitants aged 15-64y) in Luxembourg (estimation based on RELIS 2015 data - Origer et al., 2017).
  - Although HRDU and IDU prevalence rates appear to follow a decreasing trend, some indicators point at an increasing marginalisation of certain groups of users. Part of the HRDUs may thus not be in contact with treatment centres or low-threshold facilities (and perhaps neither with law enforcement).

CHARACTERISTICS AND PATTERNS OF USE OF THE HRDUs

- During the last 15 years, the average age of the HRDUs in Luxembourg has been around 30 years old. In 2017 (most recent data) HRDUs were, on average, 28 years of age which suggests a decrease in the average age of this group (34y in 2016).
- The majority of the indexed HRDUs are male (88.2% in 2017). The proportion of female HRDUs has followed a decreasing trend since the last 10 years (23% in 2007 and 11.8% in 2017).
- The majority of the HRDUs report a stable residence (65.4%), however, a relevant proportion face a homeless situation (19.6% in 2017). Most of the HRDUs (61.1%) are professionally inactive against a smaller proportion who report a stable (14.9%) or unstable job (5.7%), or to be currently studying (2.3%) (Berndt et al., 2018).

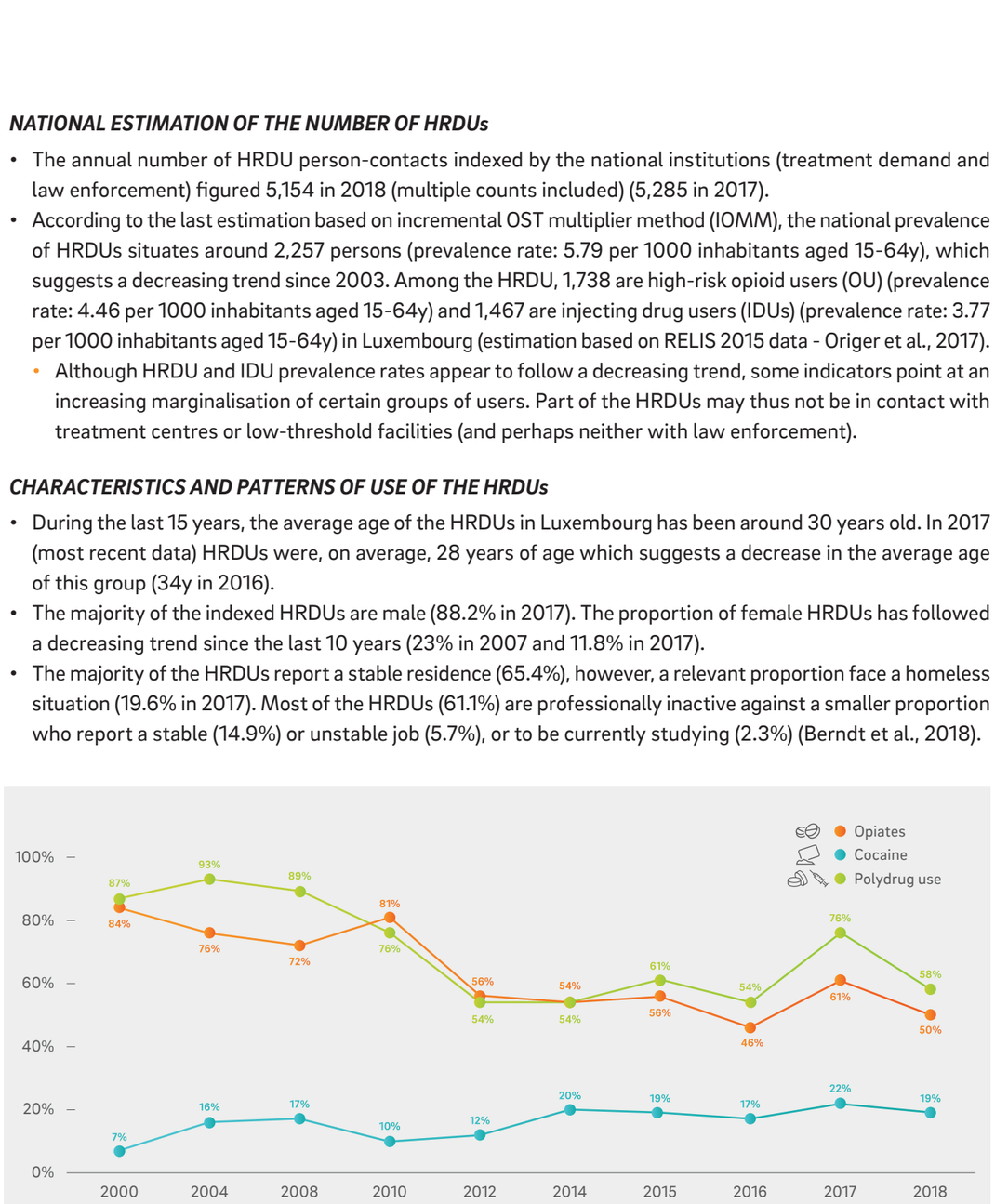


FIGURE 12. Trends in primary drug use among HRDUs during the last 18 years (self-reported) (RELIS, 2018 – Berndt et al., 2018)

- Opioids (and heroin in particular) remain the most prevalent drugs among this group – in 2018, 50% of the HRDUs used opioids as their primary drug. However, the last years primary opioid consumption has been in a discontinuous decreasing trend, which contrasts with a slight discontinuous increase in primary cocaine consumption - 7% in 2000 and 19% in 2018.
- In 2018, 58.2% of the HRDUs reported polydrug use[3] (2017: 72.6%; 2016: 54%). Although polydrug use is very high among HRDUs, it has been witnessing a discontinuous decreasing trend since 2004 (Figure 12).

3 Defined as "the use of at least two illicit drugs and/or NPS either at the same time (concurrent) or one after the other (sequential)".

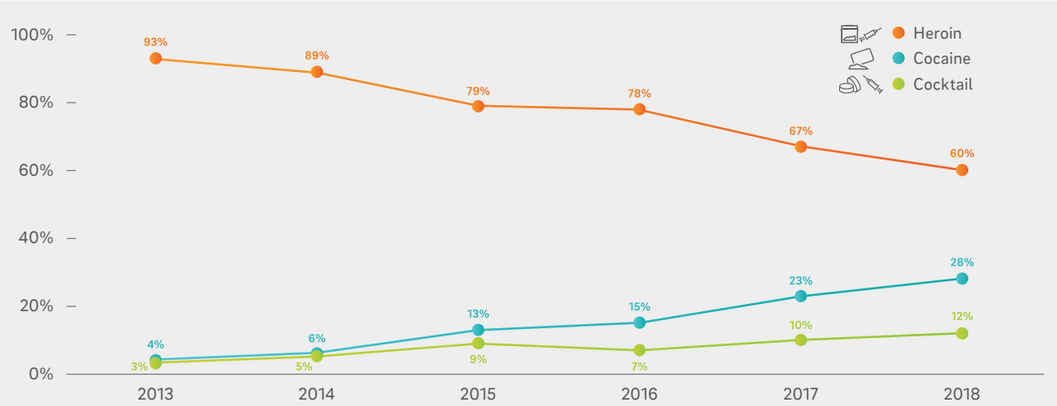


FIGURE 13. Trends in drug use among supervised drug consumption room clients (CNDS Abrigado, 2018)

- Data from the supervised drug consumption room 'Abrigado'[4] confirm RELIS data on the changes regarding the most frequently used drugs: use of heroin is decreasing while use of cocaine and cocktails ("speedball"[5]) are increasing. Specifically, while in 2013 heroin was used in 93% of consumption episodes, in 2018 this substance was used in only 60% of the consumptions. On the contrary, in 2013 only 4% of the consumption episodes involved cocaine, while in 2018 this substance was used in 28% of the consumptions (Figure 13).

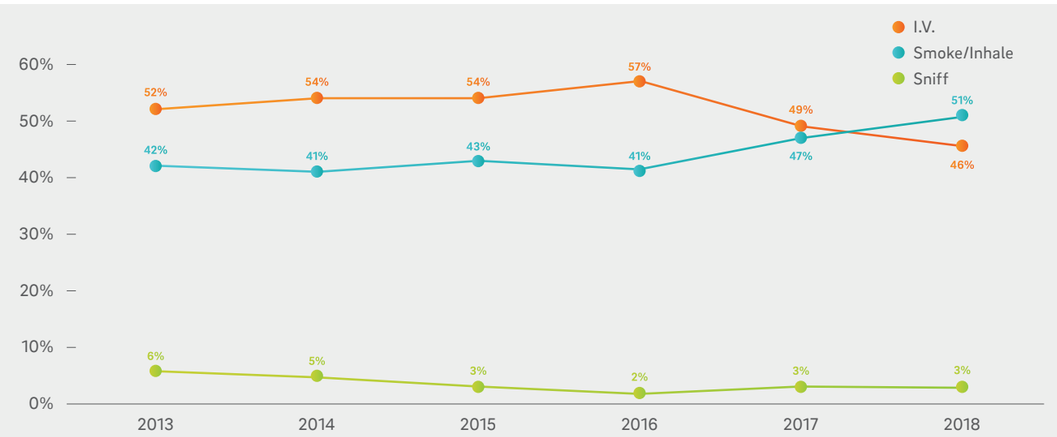


FIGURE 14. Distribution of the HRDU according to their routes of administration (%) (CNDS Abrigado, 2018)

- A gradual modification towards safer routes of administration has been observed and inhalation (chasing) is increasingly frequent (CNDS Abrigado, 2018):
  - In 2018, inhalation was the most frequent route of administration - used by the majority of the supervised drug consumption room clients (51%). 46% of the clients reported injecting and 3% sniff.
- Even though more users adopt the inhalation mode, injecting cocaine is becoming increasingly popular (8% in 2015 to 13% in 2018) (Figure 14).

4 Abrigado is a low-threshold centre situated it Luxembourg city managed by the Comité National de Défense Sociale (CNDS). It offers several harm reduction measures and includes a supervised injection facility (since 2005) and a supervised drug inhalation facility (blowroom since 2012) allowing for the use of drugs through injection, inhalation and sniffing.

5 Mixture of heroin and cocaine.

2.4. DRUG USE IN SPECIFIC TARGETED GROUPS

DRUG USE IN FESTIVE AND NIGHTLIFE SETTINGS (PIPAPO SURVEY)

- Background: Drug use in festive and nightlife settings is analysed yearly by the project 'Pipapo' from 4motion asbl. A rapid assessment survey is implemented at several festive and nightlife venues in Luxembourg. The main goal is to describe the characteristics of this specific group of users attending these events as well as to follow-up the recreational drug use in festive contexts in Luxembourg.
- Method: Survey administered by means of a paper-and-pencil questionnaire during festivals and nightlife events. The questionnaire addresses drug use "in the last 2 weeks".
- Sample: Non-representative sample of 2,079 "party goers" in 2018. No exclusion criteria - the survey inquires all volunteer persons regardless of their drug use. In 2018, the sample consisted of 986 male (47.4%) and 1,087 female (52.3%) respondents. Few respondents (n=6) reported unknown gender (0.3%). The median age of respondents was 24 years, the youngest respondent had 12 years and the oldest had 74 years. 75.7% of the respondents reported residency in Luxembourg, whereas 14.9% in Germany, 3.7% in Belgium, and 3.6% in France.

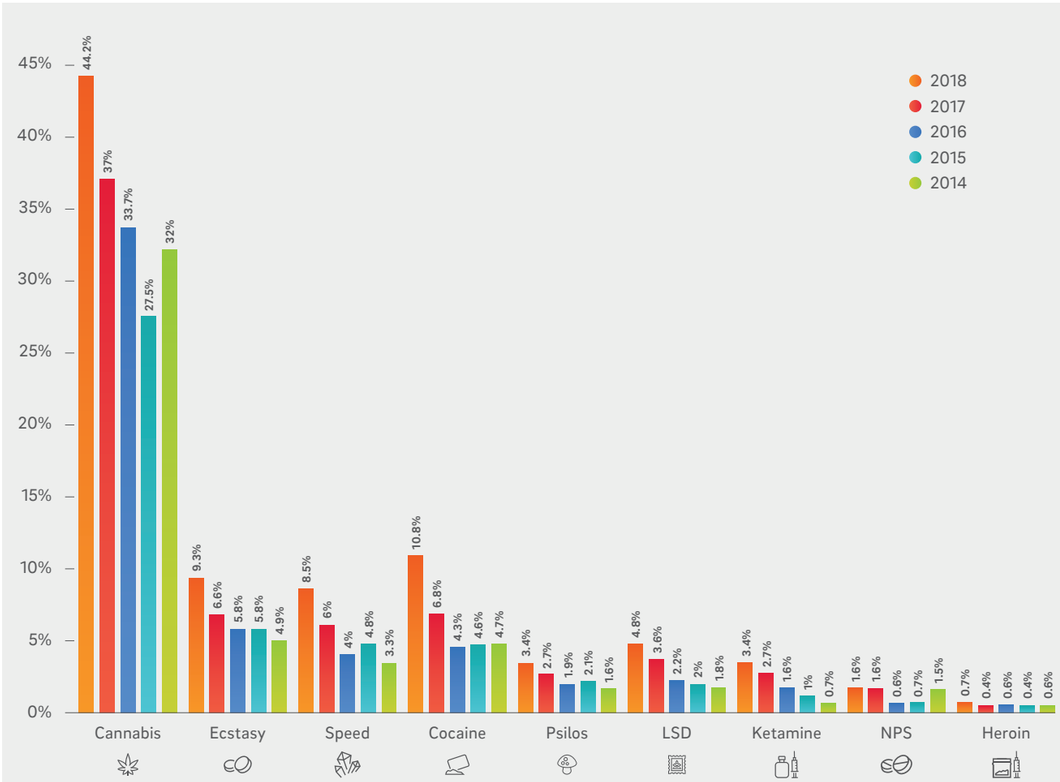


FIGURE 15. Proportion of individuals reporting illicit drug use in festivals between 2014 and 2018 (Pipapo survey - Paulos, 2018)

- Cannabis is the most frequently illicit drug used followed by ecstasy/MDMA, amphetamines (ATS/speed) and cocaine.
- Data suggest an increase in the reported recent use of all the substances except for heroin.
- Males tend to report higher consumption than females for all the substances (Figure 15).

DRUG USE AMONG RECREATIONAL USERS (EWSD, 2018)

- Background: In 2018, the PFLDT participated in the EMCDDA pilot project "European Web Survey on Drugs (EWSD)" aiming to capture recreational users' consumption habits, attitudes and perceptions towards drug use, as well as to improve knowledge on drug markets at national levels.
- Methodology: Web-based survey launched in three languages - English, German and French. Data were collected between August and September 2018. Participants were recruited via online promotion (Facebook Adds, Google Display and YouTube), distribution of flyers and posters and by direct personal approach in festive and nightlife events. Respondents were selected based on three inclusion criteria: a) aged 18 years-old or above; b) residency in Luxembourg; c) use of at least one illicit drug during the last year.
- Sample: Non-representative sample of 1,223 recreational drug users - mainly young adults between the age of 18-34 years (67.4% aged 18-24y and 20.8% aged 25-34y), the majority male (69.1% males; 30.1% females; 0.8% transgender), and the majority with a secondary or higher education degree (50.1% secondary and 25.2% university). This group of drug users can be described as young recreational users, interested in festivals/nightlife events and connected to online social networks.

Prevalence rates

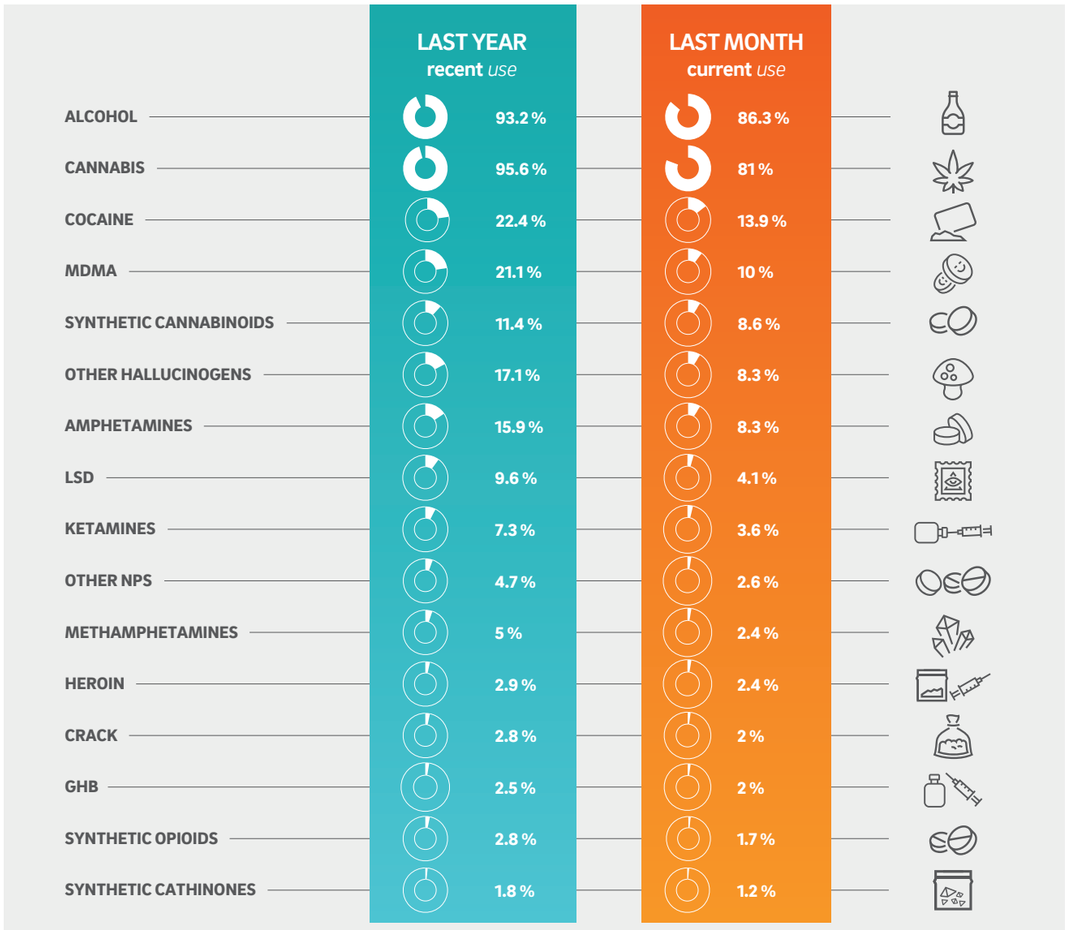


FIGURE 16. LYP (recent) and LMP (current) rates of drug use among the targeted sample (EWSD, 2018 - Berndt & Seixas, 2019)

- Prevalence rates for this targeted sample of last year drug users are, obviously, much higher than those observed among the general population:
  - Cannabis and alcohol are the most prevalent substances both in terms of recent and current use.
  - Cocaine appears as the second most commonly used illicit drug (recently used by 22.4% and currently used by 13.9% of the respondents) followed by ecstasy/MDMA (recently used by 21.1% and currently used by 10% of the respondents).
  - In terms of recent use, other hallucinogens (17.1%) and amphetamines (15.9%) appear also as relevant drugs, while current use of synthetic cannabinoids (8.6%) deserves attention (Figure 16).
- Use of synthetic cannabinoids and NPS are not negligible (data from general population surveys and from police seizures suggest only marginal presence of these substances in Luxembourg). Caution should be taken when interpreting these findings since bias related to participants' conception of NPS cannot be discarded. Further research is necessary in order to better understand NPS' use in Luxembourg.

Gender differences

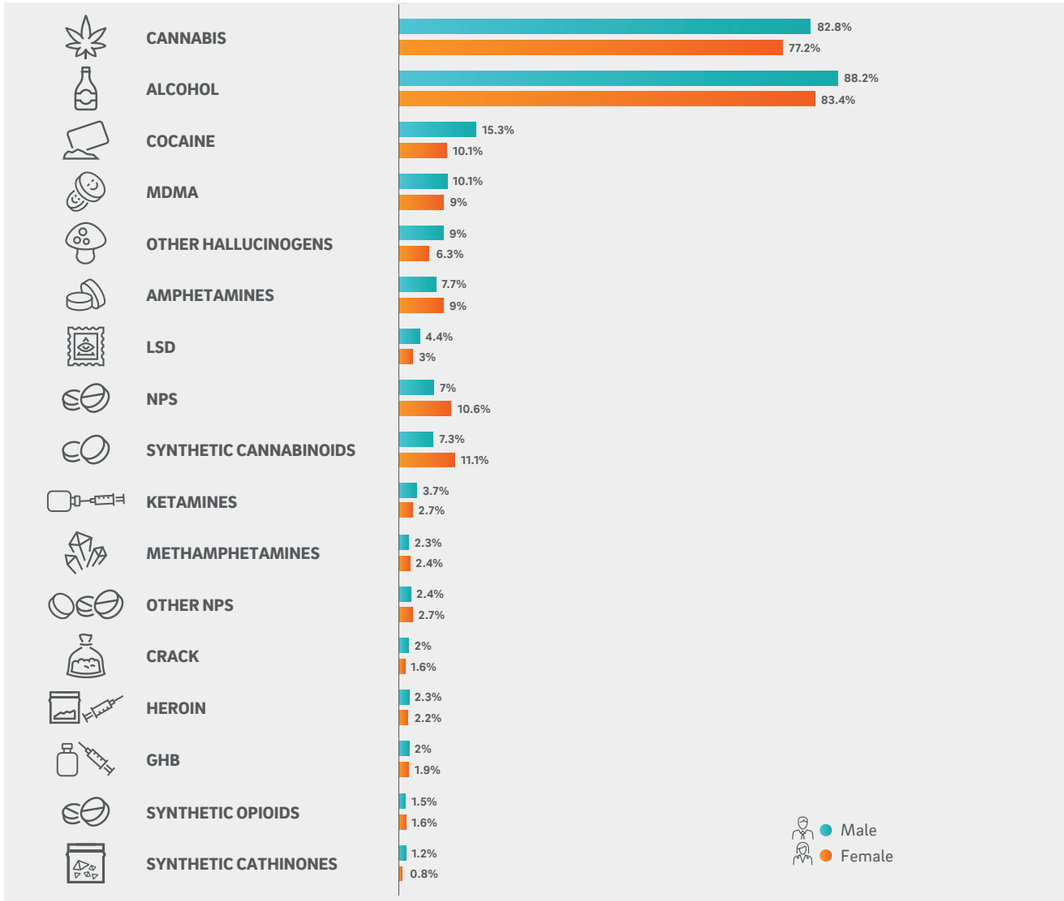


FIGURE 17. Gender differences in LMP rates of drug use among the targeted sample (EWSD, 2018 - Berndt & Seixas, 2019)

- Concerning gender differences in recreational drug use, EWSD data point out that, on one hand, current use of cocaine ($\chi2$ (1) = 5.922, p <.05) and cannabis ($\chi2$ (1) = 4.945, p <.05) are significantly more common among men than among women. On the other hand, women tend to use more NPS ($\chi2$ (1) = 4.436, p <.05) and synthetic cannabinoids ($\chi2$ (1) = 4.469, p <.05) than men (Figure 17).

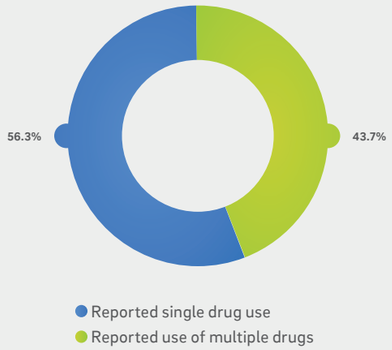


FIGURE 18. Proportion of multiple drug users among the targeted sample (EWSD, 2018 - Berndt & Seixas, 2019)

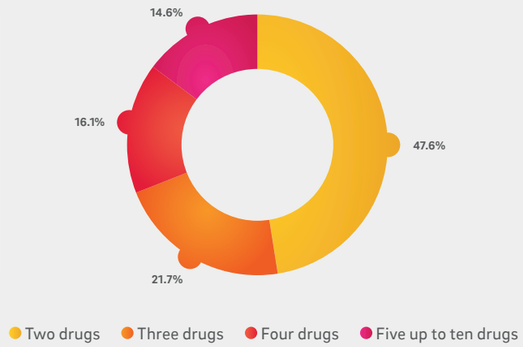


FIGURE 19. Distribution of multiple drug users according to the number of drugs used (EWSD, 2018 - Berndt & Seixas, 2019)

- Even though single drug use is predominant, multiple drug use is very common – reported by more than 40% of the respondents. The majority of the multiple drugs users (47.6%) used 2 different drugs during last year, a smaller number used 3 (21.7%), 4 (16.1%) or 5 up to 10 (14.6%) different drugs (Figures 18, 19).

	CANNABIS (RESIN)	CANNABIS (HERBAL)	COCAINE POWDER	AMPHETAMINE	MDMA	NPS HERBAL
Average number of days of use- last month	12 DAYS /MONTH	16 DAYS /MONTH	5 DAYS /MONTH	6 DAYS /MONTH	4 DAYS /MONTH	14 DAYS /MONTH
Amount (grams or units) used on a typical day	2.85 JOINTS	2.44 JOINTS	1.18 GR	0.8 GR	0.51 GR	1.75 GR
Amount bought on a typical purchase (grams/units)	4.06 GR	4.56 GR	2.45 GR	8.75 TABLETS	4.61 TABLETS	16.69 GR
Average price (€ euro per gram or tablet	14.5 € /GR	16.7 € /GR	64.9 € /GR	7.3 € /TABLET	8.7 € /TABLET	10.7 € /TABLET
% of drug typically shared with others	49.3 %	43.7 %	43.4 %	44.8 %	47.8 %	-
How respondents get their drugs (several answer options possible)	Bought from dealer 74.2 %	Bought from dealer 62.3 %	Bought from dealer 48.7 %	Bought from dealer 38.9 %	Bought from dealer 42.2 %	Bought from dealer 40.9 %
	Obtained for free 43.6 %	Obtained for free 47.1 %	Obtained for free 42.9 %	Obtained for free 54.4 %	Obtained for free 46.9 %	Obtained for free 40.9 %

FIGURE 20. Drug market characteristics and consumption habits among the targeted sample (EWSD, 2018 - Berndt & Seixas, 2019)

- Cannabis is the most frequently used illicit drug – on average herbal cannabis is used 16 days per month and resin is used 12 days per month. Respondents report smoking 2-3 joints of cannabis (herbal or resin) on average on a typical day and tend to buy 4 up to 4.6 grams of cannabis (herbal or resin) per purchase.
- Cocaine is the most expensive drug and amphetamine the cheapest. Users buy on average 2.5 grams of cocaine and 9 tablets of amphetamines on a typical purchase.
- Recreational drug users tend to share with other users almost half of the amount of drugs they buy.
- Drugs are predominantly obtained through a dealer or for free. Other means of supply are not significantly reported (Figure 20).

Associations between current use of different types of drugs

- The use of cannabis is not related to the use of other drugs (except synthetic cannabinoids to which it is only poorly positively related: $r = .10$, $p < .05$). However, using any other illicit drug increases the likelihood of using other drugs (significant positive correlations across all the other illicit drugs):
  - Cocaine use is strongly linked to the use of MDMA, amphetamines and ketamine.
  - MDMA use is strongly linked to the use of amphetamines and LSD.

Attitudes and risk perception towards drug use

- The majority (92.3%) of the respondents consider that "people should be permitted to use cannabis (herbal (weed) or resin (hashish))".

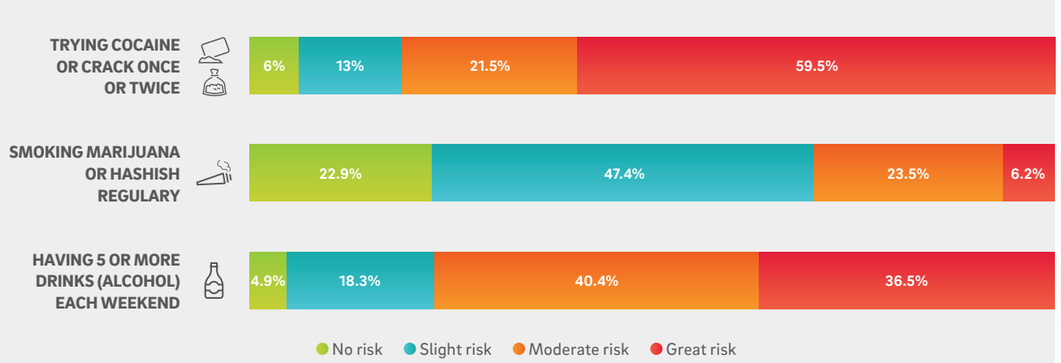


FIGURE 21. Risk perception associated with the use of cocaine, cannabis and alcohol (EWSD, 2018 - Berndt & Seixas, 2019)

- "Smoking marijuana or hashish regularly" is considered less dangerous than "trying cocaine or crack once or twice" or "having 5 or more drinks (alcohol) each weekend":
  - The majority of the respondents consider that "smoking marijuana or hashish regularly" implies no risk or only a slight risk. "Trying cocaine or crack once or twice" and "having 5 or more drinks (alcohol) each weekend" are considered behaviours that imply a moderate risk or a great risk (Figure 21).

3. DRUG-RELATED HARMS AND HEALTH CONSEQUENCES

3. DRUG-RELATED HARMS AND HEALTH CONSEQUENCES

3.1. DRUG-RELATED INFECTIOUS DISEASES

Data on drug-related infectious diseases are collected at the national level by the National Retrovirology Laboratory and complemented by information obtained through the multi-sector national network RELIS. Moreover, data are collected through national research studies by the Department of Infection and Immunity, Infectious Diseases Research Unit, at the Luxembourg Institute of Health (LIH).

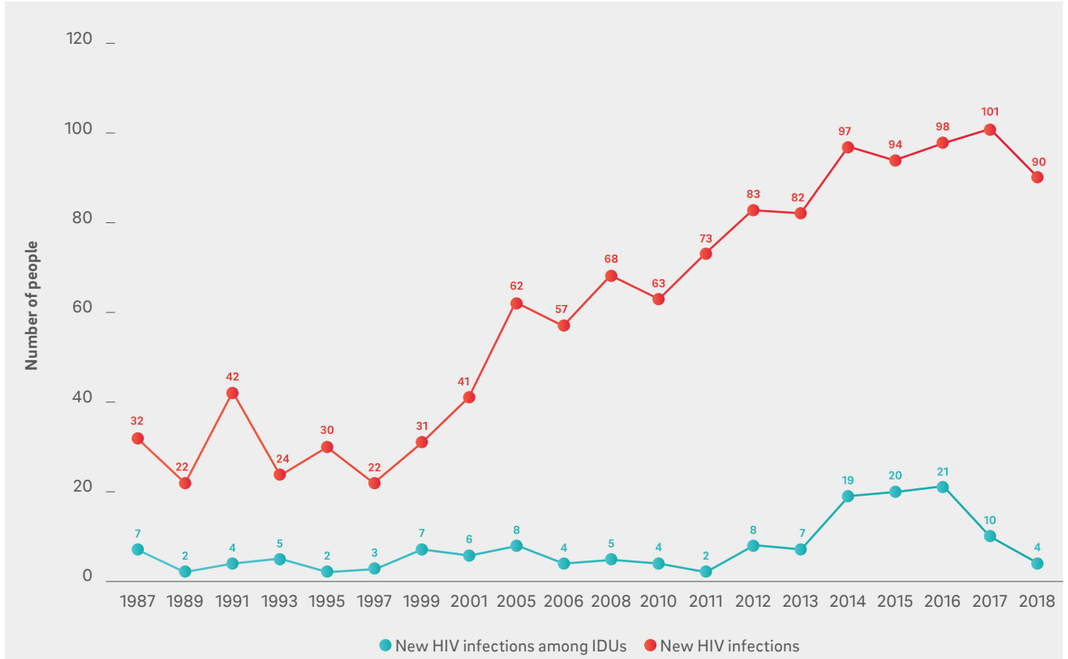


FIGURE 22. Evolution of new HIV infections in the general population and among injecting drug users (IDUs) (1987-2018) according to the SNM[6] (Devaux et al., 2019)

- Most recent data reveal that injecting drug use is the third most reported transmission mode of new HIV infections since 1989 (homo/bisexual and heterosexual transmission are currently the first and second cause, respectively).
- HIV among IDUs decreased between the late 90's and 2011. The period between 2014 and 2016 was marked by an HIV outbreak among this group – partially explained by an increase in stimulants' injection (mainly cocaine)[7].
- Following the implementation of supplementary response measures in the framework of the national drugs strategy and action plan, the national HIV and hepatitis action plan, and the recommendations formulated by the EMCDDA and the ECDC after their Luxembourg country visit in 2018, the number of new HIV cases among IDUs decreased from 21 (in 2016) to 4 (in 2018) (Figure 22).

6 Service National de Maladies Infectieuses (SNMI) located at the Centre Hospitalier de Luxembourg (CHL).

7 The injections of cocaine are more frequent compared to heroin due to shorter effect-windows of the substance. Furthermore, compared to heroin, cocaine is associated to a higher sexual activity.

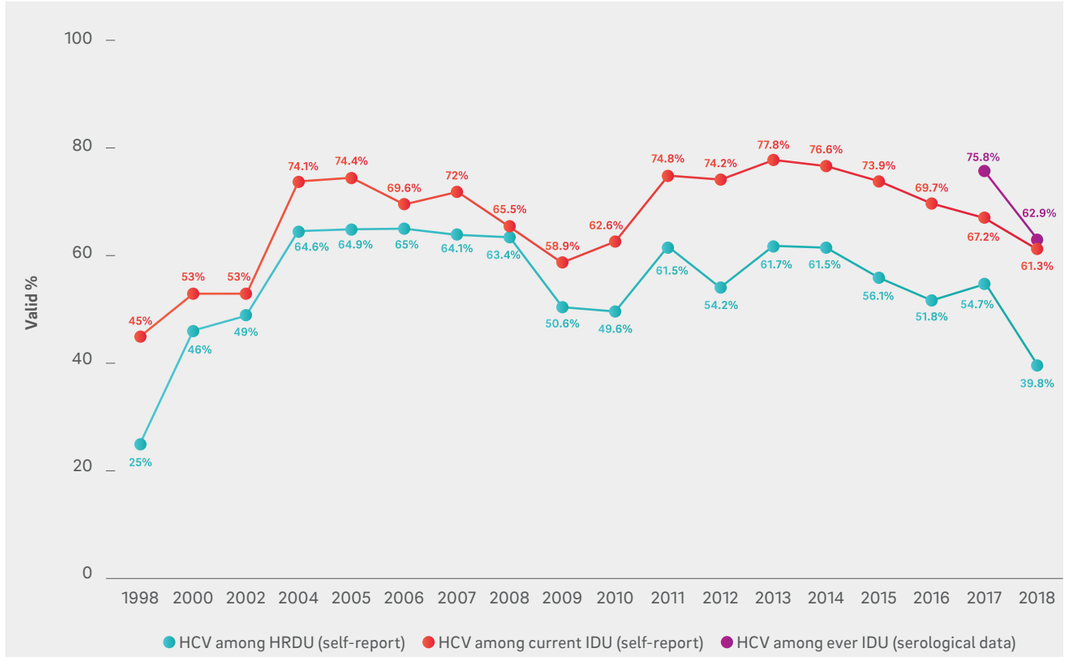


FIGURE 23. Evolution of the HCV rate among HRDUs and IDUs - self-reported and serological data (valid %) (1998-2018) (RELIS, 2018 – Berndt et al., 2018; Devaux et al., 2018)

- The HCV prevalence rate among high-risk drug users (HRDUs) and particularly among injecting drug users (IDUs) has been stable and at a high level since 2004 (Figure 23).
  - In 2018, the number of HRDUs who reported being infected with HCV decreased (39.8% in 2018 compared to 54.7% in 2017).
  - A decrease in the self-reported HCV infections has also been observed among IDUs (a particular high-risk group) (61.3% in 2018 compared to 67.2% in 2017).
  - In the framework of the national HCV-UD research project[8], serological data has been collected among HRDUs since 2017. Data from this study suggest a decrease in the number of ever IDUs infected with HCV – 75.8% in 2017 and 62.9% in 2018.
- Despite the high HCV prevalence rate among IDUs, data suggest a decreasing trend in the last years (Figure 23). This decrease in partially due to:
  - Improvements in the harm reduction responses in drug treatment centres and in prison – needle (and paraphernalia) exchange programmes (contributing to a decrease in direct contamination), availability of opioid substitution treatment and Heroin Assisted Treatment (contributing to stabilisation of users and to a decrease of high-risk behaviours).
  - Increasing testing and facilitating access to treatment for clients of drug treatment centres (often persons experiencing social exclusion and marginalisation).
- Despite these improvements, it is fundamental to continue the efforts to decreasing HCV infection rates among IDUs. Besides the harm reduction measures already in place, responses directed towards a greater stabilisation of the users (such as *Housing First*, low-threshold substitution treatment) are discussed (Ministère de la Santé, 2015).

8 Project HCV-UD « Toxicomanie, hépatite C et substitution: étude épidémiologique, comportementale et clinique au Luxembourg » - https://www.luxclin.lu/Studies/Details/?c=STP3756SUU. The project results from a collaboration between the LIH, the CHL and 5 harm reduction centres in Luxembourg and it is implemented in several low-threshold sites with the purpose of providing testing and treatment while identifying risk factors and the transmission clusters related to the HCV infection.

3.2. DRUG-RELATED MORTALITY

Anonymised data are available on all direct overdose cases due to illicit drug use documented by contextual and forensic evidence; meaning that in case of a suspected overdose death case, post mortem toxicological evidence provided by the department of legal medicine of the national health laboratory (Laboratoire national de santé; LNS) confirms (or not) the suspected overdose. Hence, acute drug-related mortality are death cases attributed directly to the use of an illicit drug, possibly in combination with other types of (prescribed) drugs, such as overdoses and acute intoxications, voluntary, accidental or of undetermined intent.

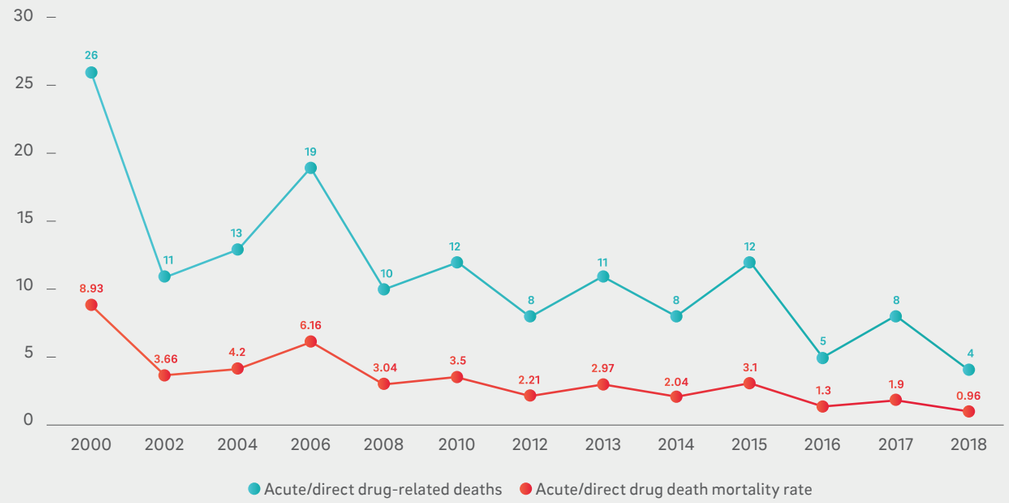


FIGURE 24. Evolution of direct drug-related death cases and mortality per 100 000 inhabitants (RELIS, 2018 - Berndt et al., 2018)

- Available data indicate that direct drug-related mortality has shown a discontinuous decrease over the last years – 20 cases in 2000 and 4 cases in 2018.
- This reflects in an overall decrease in the overdose rate in the general population - 8.93 overdose deaths per 100 000 inhabitants in 2000 and 0.96 in 2018 (Figure 24).
- The mean age at the moment of death has increased over the past 26 years (in 1992: 28.4y; in 2006: 32.5y; and in 2018: 41.3y). No victim less than 20 years of age was reported in 2018.
- Male death cases have outweighed female death cases over the past 22 years (average ratio: 82.2% males vs 17.8% females).
- Also worth mentioning is that a majority of acute drug death victims are known by law enforcement agencies (75%) for their "career" of drug possession and/or use.
- The decrease of direct drug-related deaths is associated with the regionalisation and extension of the opioid substitution treatment programme as well as with the development of low-threshold facilities, in particular the implementation of supervised drug consumption rooms. Since its opening in 2005, more than 2,200 overdose episodes have been assisted at the Abrigado centre in the city of Luxembourg. A second supervised drug consumption room is operational since September 2019 in the southern city of Esch-sur-Alzette.
- Opioids (heroin and methadone) are the substances most frequently involved in acute drug-related deaths, followed by prescription drugs. Opioids are usually found in combination with other substances.
- The drug-induced mortality rate among adults (aged 15-64y) in Luxembourg was approximately 10 deaths per million in 2018, which is lower than the latest reported European average of 22 deaths per million (2017 data).

4. RESPONSES TO HEALTH CONSEQUENCES

4. RESPONSES TO HEALTH CONSEQUENCES

4.1. PREVENTION INTERVENTIONS

Prevention is a key pillar of the National Strategy and Action Plan on Drugs and Addictions in the fight against drug addiction. Prevention interventions encompass a wide range of complementary approaches. Prevention aims at reducing initiation to drugs, delaying the onset of drug use, and encouraging protective actions and healthy lifestyles in the general population and in groups at risk, notably young people and their peers. As such, environmental and universal strategies target entire populations, selective prevention targets vulnerable groups that may be at greater risk of developing substance use problems, and indicated prevention focuses on individuals at-risk for developing substance abuse dependency.

Universal prevention is mainly implemented in schools, although drug-related information and prevention modules are not mandatory in school curricula. School-based programmes are usually implemented in cooperation with non-governmental organisations, and seminars, trainings and educational tools about addiction prevention and improving life-skills are offered to school staff (on a voluntary basis). Annual ''thematic/prevention days" or "adventure weeks" aim to give young people the opportunity to experience group dynamics, conflict management, risk assessment and a feeling of solidarity within a group of socially and culturally diverse people. A toolbox developed by the CePT (Centre de Prévention des Toxicomanies) was recently launched to assist schools with the implementation of school-based prevention activities. Moreover, the CePT published a guide with recommendations for educational professionals on how to tackle cannabis in the school environment. Training modules for professionals working with young people on how to communicate about psychoactive substances in non-formal environments and educational tools that allow for discussion on substance abuse have also been developed.

Trained police staff members periodically visit schools on demand to inform students on drugs and their risks, reaching around 6,000 students every year. Some manual-based school prevention programmes are implemented in schools. Other universal prevention programmes have been implemented periodically in community settings, while trainings and seminars are offered to staff in youth centres so they are able to reinforce social competences and prevent substance abuse and addiction among adolescents and young adults. There are also basic information sessions/trainings about drugs (use) and their (side-)effects offered to teachers, staff working in the psycho-socio-educational field, but also directly to adolescents. Online counselling, e-health and m-health interventions are developed on the national level to be offered to provide anonymised advice and information regarding drug use, thus functioning as both a universal and selective prevention measure.

Selective prevention focuses on crisis interventions in schools and on avoiding social exclusion. Activities are also carried out in recreational settings and with high-risk groups, such as at-risk families, multiple drug users and those who show excessive use of alcohol. 'Choice' and 'Choice 18+' are early intervention programmes offered by the treatment service 'Impuls' (Solidarité jeunes asbl) for juvenile first-time offenders. The Choice programme offers youngsters aged 12 to 17 who entered in conflict with drug law, mostly due to cannabis possession and/or use, an early and short-term group-based and individual counselling intervention in order to prevent further development of drug abuse. The Choice18+ targets young adults up to the age of 21 years. Both Choice programmes offer an alternative to criminal record registration as a psychoeducational programme is more effective. Young drug users may be assigned by police forces or the public prosecutor to this programme. An increase of arrests among young adults for possession and/or use of cannabis has been observed in recent years.

The NGO 4Motion asbl runs a project called 'Pipapo', which operates information points that provide information, earplugs, condoms, alcohol breath testing and drinking water in recreational and festive settings. They also offer DrUg CheCKing (DUCK) to allow for testing of substances used in these settings.

The Foundation 'Jugend- an Drogenhëllef' is the main treatment provider at the national level offering psychosocial help to drug users as well as to drug-dependent parents and their children, and providing intervention to strengthen the parenting skills of drug-using mothers.

With regard to **indicated prevention**, early detection is a priority for children exhibiting high-risk behaviour in school settings and at home; further interventions are provided by psychiatric care services.

4.2. TREATMENT RESPONSES AVAILABLE IN LUXEMBOURG

DESCRIPTION OF THE TREATMENT RESPONSES

Specialised drug treatment offers in Luxembourg include inpatient and outpatient responses. These responses rely on government support and are provided through specialised low-threshold agencies, hospital-based drug treatment units, outpatient treatment facilities, and an inpatient treatment facility. Treatment units are also available in prisons. Treatment is decentralised and most commonly provided by state-accredited non-governmental organisations. Outpatient treatment is provided free of charge, whereas inpatient treatment is covered by the national health insurance. All institutions work in close collaboration and can be viewed as an inter-connected therapeutic chain.

Low-threshold services

- Currently two agencies offer harm reduction services in the Centre (CNDS Abrigado and K28), the South and the North of the country including offers such as day and night shelter and supervised injection and blow facilities (in the centre and in the south).
- In July 2005, the first supervised drug consumption room opened in Luxembourg City. It was integrated into the low-threshold emergency Abrigado centre providing day care, night shelter (42 beds) and low threshold services to drug users.
- A second supervised drug consumption room integrated in the harm reduction service in the south of the country (Contact Esch), in the city of Esch-sur-Alzette, opened in September 2019 and is run by the Foundation 'Jugend- an Drogenhëllef' (JDH). Both facilities (Luxembourg City and Esch-sur-Alzette) include injection and inhalation rooms.
- Another low-threshold offer was implemented in the North of the country in 2014 (Contact Nord).

Outpatient treatment services

- The JDH Foundation was created in 1986. It provides various psychosocial, therapeutic and medical care services for consumers of illicit drugs, including high-risk drug users, parents, mothers and pregnant women, and their relatives. Regional antennas of the JDH Foundation exist in Luxembourg City, in Esch-sur-Alzette, and in Ettelbrück.
- The 'Alternativ Berodungsstell' (Alternative Counselling Centre) is a specialised outpatient service implemented in Luxembourg City. Its main objectives are to establish first contact with the drug-using clients and assist them in the development and organisation of a therapeutic project, detoxification, psychiatric/psychotherapeutic interventions, and the provision of informative or therapeutic sessions.
- The service 'Quai 57' (Arcus asbl) implemented in Luxembourg City is primarily a social and psychological counselling and referral agency providing help to people who suffer from an addictive disorder (with or without substance abuse) or to family members and/or peers of people with an addictive disorder.
- The service 'Impuls' (Solidarité Jeunes a.s.b.l.) provides, in the framework of youth protection, psychosocial and therapeutic assistance to young people (generally below the age of 21 years) and their families when they are confronted with the consumption of legal and illegal psychoactive substances.

Hospital-based drug treatment units

- Detoxification treatment is provided by psychiatric units within the following general hospitals:
  - Centre Hospitalier du Nord – CHdN (Ettelbrück - North);
  - Centre Hospitalier Emile Mayrisch – CHEM (Esch-sur-Alzette - South);
  - Centre Hospitalier de Luxembourg – CHL (Luxembourg city - Centre);
  - Zithaklinik and Hôpital Kirchberg – Fondation Hôpitaux Robert Schuman (Luxembourg - Centre).

Inpatient treatment services

- The national residential therapeutic centre called 'Syrdall Schlass' (CTM-CHNP) is situated in the East of Luxembourg. The Syrdall Schlass is a therapeutic centre for people dependent on illegal substances. The centre is organised as a therapeutic community and can accommodate up to 25 people, whereas patients are allowed to follow substitution treatment in-house. In some cases, it is possible to take in charge mothers and/or fathers accompanied by their children. The goal of the therapeutic community is to help each individual to allow a fulfilling life without drugs and to successfully reintegrate into society and work.
- The therapeutic programme of the Syrdall Schlass is divided into three progressive phases. The duration of a therapeutic stay usually varies from 3 months to 1 year.
- Before admission to the Syrdall Schlass, it is mandatory to first consult the 'Alternativ Berodungsstell' orientation office in Luxembourg city. All the patients have to go through detoxification before entering the therapy.

Post-therapy

- In 2016, the 'Stëmm vun der Strooss asbl' (Voice of the Street) opened a new post-therapeutic centre in Schoenfels for persons previously treated for an addictive behaviour.
- It provides post-therapy, time-limited housing and daytime occupation to ex-drug or ex-alcohol dependant adults who intend to lead a life without drugs. The post-therapy centre has two aims:
  - Offer professional and social reintegration;
  - Avoid accommodation in emergency care facilities after the end of inpatient therapy and provide follow-up in a protected setting.

As can be seen in Figure 25, drug treatment and re-integration facilities are spread over different regions. All listed services are specialised with the exception of regional general hospitals providing detoxification treatment via their respective psychiatric departments.

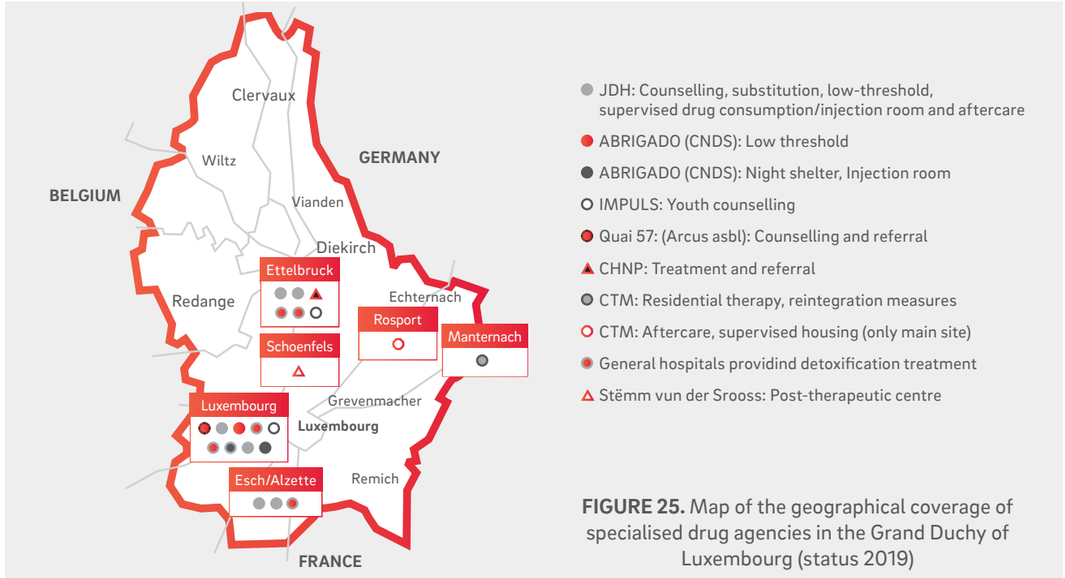


FIGURE 25. Map of the geographical coverage of specialised drug agencies in the Grand Duchy of Luxembourg (status 2019)

PROVISION OF DRUG TREATMENT

- In 2018, 1,522 clients were assisted by specialised outpatient drug treatment units. These include the treatment centres of the JDH (n=444), Impuls (n=568), Quai 57 (n=395), and the Alternativ Berodungsstell (n=115).
- The number of clients in other national in- and outpatient therapy therapeutic agencies is depicted in Table I, whereas Figure 26 shows how the total number of patients has been evolving over the past decade in both in- and outpatient services.

TABLE I. Overview of treatment provision in the Grand-Duchy of Luxembourg

				Definition	Number of clients[9] in 2018	Total clients in treatment[10] in 2018
OUTPATIENT	Specialised Drug treatment centres	Impuls, Quai 57, JDH, Alternativ Berodungstell	Non-government (non for profit)	The patient receives drug treatment without staying overnight and can be pharmaceutically assisted	1,522	1,522
	Low-threshold agencies	Abrigado, JDH-K28, JDH-Contact Esch, JDH-Contact Nord		Agencies offering harm reduction services including: night shelter, needle exchange, supervised consumption rooms, education/ counselling, infectious diseases testing	166,945	
	Outpatient OST	General Practitioners (GPs) and JDH			1,150[11]	1,150
	Mobile outreach unit	MOPUD/X-Change Project		Mobile van promoting "safer use" and "safer sex" with the ultimate goal of reducing risks of infectious diseases transmission	774[12]	
INPATIENT	Hospital-based drug treatment	CHL, CHEM, CHdN, Zithaklinik	Public/ Government	The patient is staying overnight, pharmaceutically assisted or not (including detoxification)	371[13]	371
	Therapeutic communities	Centre Thérapeutique de Manternach (CTM)		The patient is staying overnight, is provided a psychological, long-term treatment, may be pharmaceutically assisted or not (no detoxification). Detoxification is required before entering the community	37	37
	Prisons	Programme Sucht Hëllef (CPL, CPG)		The patient incarcerated in prison can submit a demand to enter a specialised drug treatment (Sucht Hëllef programme) he/she may be pharmaceutically assisted (no detoxification)	319	319
		OST treatment in prison (CPL, CPG)		The patient incarcerated in prison can continue a previously prescribed OST treatment or begin OST in prison	169	Included in the 1,150
						3,399

9,12 Number of client-contacts (the number of individual-clients is not registered for all institutions)
10 Multiple counts are not excluded
11, 13 Based on an estimation

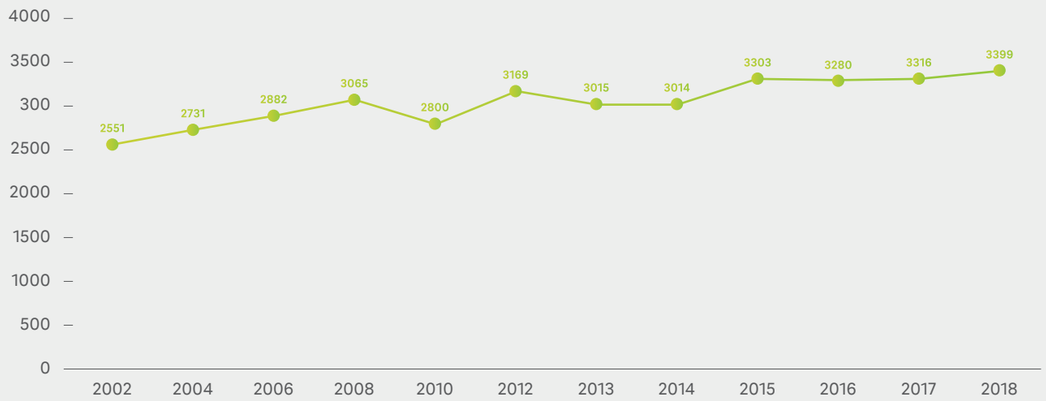


FIGURE 26. Trend of total number of clients at in- and outpatient treatment (RELIS, 2018 – Berndt et al., 2018)

Note: Data provided by the treatment institutions in their annual activities report. Inter-institutional multiple counts are not excluded meaning that a given client could be indexed twice and more.

- The number of clients visiting specialised treatment services increased steadily until 2012, and then decreased until 2014. In 2015 a new peak in absolute figures was reached.
- Since 2015 the total number of clients registered in treatment services has been relatively stable. In 2018, a slight increase led to a new peak of 3,399 registered clients (Figure 26).

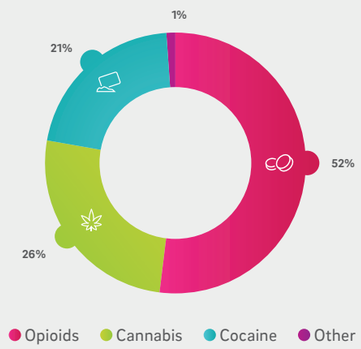


FIGURE 28. Proportion of treatment demands by primary drug in 2018 (RELIS, 2018 – Berndt et al., 2018)

CHARACTERISTICS OF TREATMENT DEMANDERS

On the national level, treatment demand, characteristics of treatment demanders and their drug use patterns are assessed continuously on an annual basis through the RELIS questionnaire provided to the majority of national out- and inpatient drug treatment centres participating in the RELIS network.

- The mean age of treatment demanders has been increasing during the last 20 years (38y in 2018 while 28y of age in 1997).
- In 2018, 73.8% of all the treatment entrants were male and 26.2% female. A similar proportion has been observed among new treatment entrants (75.6% male and 24.4% female).
- The majority of the treatment entrants were still opioid users (52%) (Figure 27), however, the number of opioid-related treatment demanders has been in a decreasing trend since the last 10 years.
- The number of cannabis (26%) and cocaine (21%) treatment entrants has been witnessing a discontinuous increasing trend for the past 10 years (Figure 28).
- In 2018, 26.8% of the treatment demanders were first treatment entrants (26.8% in 2017; 24.5% in 2016; 8.5% in 2015).

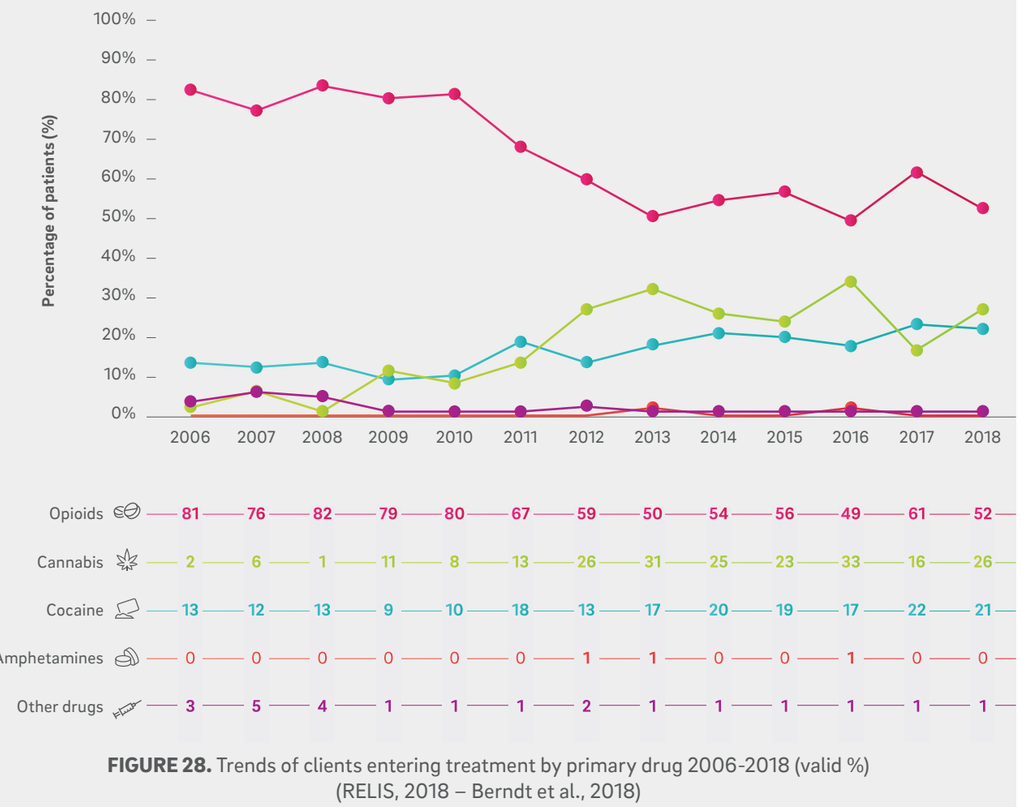


FIGURE 28. Trends of clients entering treatment by primary drug 2006-2018 (valid %) (RELIS, 2018 – Berndt et al., 2018)

4.3. OPIOID SUBSTITUTION TREATMENT

Opioid Substitution Treatment (OST) is a type of medical assisted treatment provided to opioid dependant persons primarily based on the delivery of opioids' agonists and antagonists (and antagonistic agonists) as substitutes to the drug normally used. As the primary goals of OST are the psychosocial and medical stabilisation of the patients by replacing "street" drugs by quality-controlled substitution drugs, it is often accompanied by psychosocial care provided at in- and outpatient settings. A structured and multidisciplinary substitution treatment programme is provided at the national level by the JDH since 1989. Moreover, substitution treatment licenses can be granted to medical doctors, office-based general practitioners and specialised agencies by respecting training requirements and the obligation to notify substitution treatment demands to the Directorate of Health. The JDH mainly provides liquid oral methadone whereas freelance state licensed medical doctors may also provide other substitution medications, specified by law. The pharmaceutical types of OST medications registered in Luxembourg include methadone, buprenorphine, morphine-based medications and diacetylmorphine (heroin). The costs of OST consultations are partly covered by individuals' health insurance, while the government covers pharmaceutical costs and pharmacy fees.

DEVELOPMENTS IN THE NUMBER OF OST PATIENTS

- The number of patients receiving prescribed substitution treatment has known a steep increase between 2008 and 2010 (2010: 1,158 patients; 2008: 961 - multiple counts excluded). Since 2011, a stabilisation in the number of OST demanders has been recorded (2018: 1,150; 2017: 1,142; 2016: 1,085) (Figure 29).

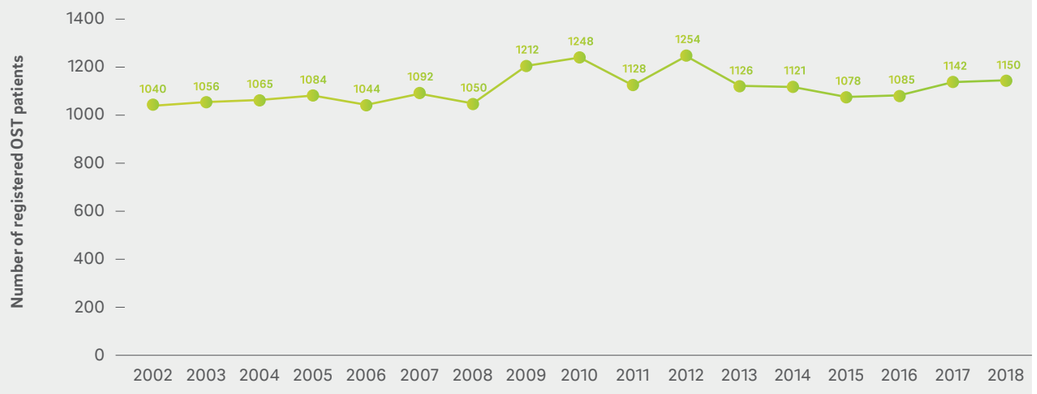


FIGURE 29. Trends of opioid substitution treatment (OST) patients 2002-2018
(RELIS, 2018 – Berndt et al., 2018)

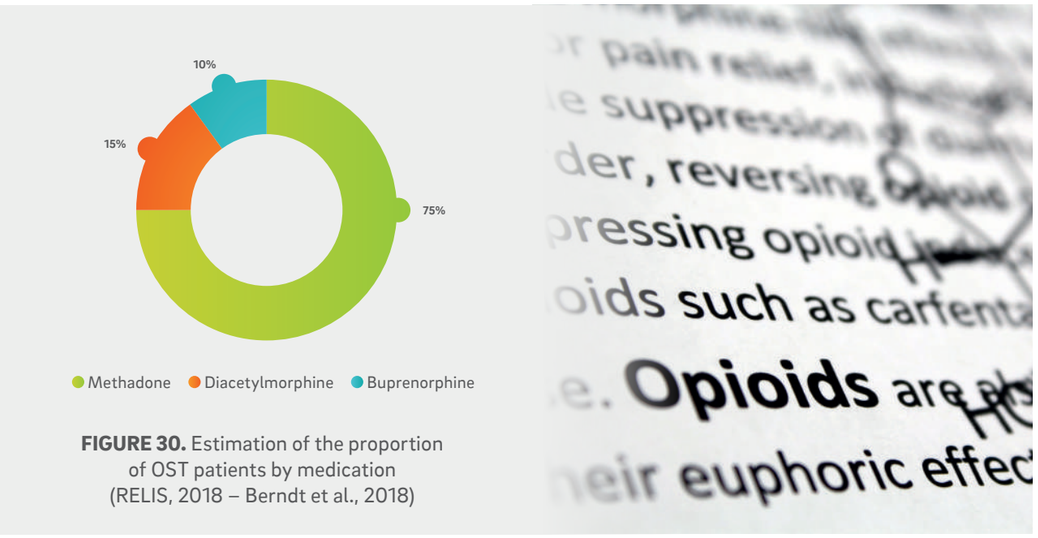


FIGURE 30. Estimation of the proportion of OST patients by medication
(RELIS, 2018 – Berndt et al., 2018)

- Since 2010, the number of patients in opioid substitution treatment (OST) has been stabilising.
- In 2018, 1,150 OST patients were registered (see also Table I)[14].
- The majority of OST patients are men (approximately 75%) and their average age has been increasing over recent years (43y in 2017; 38y of age in 2014).
- The majority of the OST patients receive prescribed methadone (75%) (Figure 30).
- A Heroin Assisted Treatment (HAT) project, coordinated by the Directorate of Health, is run by the JDH. The prescription of diacetylmorphine is not to be seen as a low-threshold measure, but a supplementary form of substitution treatment.

14 Please note that the OST patients for 2018 is an estimation based on data from previous years. Hence, the socio-demographic data presented refers to 2017.

4.4. HARM REDUCTION RESPONSES

The harm reduction responses consist of offers such as needle and syringe exchange programmes, HIV/HCV testing, supervised drug consumption facilities, and outreach offers.

The national needle and syringe programme in Luxembourg is decentralised and consists of five fixed sites and a series of vending machines situated in the towns most affected by injecting drug use. Clean syringes are available from drug counselling centres, drop-in centres for sex workers and at-risk populations, and low-threshold centres such as the supervised drug consumption room Abrigado, outreach offers and in prison. In addition to needles and syringes, testing for blood-borne infectious diseases, vaccinations and counselling on safe use practices are also provided. A mobile medical care unit facilitates the provision of primary medical care at low-threshold agencies. A mobile outreach service specifically designed for drug users in an urban environment was launched in September 2017, and a second supervised drug consumption room opened in the most populated city in the south of the country in September 2019.

- The number of person-contacts in low-threshold facilities has been increasing since 2014 – 164,254 contacts were registered in 2017 and 166,945 were registered in 2018 (Figure 31).
- There are three low-threshold agencies reporting the number of client-contacts at the national level. In 2018, the JDH low-threshold services reported 17,258 client contacts, the low-threshold harm reduction centre Abrigado reported 135,781 client contacts (i.e. CAARUD 73,106; drug consumption room 57,926 and the medical service 4,749), and the Drop-in service from the Red Cross reported 13,906 client contacts, adding up to a total number of 166,945 (includes double counting).
- The mobile outreach service MOPUD/X-Change reported 774 client-contacts in 2018 (includes double counting) (Table I). The MOPUD/X-Change is a cooperation project between JDH, the Abrigado centre and HIV-Berodung of the Red Cross.

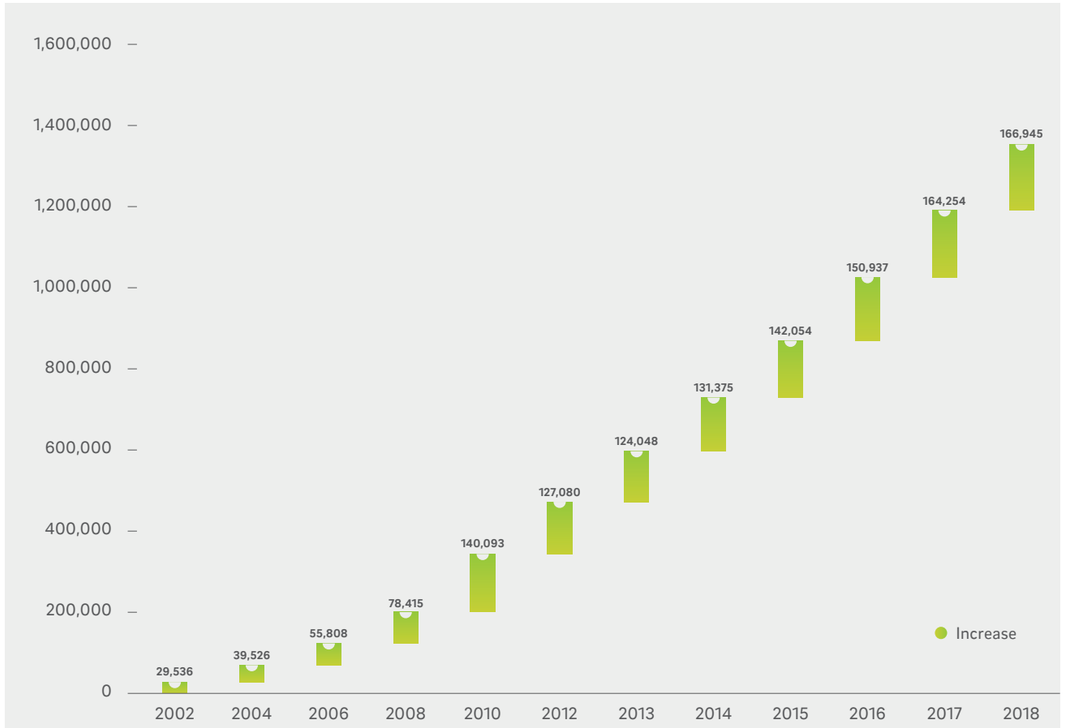


FIGURE 31. Person-contacts in low-threshold facilities 2002-2018
(CNDS Abrigado, 2018)

- The number of clean syringes distributed in the framework of the national needle programme reached a first peak in 2004 when more than 435,000 syringes were dispensed, and decreased thereafter to less than 200,000 syringes in 2013. Since then, provision has increased again, reaching a historically high level in 2018 with 492,704 distributed syringes (Figure 32).
- The vast majority of injectors (97.4% in 2018; 57.5% in 2017; 64% in 2016) procure their syringes at low-threshold agencies (predominantly the Abrigado centre) and at specialised agencies, followed by pharmacies and decreasingly via automatic dispensers.
- Return rates of used syringes increased until 2016 (94%) but have been slightly decreasing in recent years (2018: 89.4%; 2017: 92%; 2016: 94%). In 2018 for every 100 syringes given, 89 used syringes were returned.

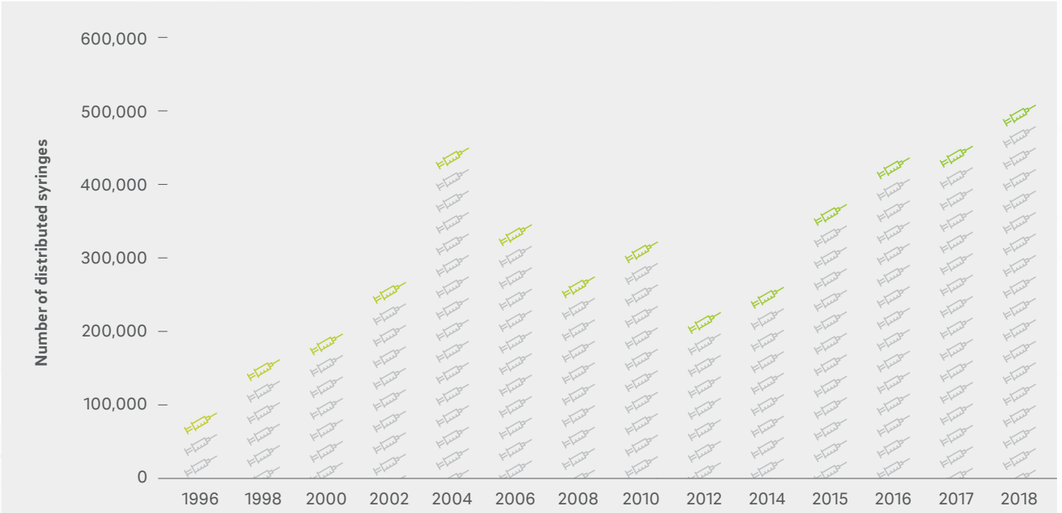


FIGURE 32. National distribution of sterile syringes 1996-2018 including specialised agencies, prisons, vending machines and the supervised injection room (Devaux et al., 2018)

5. DRUG MARKETS AND CRIME

5. DRUG MARKETS AND CRIME

5.1. AVAILABILITY AND SUPPLY

Drug markets are of changing nature. They rely on factors such as supply mechanisms, on the economic situation of the country and on the efficiency of law enforcement strategies. Availability and supply indicators should be interpreted with caution as they rely on the interplay of all these factors. The Luxembourg Focal Point of the EMCDDA (PFLDT) processes anonymous nation-wide data on drug-related offences, prosecution and seizures of illicit substances provided by the law enforcement agencies in collaboration with the specialised drug unit (section stupéfiants) of the national Judicial Police Service. Important fluctuations have been observed in the quantity of illicit substances seized over the past 2 decades (Figure 33).

CANNABIS

- Cannabis is the most frequently used illicit psychoactive substance:
  - The prevalence of cannabis use among clients in contact with national services (institutional contact indicator) increased steadily in 2012 reaching its highest peak in 2016 with 32.8% of clients reporting cannabis as their primary/preferred drug.
  - The high prevalence is in line with a high seizure figures - the quantity of cannabis seized achieved a peak in 2018 with 216 kg (34.97 kg of herbal cannabis; 181.31 kg resin) (Figure 33).
  - Overall, seizures of cannabis-based products represented 75.1% of the total number of seizures in Luxembourg in 2018 (1311 out of 1770 seizures) - 43.9% herbal cannabis and around 30% resin.
  - Regarding cannabis plants, a total number of 34 plants were seized in 2018 (74 plants in 2017).
  - No major seizures of synthetic cannabinoids have been reported in Luxembourg.

COCAINE

- Cocaine is on the rise both in terms of seizures and use:
  - Police data refer to an increasing trend in the number of cocaine seizures (216 in 2018; 226 in 2017; 207 in 2016; 190 in 2015). Although the number of seizures was slightly inferior compared to 2017, a record amount of almost 347 kg of cocaine was seized in 2018 (see Figure 33).
  - The high quantity seized suggests a growing availability of cocaine on the market, while the purity increased and its price decreased in 2018. The increased proportion of HRDUs but also recreational drug users reporting primarily cocaine use confirm this trend.

HEROIN

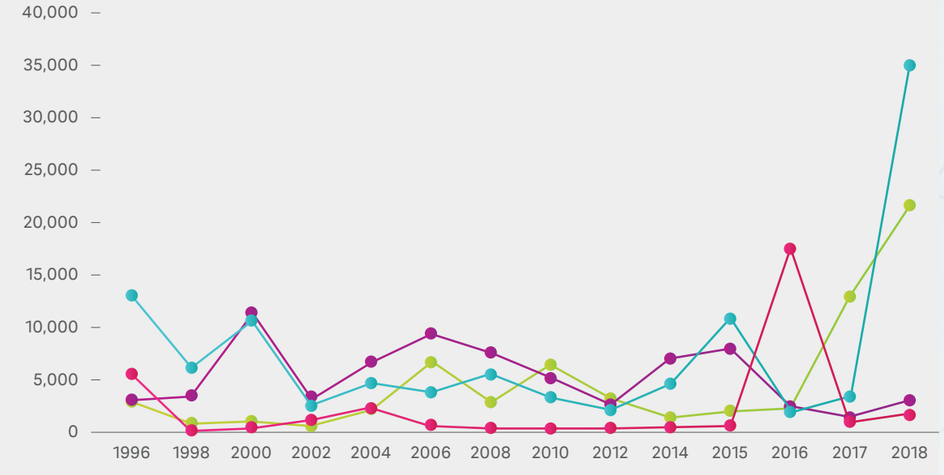
- Although heroin has a long history of use at the national level, the quantities of heroin seized seem to follow a decreasing trend over the past years:
  - While the quantity of heroin that has been seized nationally decreased sharply in the preceding two years, 2018 data show a new increase in the quantity of heroin seized though the quantities seized remain generally low (Figure 33).
  - The total quantity of opioid-related seizures was 4.54 kg in 2018 - slightly more than half of this quantity was dedicated to heroin seizures, and to lesser extent to Mephenon® and methadone seizures.

ECSTASY (MDMA), AMPHETAMINE-TYPE SUBSTANCES (ATS) AND METHAMPHETAMINES

- The seizures of ecstasy-like (MDMA) and amphetamine-type substances (ATS) have been fluctuating over the last 20 years:
  - The year 2016 stands for an historical record in MDMA quantities seized, as a total number of 17,639 pills were seized suggesting a high popularity of this psychoactive substance.
  - In the past two years, the quantity of seized MDMA pills decreased with a total number of 965 pills in 2017 and 1,564 pills in 2018, respectively (Figure 33).
  - Although ATS seizures have been seized in limited quantities, they increased over the past years (1.92 kg in 2018; 0.23 kg in 2017) - the treatment service Impuls has also reported an increasing number of adolescents using ATS in 2018.
- Although use of methamphetamines have been only rarely reported and seized in Luxembourg, a recent study from the Laboratoire national de santé (LNS) and the Luxembourg Institute of Science and Technology (LIST) using wastewater analysis concluded that there is presence of methamphetamines on the national level (LNS and LIST, 2018), although at a very low level.
  - While wastewater samples only from the municipality of Petange in the south of the country were analysed, all drugs that were tested for in the project were also detected in the wastewater. While cocaine, heroin, amphetamine, cannabis and ecstasy (MDMA) are regularly seized by the police or customs, the detection of methamphetamine (crystal meth) in the samples was less expected.
  - Based on the results of the wastewater analysis from the municipality of Petange, consumption of cocaine and MDMA was slightly above the European median/average. This suggests that more cocaine and MDMA are present on the Luxembourg drug market than amphetamine and methamphetamine.

OTHER DRUGS

- From supply reduction, limited to no evidence exists thus far on the presence of crack or fentanyls on the national market. However, it is worth noting that freebasing is reported by treatment and harm reduction agencies, in particular by the supervised drug consumption facility of the Abrigado centre.
- 78.23 kg of khat and 500 kg of 2-bromo-4-chloropropiophenone were seized in 2018. Moreover, 304 grams of psychoactive mushrooms/psilocin and 310 grams of mitragynine kratom were seized.
- NPS including synthetic cannabinoids, have been identified and seized in Luxembourg, although at a modest level to date.



	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014	2015	2016	2017	2018
Cannabis (gr./10)	3,087	693	955	252	2,369	6,700	2,882	6,197	3,084	1,392	2,055	2,248	13,246	21,633
Heroin (gr.)	2,934	3,592	11,358	2,957	6,255	9,298	7,673	5,297	2,648	6,732	8,041	2,492	1,304	2,863
Cocaine (gr.)	12,891	5,995	10,757	2,486	4,481	3,825	5,519	3,257	2,013	4,695	10,703	1,862	3,254	34,683
MDMA (pills)	5,545	145	318	1,139	2,232	555	107	291	137	247	543	17,639	965	1,564

FIGURE 33. Total quantities of national yearly seizures: cannabis, heroin, cocaine, and MDMA (1996 - 2018) (Specialised drug unit of the Judicial Police, 2018)

Note: Please note that for 2018 the quantity of cocaine has been reported as gr/10 (total seizure 346.828 kg).

5.2. TRENDS ON PRICE

Ad hoc surveys allow for data on the average market price of illicit street drugs. In 2018, these data were collected among two different user groups: high-risk drug users (HRDU) and recreational drug users. The figures below report the trends regarding average prices of the drugs mainly used by HRDU (heroin, cocaine, herbal cannabis and cannabis resin) (Figure 34) and the drugs mainly used by recreational drug users (Figure 35).

FIGURE 34. Trends on the price of illicit drugs assessed among HRDU in Luxembourg (2010-2018) (Specialised drug unit of the Judicial Police, 2018; CNDS Abrigado, 2018)

Note: Price expressed in EURO. The unit is price per gram.

- According to HRDU (sources: National Judicial Police and Abrigado centre):
  - Prices move within increasingly broader ranges for heroin, cocaine and cannabis, which is partly due to increasing variations in quality levels of street drugs.
  - Average cocaine and heroin prices have been decreasing since 2010 – the price of cocaine dropped most (from 143.7€/gr in 2010 to 76.29€/gr in 2018), which might be linked to a higher availability on the illicit market.
  - The average prices of cannabis products on the illicit domestic market (herbal cannabis and resin) have been relatively stable over the last 8 years.

	CANNABIS (RESIN)	CANNABIS (HERBAL)	COCAINE POWDER	AMPHETAMINE	MDMA	NPS HERBAL
Average price (€ euro per gram or tablet	14.5€ /GR	16.7€ /GR	64.9€ /GR	7.3€ /TABLET	8.7€ /TABLET	10.7€ /TABLET

FIGURE 35. Prices of illicit drugs in Luxembourg reported by recreational drug users (EWSD, 2018 - Berndt & Seixas, 2019)

- According to a targeted group of recreational drug users (source: European Web Survey on Drugs, 2018)[15]:
  - Cocaine is more expensive (on average 65€/gr) than all other drugs consumed by recreational drug users.
  - Cannabis prices are on average 14.5€/gr for resin and 17€/gr for herbal cannabis. Herbal forms of NPS are cheaper (on average 10.7€/gr) than cannabis. Lower prices linked with their promotion as "legal highs" might represent a risk factor for an increase in its consumption.
  - MDMA (on average 9€/tablet) and amphetamines (on average 7€/tablet) are the cheapest controlled illicit drugs on the market.

5.3. TRENDS ON PURITY

The National Health Laboratory (LNS) provides purity data and toxicological analysis of psychoactive substances. This allows for trend analysis on the purity of drugs at the street level in Luxembourg.

FIGURE 36. Trends on the purity of drugs at street level (2004-2018) (LNS, 2018)

Note: Purity for cocaine, heroin and amphetamines, purity is expressed in percentages of pure active substance at the street level. For cannabis, purity refers to percentage of THC.

- The purity of the illicit drugs obtained in Luxembourg is following an increasing trend. The exception is heroin, which average purity remained stable over the past 5 years.
- Between 2004 and 2014 the purity of cocaine decreased. However, since 2014 cocaine purity is on the rise (on average 52.7% in 2018 compared to 48.4% in 2017).
- The purity of other stimulants such as amphetamines or ecstasy/MDMA seems to be increasing but discontinuously. Compared to 2017, the average purity of amphetamines increased by 17.1% while the average purity of ecstasy/MDMA dropped by 16.2% in 2018 (Figure 36).
- Even though the average purity of THC products has been increasing at a moderate pace, cannabis with remarkably high THC concentrations has been seized on the national market in recent years. In 2018, the maximum concentration of THC in herbal cannabis increased significantly by 26.9% and the maximum concentration of THC in resin cannabis even increased by 31.2% compared to 2017.

15 Trends data are not available since the EWSD study was implemented punctually.

5.4. DRUG-RELATED CRIME

- The number of police records for presumed offences against the modified 1973 drug law stabilised between 2001 and 2008. Even though from 2012 to 2015 the number of referred police records increased, police records have been decreasing with 2,624 records in 2016, 2,525 records in 2017, and 2,284 records in 2018, respectively.
- In 2018, 1,755 offenders involved in traffic and/or use of illicit substances were reported by the specialised drug unit of the Judicial Police, a lower number compared to the previous nine years. The majority of the offenders have been involved in personal possession or use, whereas only a small proportion of the offenders has been involved in supply or trafficking of drugs (Table II).

TABLE II. Number of national law enforcement interventions (2001-2018)

YEAR	2001	2003	2006	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
DRUG LAW ENFORCEMENT RECORDS:														
S.P.J.	216	239	190	110	121	134	165	44	17	9	80	45	21	51
Police[16]	1,126	1,326	824	881	1,465	1,969	1,643	1,526	1,849	2,651	3,192	2,531	2,358	2,066
Customs[17]	113	95	186	228	328	443	477	232	203	156	113	48	146	167
TOTAL	**1,455**	**1,660**	**1,200**	**1,219**	**1,914**	**2,546**	**2,225**	**1,802**	**2,069**	**2,816**	**3,385**	**2,624**	**2,525**	**2,284**
OFFENDERS:														
S.P.J.	321	369	248	128	121	131	164	44	17	9	77	44	14	27
Police[17]	1,272	1,753	1,007	1,009	1,459	1,960	1,632	1,517	1,846	2,623	3,158	2,481	1,825	1,583
Customs[17]	182	148	320	350	325	439	407	221	200	147	110	41	130	145
TOTAL	**1,776**	**2,270**	**1,575**	**1,487**	**1,963**	**2,530**	**2,210**	**1,782**	**2,066**	**2,779**	**3,345**	**2,566**	**1,969**	**1,755**

Source: Specialised drug unit of the Judicial Police, 2018

16 Includes the « Service de Recherche et d'Enquête Criminelle » (Luxembourg ville, Esch-sur-Alzette, Diekirch, Grevenmacher)
17 The original report can be downloaded from: http://www.gouvernement.lu/publications

- The number of arrests for drug-related offences increased again in 2018 (232) compared to the previous year (Figure 37). Similar to 2017, cannabis was the most frequent substance involved in drug-related arrests, followed by cocaine and heroin.

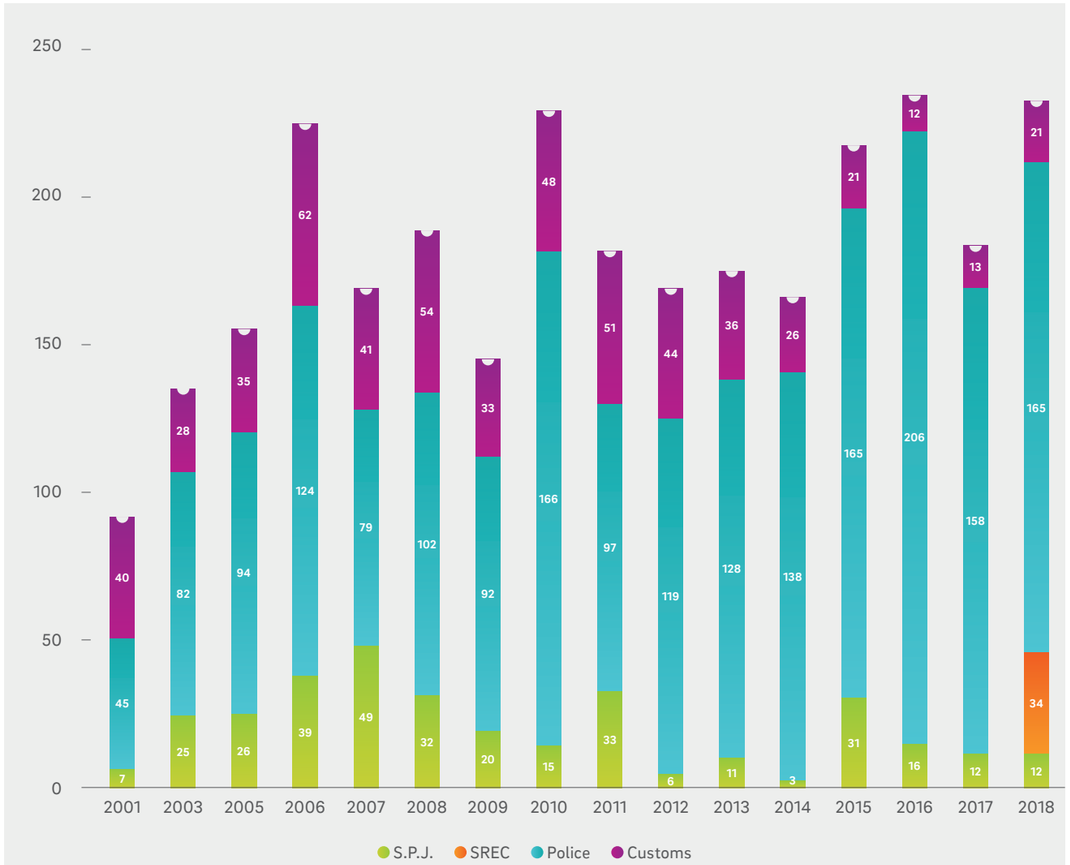


FIGURE 37. Number drug law offences related arrests (2001-2018)
(Specialised drug unit of the Judicial Police, 2018)

Note: SREC = Service de Recherche et d'Enquête Criminelle (Luxembourg ville, Esch-sur-Alzette, Diekirch, Grevenmacher).

CHARACTERISTICS OF DRUG LAW OFFENDERS

- In 2018, the population of individual drug law offenders was composed of 89% males (85.8% in 2017), a proportion that has been varying between 79% and 90% during the past decade.
- Since 1997, non-natives (59% in 2016; 63.6% in 2017; 62.1% in 2018) have been representing the majority of drug law offenders.
- In 2018, the percentage of minors (< 18 years) among the drug law offenders increased to 14.1%, and this increase is confirmed by the figures from previous years (9.7% in 2015; 10% in 2016; 12.4% in 2017 compared to 4.9% in 1994 and 8.7% in 2000). In 2018, 26.2% of offenders were below the age of 19 years, 39.6% between the age of 20 and 29 years, 22.2% between 30 and 39 years, and 12% above the age of 40 years; these figures are comparable to previous years.

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CONFLICT OF INTEREST

No conflict of interest has been declared by the authors.

LIST OF ABBREVIATIONS

CAARUD	Centre d'accueil et d'accompagnement à la réduction des risques pour usagers de drogues
CePT	Centre de Prévention des Toxicomanies
CHNP	Centre Hospitalier Neuro-Psychiatrique
CNDS	Comité National de Défense Sociale
CNS	Caisse National de Santé
CPG	Centre Pénitentiaire de Givenich
CPL	Centre Pénitentiaire de Luxembourg
CTM	Centre Thérapeutique de Manternach
EWS	Early Warning System on New Synthetic Drugs
EWSD	European Web Survey on Drugs
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
HAT	Heroin Assisted Treatment
HRDU	High-risk drug use/user
ICD	Interministerial Commission on Drugs
IDU	Injecting drug use/user
JDH	Fondation Jugend- an Drogenhëllef
LIH	Luxembourg Institute of Health
LNS	Laboratoire National de Santé
PFLDT	Point Focal Luxembourgeois de l'Observatoire Européen des Drogues et des Toxicomanies (OEDT) (Luxembourg Focal Point of the EMCDDA)
RELIS	Réseau Luxembourgeois d'Information sur les Stupéfiants et les Toxicomanies
REITOX	Réseau Européen d'Information sur les Drogues et les Toxicomanies/European Information Network on Drugs and Drug Addiction

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