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NATIONAL DRUG REPORT 2021

THE DRUG PHENOMENON IN THE GRAND DUCHY OF LUXEMBOURG: TRENDS AND DEVELOPMENTS (key issues)

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

2021

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This report presents an overview of the drug phenomenon in Luxembourg, covering drug policy, drug supply and demand, prevalence and patterns in drug use, drug use in prison, health consequences and responses, as well as drug markets and crime. The statistical data and analysis presented in this report refer to 2020 or the most recent year for which data are available and were provided to the Luxembourg Focal Point of the EMCDDA (PFLDT) from routine monitoring by the RELIS network, unless stated otherwise.

1. DRUG POLICY

Drug policy

1.1. NATIONAL DRUG STRATEGY

The 5th National Drug Strategy and Action Plan 2020-2024, relying on the governmental programme 2018-2023[1], was presented by the Health Ministry and the National Drug Coordinator in 2020 and adopted by the Council of government on October 9th 2020 (Ministère de la Santé, 2020). The National Strategy is based on a holistic approach and addresses illicit drugs, alcohol, tobacco, psychotropic drugs and behavioural addictions. The Action Plan 2020-2024 builds upon the two pillars of drug demand and drug supply reduction, and four transversal themes: (1) harm reduction, (2) research and information, (3) international cooperation, and (4) coordination. Its overall objective is to contribute to achieve a high level of protection in terms of public health, public security and social cohesion.

The Grand-Duchy of Luxembourg evaluates its drug policy and strategy by means of routine indicators' monitoring and specific research projects and evaluations. An external mixed-methods evaluation of the 4th National Drug Strategy and Action Plan was conducted by the Trimbos Institute of the Netherlands in 2019, showing that the majority of the objectives outlined in the 2015-2019 action plan were met and proven to be effective, recommending to pursue the adopted approach and underlying principles of evidence-based policies, with a balanced approach and focus on health and human rights (Kools, van der Gouwe & Strada, 2019). The recommendations of the external evaluation contributed to the elaboration of the current 2020-2024 National Drug Strategy and Action Plan. The 2020-2024 National Drug Strategy and Action Plan is transversal and multidimensional, while its elaboration also involve stakeholders and experts from different fields at both national and international levels.

The current National Drug Strategy and Action Plan reflects the priorities set by the government:

- To provide objective and reliable information on psychoactive substances and the effects and potential consequences of their use;
- To prevent and reduce the initiation to drug use and addictive behaviours;
- To ensure decentralised, diversified and high-quality offers of treatment and harm reduction for people suffering from addiction;
- To reduce the prevalence of drug use and addictive behaviours in the general population, as well as health and social damage generated by illicit drug use;
- To reduce damage caused by drug trafficking;
- To contribute to better housing and rehabilitation offers;
- To enhance collaboration with law enforcement agencies at the national and international level.

The Action Plan 2020-2024 lists around 80 separate actions developed in close collaboration with field actors and ministries, that were approved by the "Groupe Interministériel Toxicomanie". The fields of action include universal, indicated and selective prevention with a focus on young people; diversity and high-quality treatment and care offers; socio-professional reintegration; reduction of risks and harms, especially among high-risk groups and expansion of substitution treatment offers; research, evaluation and information; supply reduction; coordination and international relations. Special focus is also given to regionalisation and decentralisation, and thereby to the diversification and improvement of the accessibility of treatment and care offers. In terms of integration and rehabilitation, the objectives to be achieved are the extension of the existing offers of accommodation and supervised housing, adapted to the situations and needs of (ex-) drug users, and low-threshold socio-professional reinsertion measures. Finally, research in the field of illicit drugs and addictions and the evaluation of specialised offers should be further promoted and supported. The selection of specific actions, projects or programmes is based upon a 6-criteria matrix including

1 Presentation of the « Plan d'action national drogues illicites 2020–2024 » : https://sante.public.lu/fr/actualites/2020/10/plan-action-national-drogues-2020-2024/index.html

pertinence, opportunity, feasibility, cost–benefit/quality factors, quality assurance mechanisms and measurability of results/impact. Like previous action plans, the 2020-2024 National Drug Strategy and Action Plan will also be subject to a final external evaluation at the end of its implementation.

1.2. DRUG POLICY COORDINATION

The national drug policy coordination primarily involves five ministries: The Ministry of Health, the Ministry of Justice, the Ministry of Internal Security, the Ministry of Family and Integration, and the Ministry of Foreign Affairs. The Ministry of Health is in charge of drug-related demand and harm reduction, the Ministry of Justice and the Ministry of Internal Security are responsible for supply reduction, the Ministry of Family and Integration is competent in the field of homelessness and related integration measures, and the Ministry of Foreign Affairs deals with international cooperation. The Ministry of Health plays a central role as the National Drug Coordinator chairs the ICD (Inter-ministerial Committee on Drugs). This committee is composed of senior delegates from all ministerial departments involved in the drug field, directors of specialised NGOs and invited experts from civil society. Its main purpose is to organise and follow-up the implementation and effectiveness of the National Drug Strategy and Action Plan, as well as to assess emerging needs and elaborate national recommendations. A more restricted group, including NGOs, is responsible for drafting action plans and national strategies, to be validated by the ICD and approved by the Council of government.

1.3. DRUG RELATED PUBLIC EXPENDITURE

The global budget of the Ministry of Health granted to drug demand reduction related services and programmes went up from EUR 2,066,000.- in 2000 to EUR 16,255,746.- in 2019 and EUR 20,208,125.- in 2020, thus witnessing a progression rate of 24.3% compared to the previous year. In reference to the year 2005, the global budget dedicated to drug demand reduction related services and programmes by the Ministry of Health was EUR 6,196,000.-, the progression rate to 2020 is 226.1%. Overall public expenditures in the field of drug demand and drug supply reduction per year have been estimated at EUR 38,500,000.- (Origer, 2010; 2017).

1.4. LEGAL PENALTIES FOR PERSONAL DRUG POSSESSION AND USE

The national reference law on drugs dates back to February 19th 1973[2], and addresses the selling of pharmaceuticals and the fight against drugs and drug addiction. The 1973 basic national drug law regulates both, the selling of controlled medicines and the fight against drug addiction. This law prohibits the illicit use, transport and selling of drugs. It has been amended by the law of April 27 2001[3] and in 2018[4].

In 2001, the respective law of April 27 introduced the following amendments: cannabis use and possession for personal use were decriminalised at the national level and are since then punishable only by a fine (ranging between 251 and 2,500 euros). Prison sentences are only foreseen in case of aggravating circumstances (e.g. transportation of large amounts of substances, use in schools or in the presence of minors). In fact, possession of cannabis for personal use is treated as an offence by all EU Member States, while over one third of the countries - including Luxembourg - do not allow prison sentences as a penalty for minor offences (see Fig. 1). The national law further introduced alleviation of penalties for simple drug use, and an enhanced overall differentiation of penalties according to the type of drug offences and the nature of controlled substances involved. 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 (see Fig. 2).

2 Official gazette A-12 du 3 mars 1973, Loi du 19 février 1973 concernant la vente des substances médicamenteuses et la lutte contre la toxicomanie, p. 319-324. (Adoption: 19.02.1973. Entry into force: 03.03.1973)

3 Official gazette A-61 du 17 mai 2001, Loi du 27 avril 2001 modifiant la loi modifiée du 19 février 1973 concernant la vente de substances médicamenteuses et la lutte contre la toxicomanie, p. 1180 (Adoption 27.04.2001. Entry into force: 17.05.2001)

4 Official gazette A-638 du 1 août, 2018, Loi du 20 juillet 2018 modifiant la loi modifiée du 19 février 1973 concernant la vente des substances médicamenteuses et la lutte contre la toxicomanie, p. 319-324. (Adoption: 20.07. 2018. Entry into force: 01.08.2018)

For minor cannabis possession:

- ***incarceration possible***
- ***incarceration not possible***

FIGURE 1.

Possibility of legal penalty of incarceration for possession of cannabis for personal use (minor offences) (EMCDDA, 2019)

Incarceration possible:

- ***For any minor drug possession***
- ***Not for minor cannabis passession, but for other drug possession***
- ***Not for minor drug possession***

FIGURE 2.

Legal penalty of incarceration foreseen for possession of drugs for personal use (minor offences) (EMCDDA, 2019)

The national legislation does not differentiate between small-scale and large-scale drug dealing or distribution. Sentences for both currently range from one to 5 years' imprisonment and/or a fine, while a prison sentence of 5 to 10 years can be imposed if the distributed drug has caused severe damage to health. If the drug has caused fatal consequences for the user, the sentence 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. Controlled narcotic, psychotropic and toxic substances are listed by means of various Grand Ducal Decrees.

The law of 27 April 2001 further foresees a legal framework for a series of treatment and harm reduction measures, namely, drug substitution treatment, needle exchange and supervised drug consumption rooms state accredited and Heroin Assisted Treatment (HAT), launched as a pilot programme in June 2017.

1.5. 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 was modified and entered in force on August 1st 2018 *(« 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 »*). 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[5].

REGULATION OF LEGAL ACCESS TO CANNABIS FOR NON-MEDICAL PURPOSES

By the end of the year 2018, the coalition agreement of the current 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 adult residents of the Grand Duchy of Luxembourg. 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 government has agreed on a step-by-step approach with an initial phase focusing on the drug-related crime prevention component. On October 22nd 2021, the government announced a 'package of measures regarding the problem of drug-related crime'. This included an update on the progress towards a national regulation on controlled cannabis production and supply to adult residents as featured in the government coalition agreement of 2018. On the one hand, it has been proposed that adult residents should be permitted to legally cultivate up to four cannabis plants per household from seeds (not cuttings/seedlings) for personal consumption at home. On the other hand, consuming cannabis in public would still be prohibited, but it is foreseen to amend the penalties for small quantities of cannabis use/possession in public. According to the updated proposal, a lighter and more expeditious penal procedure (taxed warnings) is foreseen with regard to adults whose consumption and possession in public, as well as transportation and acquisition, does not exceed 3 grams of cannabis (including its derivatives or mixed cannabis products). The fine, which currently ranges between 251 and 2 500 euros, would be reduced to 25-500 euros and a warning with a penalty of 145 euros would be applied[6]. Discussions and preparations towards the implementation of this approach are ongoing and involve numerous governmental and non-governmental actors. An independent, scientific and impact-oriented evaluation of the project is planned to determine the extent to which the objectives of the proposed government initiative would be achieved.

5 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.

6 https://gouvernement.lu/fr/actualites/toutes_actualites/articles/2021/10-octobre/22-mesures-criminalite.html

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 assessed by means of the cross-sectional population-based survey "European Health Interview Survey" (EHIS)". 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. A module covering the topic of illicit and new psychoactive substances has been added to the survey by the EMCDDA Luxembourg Focal Point (PFLDT) since 2014. This non-mandatory module assesses amongst others the lifetime prevalence, the last year prevalence as well as the last month prevalence of use of several illicit drugs. The latest EHIS wave in Luxembourg took place in 2019.

The data presented in this chapter are based on the 2014 and 2019 EHIS waves. The EHIS targets illicit drugs and NPS' use among the general population aged 15-64 years. In 2019, 3,514 valid questionnaires from respondents of this age category were retained, among those 1,052 valid questionnaire from respondents aged 15-34 years old, and 165 valid questionnaires from respondents aged 15 to 18 years old.

CANNABIS

Cannabis is the drug most commonly used at the national level. Figure 3 compares lifetime, last year and last month prevalence of cannabis use across three age groups. Even though overall data are suggestive of an increase in cannabis use across all age groups between 2014 and 2019, these differences are statistically non-significant:

- Lifetime use – experimental (lifetime) use of cannabis is highest among young adults (15-34y) with a proportion of 31.5% in 2014, which increased to 32.7% in 2019. Among youngsters (15-18y), the proportion of lifetime use increased from 16.6% in 2014 to 18.2% in 2019.
- Last year use - recent (last year) use of cannabis among the general population (15-64y) showed an increase since 2014 (4.8% in 2014 and 5.4% in 2019). This increase is observed among young adults (15-34y) (9.8% in 2014 and 12% in 2019) and among youngsters (15-18y) (11.2% in 2014 and 15.2% in 2019). Recent (last year) use of cannabis among young adults (15-34y) in Luxembourg as assessed in 2019 remains below the EU average – 12.0% in Luxembourg compared to 15.4% EU average as reported in the 2021 European Drug Report (EMCDDA, 2021).
- Last month use - current use (last month) of cannabis increased between 2014 and 2019, notably among youngest users (15-18y) – 4.7% in 2014 and 7.3% in 2019 (see Fig. 3).

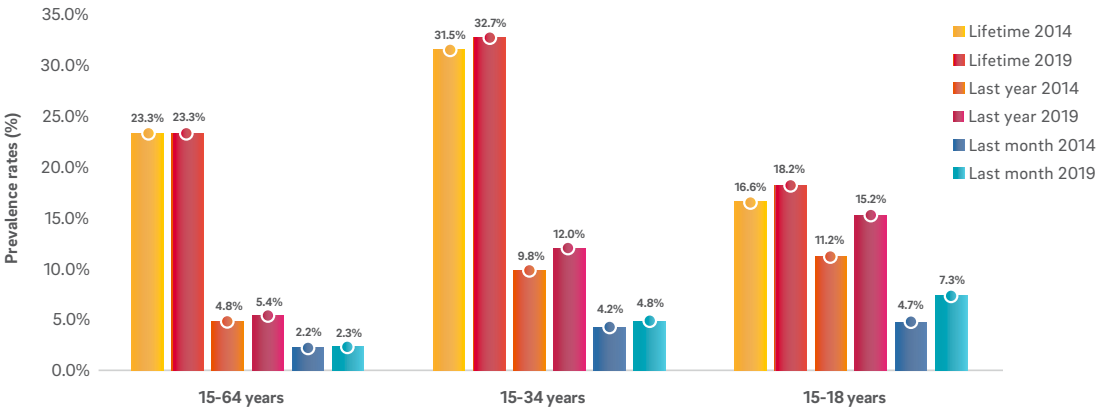


FIGURE 3.

Lifetime, last year and last month prevalence of cannabis use across different age groups: comparison of 2014 and 2019 data (EHIS, 2014, 2019)

- Gender differences - gender differences are also worth mentioning. In 2014 and 2019, a higher proportion of men report cannabis use compared to women (in lifetime, as well as last year and last month):
- Men report greater recent (last year) cannabis use (7.0% of the entire male population aged 15-64y and 16.5% of male young adults aged 15-34y) compared to women (4.0% of all women aged 15-64y and 9.3% of young women aged 15-34y).
- With regard to current use (last month), the proportion of young male adults who report having used cannabis is more than double the proportion of young female adults both in 2014 (6.7% of men and 2.1% of women) and in 2019 (7.9% of men and 3.0% of women) (see Fig. 4).

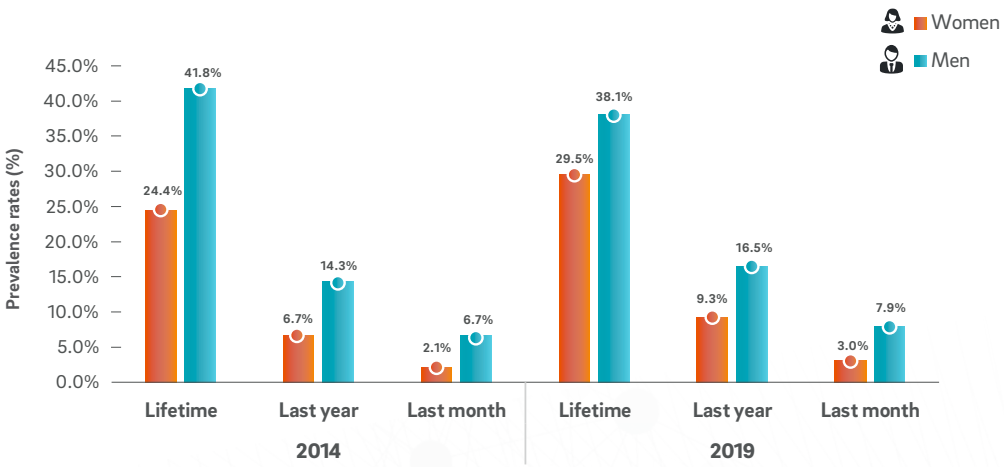


FIGURE4.

Lifetime, last year and last month prevalence of cannabis use among male and female young adults (15-34y): comparison of 2014 and 2019 data (EHIS, 2014, 2019)

OTHER SUBSTANCES

Following cannabis, the 2014 and 2019 EHIS waves reveal that stimulants are the most commonly used drugs among the general population:

- Lifetime use - in 2019, a slightly higher proportion of young adults (15-34y) reported experimental (lifetime) use of ecstasy/MDMA, cocaine and LSD compared to 2014. On the contrary, use of hallucinogenic mushrooms and NPS decreased slightly. These differences are not statistically significant (see Fig. 5).
- Last year use - with regard to recent (last year) use, 2019 data suggest an increase for ecstasy/MDMA, amphetamines, cocaine, mushrooms and LSD use among young adults (15-34y), and an increase in recent use of ecstasy/MDMA and cocaine when considering the entire population (15-64y) compared to 2014 data. These differences are not statistically significant though. Recent (last year) use of stimulants among young adults (15-34y) as measured in 2019 in Luxembourg are below the EU average (EMCDDA, 2021) – ecstasy/MDMA (0.9% in Luxembourg compared to 1.9% EU average), amphetamines (0.3% in Luxembourg compared to 1.4% EU average), and cocaine (0.9 % in Luxembourg compared to 2.1% EU average) (see Fig. 6).

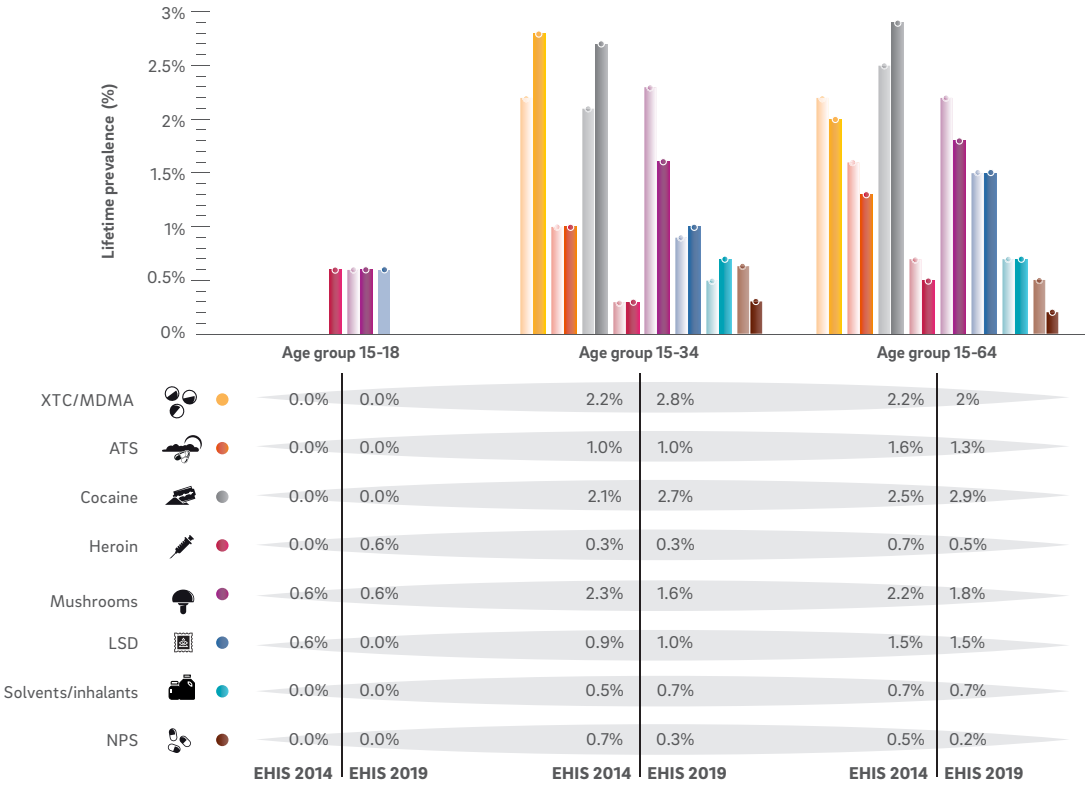


FIGURE 5.

Lifetime prevalence of illicit drugs' use across different age groups: comparison of 2014 and 2019 data (EHIS, 2014, 2019)

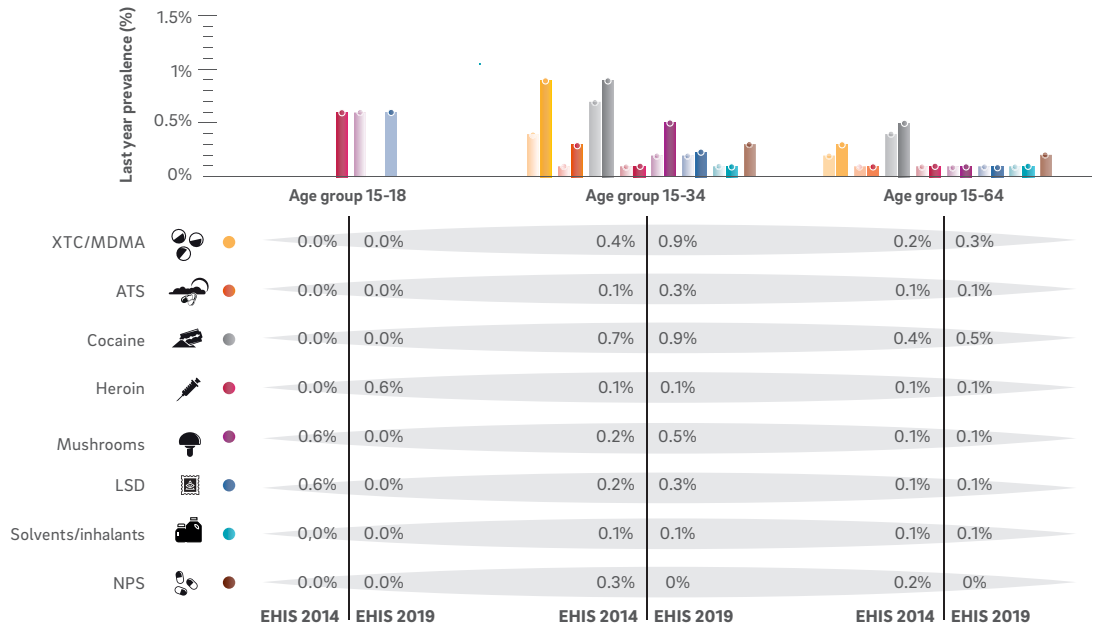


FIGURE 6.

Last year prevalence of illicit drugs' use across different age groups: comparison of 2014 and 2019 data (EHIS, 2014, 2019)

> Last month use - as far as current use (last month) is concerned, EHIS data are suggestive of a decrease in the prevalence rates for the majority of drugs. This said, it is important to highlight that in Luxembourg, due to the small size of the population, the subsamples of specific age groups (e.g. 15-18y) concerned by the questions on recent use (last year) and current use (last month) are small. Hence, the differences in the prevalence rates are explained by very small differences in terms of the number of effective cases (see Fig. 7).

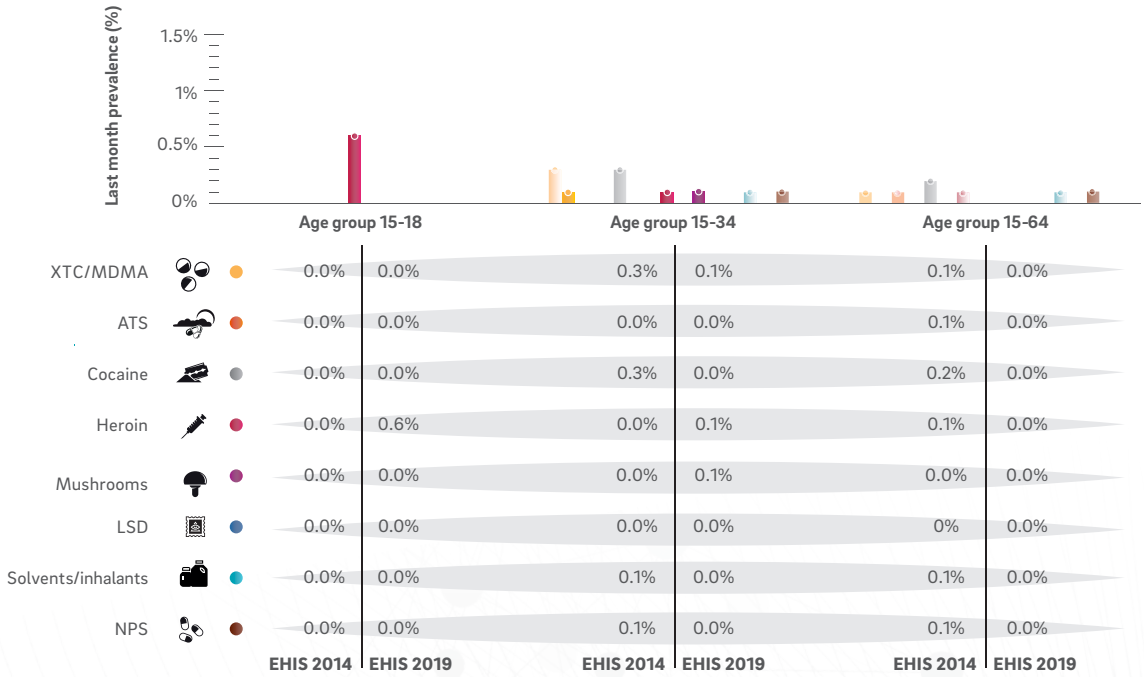


FIGURE 7.

Last month prevalence of illicit drugs' use across different age groups: comparison of 2014 and 2019 data (EHIS, 2014, 2019)

> Average age of first use - cannabis and solvents are the drugs with an earlier average age of first use (cannabis at 19y and solvents at 17y) (EHIS, 2019). The initiation of using other drugs such as ecstasy/MDMA (on average at 22y), LSD (on average at 21y), and NPS (on average at 30y) appears to occur at a later age. It is relevant to highlight that the average age of first use of heroin (23y in 2014 and 19y in 2019) as well as the average age of first use of amphetamines appear to be decreasing (21y in 2014 and 20y in 2019).

> Gender differences - on average, EHIS data from both 2014 and 2019 yield that women report trying drugs at the same age or later than their male counterparts, except for heroin, hallucinogenic mushrooms and solvents (not in Figure/Table).

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 HBSC is a survey assessing various health behaviours and conducted among school children aged 11-18 years in both primary and secondary schools. A specific module assessing drug-related behaviour is, however, only presented to those attending secondary schools. The University of Luxembourg scientifically coordinates the HBSC survey in Luxembourg. Four waves have already been conducted in Luxembourg, the first dating from 2006 and the last one from 2018.

Throughout the different HBSC waves, drug-related questions and methodological approaches have been slightly adapted to take into account the challenges of this type of data collection among school-aged children. In all four waves of the HBSC survey, adolescents in secondary schools were consistently asked if they had ever used cannabis in their life (lifetime prevalence) and/or in the past 30 days (last month prevalence). Questions on the use of other substances were only addressed in previous waves of the survey (2006-2014). Results for the different indicators are hence reported separately.

The evolution of lifetime and last month prevalence of cannabis use between 2006 and 2018 are presented as reported in the latest HBSC Luxembourg trends report (Heinz, van Duin, Kern, Catunda, & Willems, 2020). In this regard it is important to note that, although the drug questions were presented to all secondary students (12-18y), only the results for the students aged 15-18y are presented. This methodological decision is due to the fact that younger students (below 15 years-old) can be found in both primary and secondary schools. Since the HBSC survey is conducted exclusively in secondary schools, prevalence rates for these age groups (< 15 years-old) would not be representative in general, but only for those who attend secondary schools.

The consumption of other substances were assessed exclusively in previous waves of the survey (2006-2014). These data are reported in this section due to their relevance for the understanding of the overall picture of drug use among this population. The analysis of these data followed different methodological criteria and are reported for scholars aged 13-18 years old, as presented in the 2018 National Drug Report (Berndt, Seixas, & Origer, 2019).

CANNABIS

> Lifetime and last month use - lifetime use of cannabis among scholars has been stable over the last 12 years (around 30%) with a slight decrease in 2018 (27.1%).

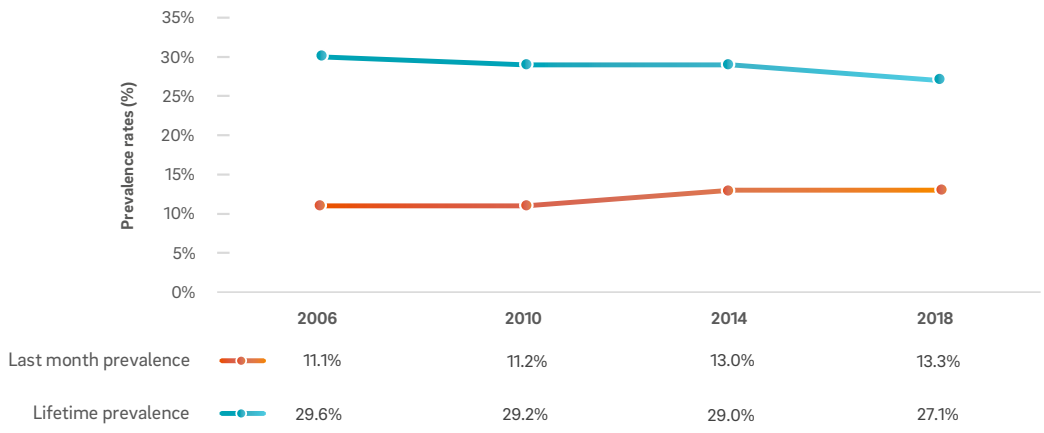


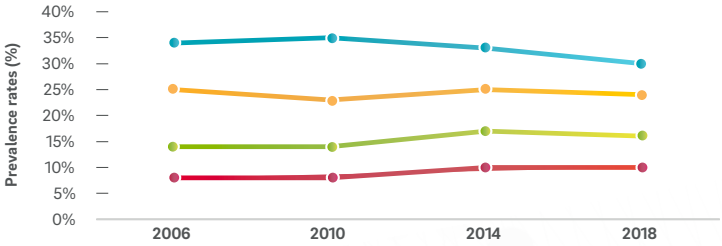
FIGURE 8.

Lifetime and last month prevalence of cannabis use among scholars (15-18 years-old) (valid %) (HBSC, 2006-2018)

> While experimental (lifetime) use has been stable, current (last month) use slightly increased from 2006 (11.1%) to 2018 (13.3%) (Fig. 8). Lifetime use of cannabis is less meaningful than recent (last year) and current (last month) use of cannabis as it covers all types of use, independent of its frequency and periodicity (e.g. those that have used cannabis only once during their lifetime). While there is a mixed picture regarding the use of cannabis, the proportion of young scholars (boys and girls) who report to use cannabis currently (during the last month) has risen overall (although this overall increase is likely to be due to the significant increase among girls).

> Gender differences - a closer look into gender differences suggests that the proportion of experimental (lifetime) and current (last month) cannabis users is slightly higher among boys than among girls:

- For both genders, a slight increase in current (last month) cannabis use has been observed from 2006 to 2018 - for girls it increased from 8% in 2006 to 10% in 2018 (this increase is statistically significant), and for boys from 14% to 16% in the same period (this increase is statistically non-significant).
- The proportion of boys with an experimental (lifetime) use of cannabis has slightly decreased over the past years (from 34% in 2006 to 30% in 2018), whereas the proportion of girls remained largely stable (25% in 2006 and 24% in 2018) (see Fig. 9).



	2006	2010	2014	2018
Lifetime Prevalence boys	34%	35%	33%	30%
Lifetime Prevalence girls	25%	23%	25%	24%
Last month Prevalence boys	14%	14%	17%	16%
Last month Prevalence girls	8%	8%	10%	10%

FIGURE 9.

Lifetime and last month prevalence of cannabis use among young scholars (boys and girls) (15-18y) (valid %) (HBSC, 2006-2018)

> Age differences - prevalence rates of cannabis use are consistently higher among the older age groups (17-18y) than among the younger age groups (15-16y). A repeated cross-sectional comparison points out that for older scholars (17-18y) current use of cannabis has been increasing over the years (regardless of gender), while it has been stable for younger scholars (15-16y) (Fig. 10, 11) (HBSC, 2018).

> However, an analysis by age group shows that there has been a shift in age: for both boys and girls, current cannabis use has decreased among younger scholars and increased among older ones, respectively (Fig. 10, 11).

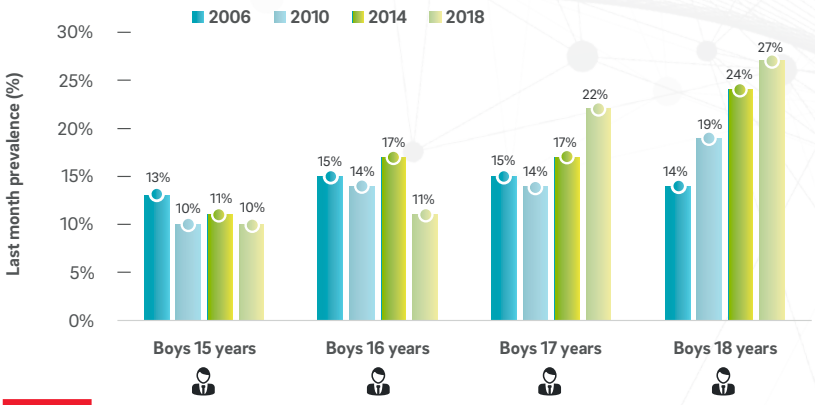


FIGURE 10.

Last month prevalence of cannabis use among boys across different ages (valid %) (HBSC, 2006-2018)

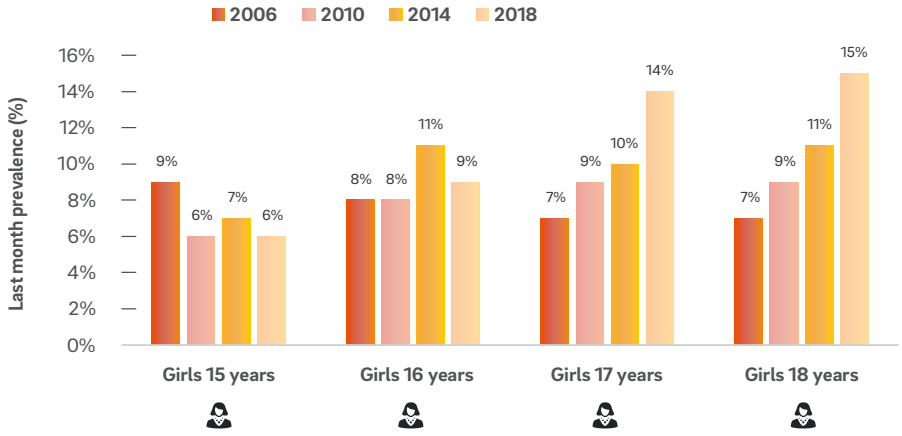


FIGURE 11.

Last month prevalence of cannabis use among girls across different ages (valid %) (HBSC, 2006-2018)

OTHER ILLICIT DRUGS

> Lifetime use – the experimental use of illicit drugs other than cannabis has been assessed in the 2006, 2010 and 2014 HBSC waves:

- Lifetime use of illicit drugs among young scholars (13-18y) decreased between 2006 and 2014 for a great number of substances – cocaine (2006: 2.1%; 2014: 1.8%); ecstasy/MDMA (2006: 1.7%; 2014: 1.3%); amphetamines (2006: 1.6%; 2014: 1.1%); hallucinogenic mushrooms (2006: 2.1%; 2014: 1.4%); and opioids (2006: 0.9%; 2014: 0.8%) (Origer, Lopes da Costa, & Diederich, 2008; Origer, et al., 2012; Berndt et al., 2018).
- However, with regard to 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%) (see Fig. 12).

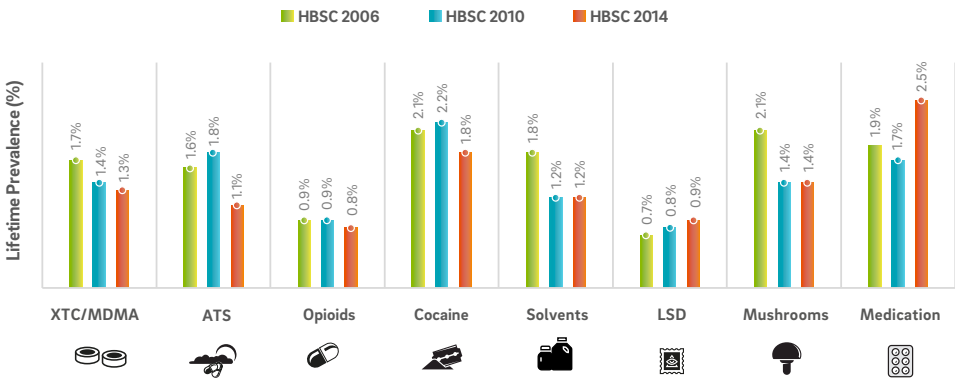


FIGURE 12.

Lifetime prevalence of several illicit drugs' use (age group 13-18 years old) (HBSC, 2006-2014)

> Last year use - regarding recent use of other illicit drugs, the data available date from the 2006 and 2010 HBSC waves:

- Cocaine was the most prevalent drug used by young scholars (13-18y) (after cannabis) – used by 2.1% of the scholars in 2006 and by 1.7% in 2010. Amphetamines, hallucinogens (such as magic mushrooms), ecstasy/MDMA, solvents and opioids were present, although with lower prevalence rates (Origer et al., 2008, 2012) (see Fig. 13).

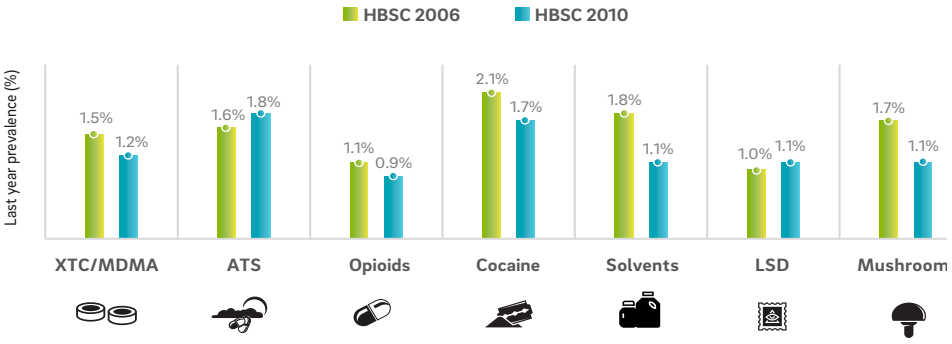


FIGURE 13.

Last year prevalence of illicit drug use among youngsters aged 13-18 years (HBSC, 2006, 2010)

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). According to the national definition, HRDU is associated to a high probability of intervention or the need of involvement of a third party from the law enforcement or care sectors. Specifically, data on HRDU originate from the national monitoring system RELIS[7], which encompasses both types of data.

NATIONAL ESTIMATION OF THE NUMBER OF HRDUS

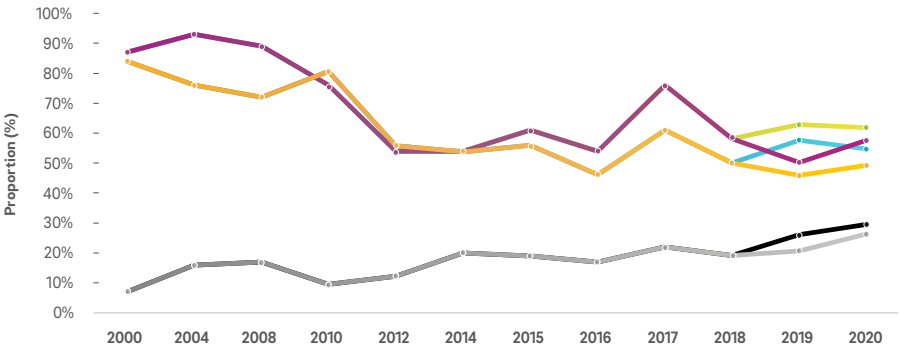
> The annual number of HRDU person-contacts indexed by the national institutions (treatment demand and law enforcement) figured 4,917 in 2020 (multiple counts included) (5,548 in 2019; 5,290 in 2018).

> The latest HRDU estimations were performed on 2019 RELIS data using the incremental OST multiplier method (IOMM) (Origer, 2018, in National Drug Report 2018 [Rapport RELIS] - Berndt, Seixas & Origer, 2019):

- The national prevalence of HRDUs situates around 2,162 persons (prevalence rate: 5.06 per 1,000 inhabitants aged 15-64y), remaining relatively stable compared to the last estimation conducted in 2018 (2018: 2,100 persons; prevalence rate: 5.02 per 1,000 inhabitants aged 15-64y).
- Among the HRDUs, 1,427 are estimated to be high-risk opioid users (OU) with a prevalence rate of 3.34 per 1000 inhabitants aged 15-64y (2018: 1,470 OU; prevalence rate of 3.51 per 1000 inhabitants aged 15-64y).
- Approximately, 822 are injecting drug users (IDUs) with a prevalence rate of 1.93 per 1,000 inhabitants aged 15-64y (2018: 800 IDUs; prevalence rate of 1.91 per 1,000 inhabitants aged 15-64y) in Luxembourg.
- Although HRDU, OU and IDU prevalence rates remain stable, 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).

7 Réseau Luxembourgeois d'Information sur les Stupéfiants et les Toxicomanies (RELIS)

- During the last 15 years, the average age of the HRDUs in Luxembourg has been around 30 years. In 2020 HRDUs were, on average, 37 years of age (2019: 35 years) which indicates an overall aging of the national HRDU population.
- The majority of the indexed HRDUs were male (79.8%) in 2020 (77.3% in 2019). The proportion of female HRDUs is slightly smaller (20.2%) compared to previous years (22.7% in 2019).
- The majority of the HRDUs report a stable residence (50.2%) in 2020 (63.2% in 2019), however, an increasing proportion report homeless (24.5%) (13.1% in 2019) or instable residency (16.0%) (12.1% in 2019) situations.
- More than half of the HRDUs (57.0%) (51.4% in 2019) are professionally inactive - almost one-third of all HRDUs report to be a beneficiary of social aids (31.4%) (31.9% in 2019) or employment benefits (3.5%) (3.6% in 2019). A smaller proportion reports a stable (12.3%) (11.6% in 2019) or unstable job (5.5%) (6.4% in 2019), or to be currently studying (10.2%) (19.0% in 2019).
- The majority of HRDUs were born in Luxembourg (64.1%) (67.2% in 2019), followed by Portugal (13.9%) (11.7% in 2019), France (5.1%) (4.9% in 2019), Germany (4.2%) (4.2% in 2019) and Belgium (3.4%) (1.2% in 2019). Other countries of birth are negligible.
- With regard to type of primary drug use among HRDU, it is relevant to note that in 2019, the RELIS sample included more adolescents/young adults with high-risk cannabis use (in treatment at the 'Impuls' drug counselling centre). The relative proportions of primary use of opioids and/or cocaine tend to be lower compared to previous years. In order to account for the change in the characteristics of the sample, and allow for a comparison with previous years, 2019 and 2020 data are presented both in- and excluding respondents from the youth treatment service 'Impuls'. When considering the entire RELIS sample (i.e. people in contact with all drug treatment centres across the country, including 'Impuls'), a comparison between 2019 and 2020 data suggest an increase in primary opioid and cocaine use:
  - More specifically, primary use of opioids increased compared to last year (49.4% in 2020; 45.9% in 2019) but it shows a discontinuous decrease since 2000 (84% in 2000), which contrasts with a discontinuous increase in use of cocaine as primary drug (7% in 2000, 20.7% in 2019 and 26.4% in 2020).
  - However, when 'Impuls' treatment demanders are excluded from the sample analysis, available data reinforce the idea that the primary use of opioids are following a discontinuous decreasing trend, while cocaine is clearly on the rise (see Fig. 14).



	2000	2004	2008	2010	2012	2014	2015	2016	2017	2018	2019	2020
Opioids	84.0	76.0	72.0	80.6	55.8	53.8	55.9	46.1	61.0	50.0	45.9	49.4
Opioids (excluding Impuls)	84.0	76.0	72.0	80.6	55.8	53.8	55.9	46.1	61.0	50.0	57.7	54.9
Cocaine	7.0	16.0	17.0	9.5	12.2	19.9	19.0	17.0	22.0	19.2	20.7	26.4
Cocaine (excluding Impuls)	7.0	16.0	17.0	9.5	12.2	19.9	19.0	17.0	22.0	19.2	26.1	29.6
Polydrug use	87.0	93.0	89.0	76.0	54.0	54.0	61.0	54.0	76.0	58.2	50.2	57.3
Polydrug use (excluding Impuls)	87.0	93.0	89.0	76.0	54.0	54.0	61.0	54.0	76.0	58.2	62.9	62.0

FIGURE 14.

Trends in primary drug use among HRDUs (N=239; % self-reported) (RELIS, 2020)

- Although polydrug use is very high among HRDUs, it has been witnessing a discontinuous decreasing trend since 2004. In 2020, 57.3% of the HRDUs reported polydrug use (2019: 50.2%; 2018: 58.2%). When excluding the high-risk cannabis users and hence a sample comparable to the precedent years, the proportion of polydrug users reaches 62.0% in 2020 (2019: 62.9%; 2018: 58.2%) (RELIS, 2020).
- During the last years, a decrease in heroin use and an increase in the use of cocaine and cocktails (mixtures of heroin and cocaine) have been observed at the supervised drug consumption rooms at CNDS Abrigado:
  - While in 2013 heroin was used in 93% of the consumption episodes, in 2020, this substance was only used in 58% of the consumptions.
  - On the contrary, in 2013 only 4% of the consumption episodes involved cocaine and 3% cocktails, while in 2020 cocaine was used in 25% and cocktails in 17% of the consumption episodes, respectively (Fig. 15).

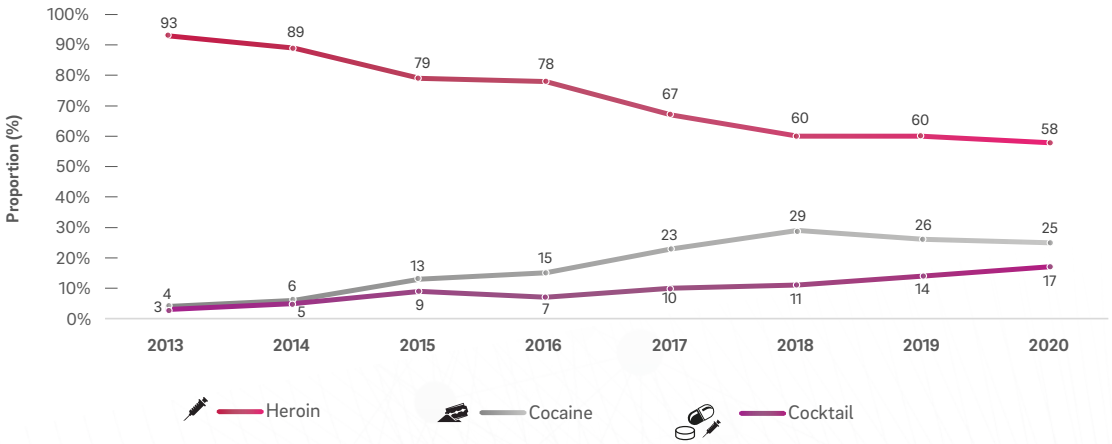


FIGURE 15.

Trends in the proportion of heroin, cocaine and cocktails consumption episodes at the Abrigado drug consumption rooms (%) (CNDS Abrigado, 2021)

- A different pattern has been reported by the supervised drug consumption rooms at the 'Contact Esch'[8]. In contrast to 2019, the 2020 registered consumption episodes at Contact Esch revealed that heroin accounted for 79.4% (40.0% in 2019) and cocaine for 16.6% (50.0% in 2019) of all consumptions.
- Inhalation (chasing/blowing) is increasingly frequent and has been the most prevalent route of administration at Abrigado drug consumption rooms since 2018 – it represented 41% of the consumptions in 2014, 53% in 2019 and 52% in 2020. Injection represented 46% of the consumption episodes in 2020 and nasal/sniffing 2% (Fig. 16).

8 A new drug consumption facility including an injection room and an inhalation room, run by the Foundation 'Jugend-an Drogenhëllef' (JDH) opened in 2019 at the main harm reduction centre - Contact Esch - in Esch-sur-Alzette, in the South of Luxembourg.

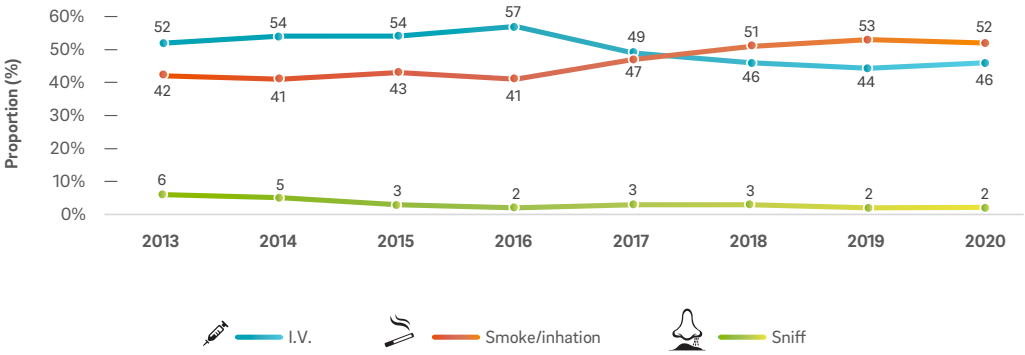


FIGURE 16.

Trends in the proportion of consumption episodes according to their routes of administration at Abrigado drug consumption rooms (%) (Abrigado, 2021)

> At the supervised drug consumption rooms at Contact Esch 29% of the clients used injection as their route of administration, compared to 69% who used inhalation, and 2% sniff (2020 data). This suggests that the HRDU population in the South of the country shows slightly different consumption patterns, compared to Abrigado clients.

> Overall, data are indicative of a positive shift towards safer consumption modes. The information and prevention work done by the staff from harm reduction centres has most probably contributed to this change.

2.4. DRUG USE IN SPECIFIC TARGET GROUPS

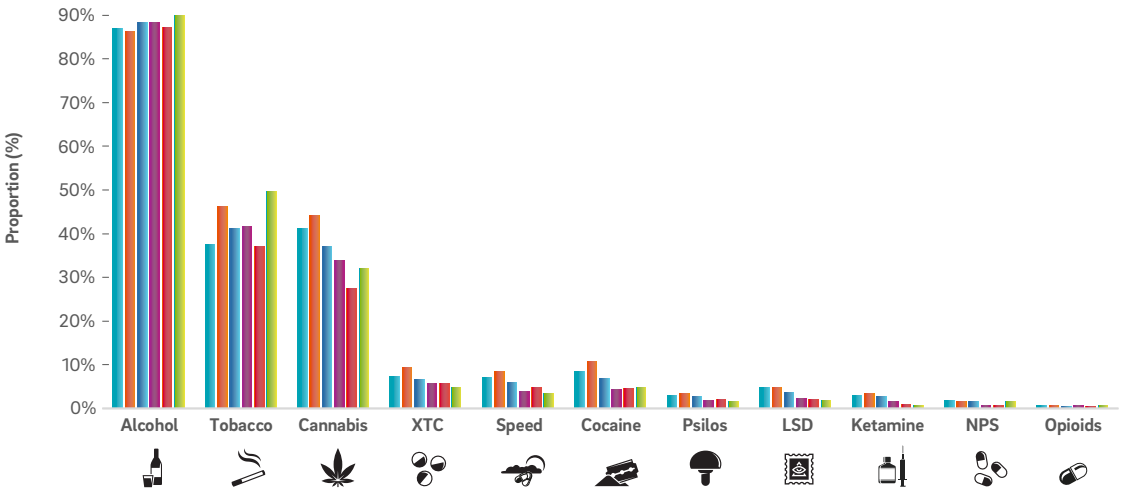
DRUG USE IN FESTIVE AND NIGHTLIFE SETTINGS (PIPAPO SURVEY)

> 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 the recreational drug use in festive contexts in Luxembourg.

> Pipapo uses a self-administered paper-and-pencil survey among visitors at festivals and nightlife events. The questionnaire, addressing drug use "in the last 2 weeks", can be completed on a volunteer basis and no particular exclusion criteria are applied.

> In 2020, the COVID-19 sanitary crisis impeded the implementation of the routine Pipapo activities (presence in festivals and nightlife events) and affected their yearly rapid assessment of drug use among the target group of "*party goers*". In order to adapt to the restrictions in place, the concept "Party safe" has been developed. The "Party safe" is a street working project based upon direct prevention while it took place between July and September 2020. The number of valid responses to the rapid assessment survey consequently decreased compared to previous years (N=414). The sample consisted of 231 (55.4%) males and 182 (44.4%) females (1 missing-value), and the median age was 21 years-old with a minimum age of 13 years and a maximum age of 69 years. Preliminary results reflect data from previous years: cannabis as the most frequently used illicit substance, followed by cocaine, ecstasy/MDMA and amphetamines/speed.

> Figure 17 presents the evolution of recent illicit drug use among recreational drug users throughout the last 6 years. 2020 data are not comparable and hence not included in the figure.



	Alcohol	Tobacco	Cannabis	XTC	Speed	Cocaine	Psilos	LSD	Ketamine	NPS	Opioids
2019	86.8	37.6	41.1	7.2	7.1	8.3	3.0	4.7	2.9	1.9	0.8
2018	86.2	46.1	44.2	9.3	8.5	10.8	3.4	4.8	3.4	1.6	0.7
2017	88.4	41.2	37.0	6.6	6.0	6.8	2.7	3.6	2.7	1.6	0.4
2016	88.4	41.7	33.7	5.8	4.0	4.3	1.9	2.2	1.6	0.6	0.6
2015	87.3	37.1	27.5	5.8	4.8	4.6	2.1	2.0	1.0	0.7	0.4
2014	89.9	49.6	32.0	4.9	3.3	4.7	1.6	1.8	0.7	1.5	0.6

FIGURE 17.

Evolution of the proportion (%) of recent (last 2 weeks) drug users among visitors of festive and nightlife events (2014-2019 data) (Pipapo survey – Paulos et al., 2020)

- In 2019, cannabis was the most frequently illicit drug used in festive settings (41.1%) followed by cocaine (8.3%), ecstasy/MDMA (7.2%), and amphetamines (ATS/speed) (7.1%).
- Between 2014 and 2018, data suggest an increase in the reported recent use of all substances. However, from 2018 to 2019 a slight decrease was observed regarding the recent use of cannabis, ecstasy, speed, cocaine, hallucinogenic mushrooms (psilos), LSD and ketamine (see Fig. 17).
- Males tend to report higher consumption than females for all substances (see Fig. 18).

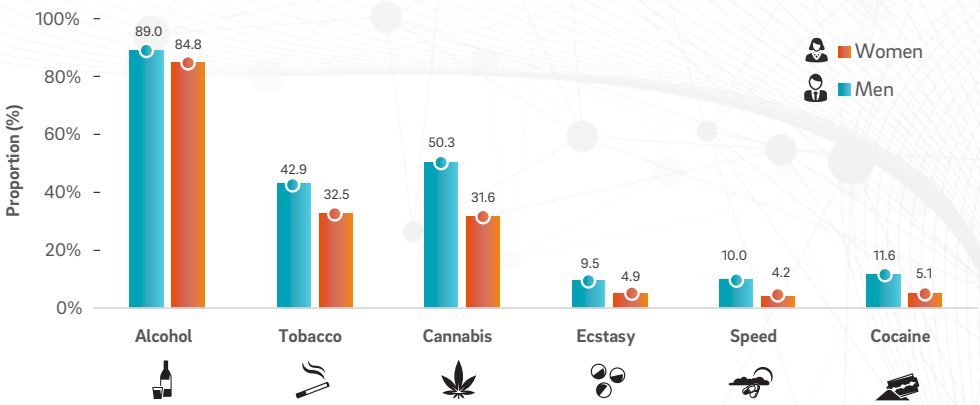


FIGURE 18.

Gender differences in the proportion of recent (last 2 weeks) drug users among visitors of festive and nightlife events (%) (2019 data) (Pipapo survey – Paulos et al., 2020)

DRUG USE AMONG RECREATIONAL USERS (EWSD, 2018)

> In 2018, the PFLDT participated in the EMCDDA pilot project "European Web Survey on Drugs (EWSD)" aiming to investigate recreational users' consumption habits, attitudes and perceptions towards drug use, as well as to improve knowledge on drug markets at national levels.

> The study relied on a 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.

> In total, a non-representative sample of 1,223 recreational drug users were included in the study - mainly young adults between the age of 18-34 years (67.4% aged 18-24y and 20.8% aged 25-34y) (see Fig. 19), the majority men (69.1% males; 30.1% females; 0.8% transgender) 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.

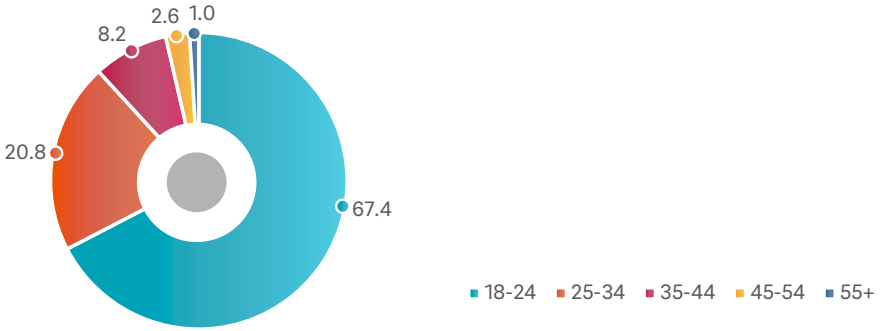


FIGURE 19.

Age categories of the targeted sample of recreational drug users (%) (EWSD, 2018 - Berndt & Seixas, 2019)

PREVALENCE RATES

> Prevalence rates among this targeted sample of last year drug users are, obviously, much higher than those observed among the general population:
  - o Cannabis and alcohol are the most prevalent substances both in terms of recent and current use.
  - o 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).
  - o 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 further attention (see Fig. 20).

> Use of synthetic cannabinoids and NPS are not negligible (while data from general population surveys and from police seizures suggest only marginal presence of these substances in Luxembourg). Caution is needed when interpreting these findings since bias related to participants' conception of NPS cannot be discarded. Further research is needed in order to improve knowledge on NPS' use in Luxembourg.

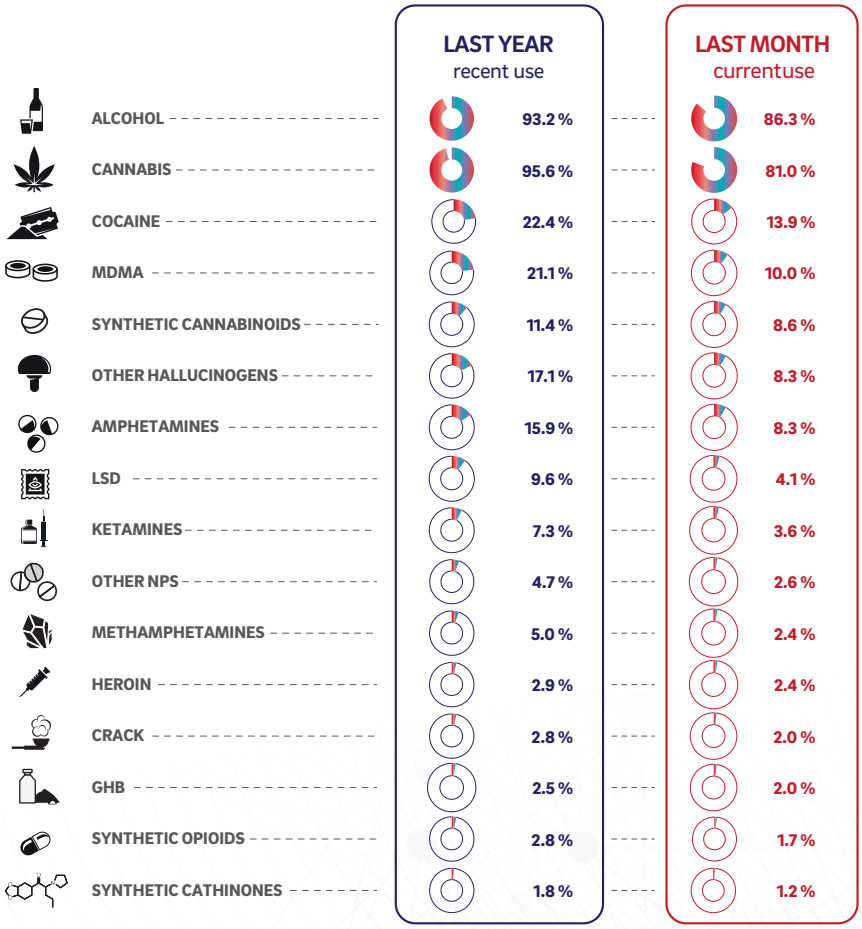


FIGURE 20.

Last year (recent) and last month (current) prevalence rates of drug use among the targeted sample (EWSD, 2018 - Berndt & Seixas, 2019)

GENDER DIFFERENCES

> Concerning gender differences in recreational drug use, EWSD data point out that, on one hand, current use of cocaine (χ^2 (1) = 5.92, p <.05) and cannabis (χ^2 (1) = 4.95, p <.05) are significantly more common among men than among women. On the other hand, women tend to use more NPS (χ^2 (1) = 4.44, p <.05) and synthetic cannabinoids (χ^2 (1) = 4.47, p <.05) than men. These findings deserve further investigation. No other significant gender differences are to be reported (Fig. 21).

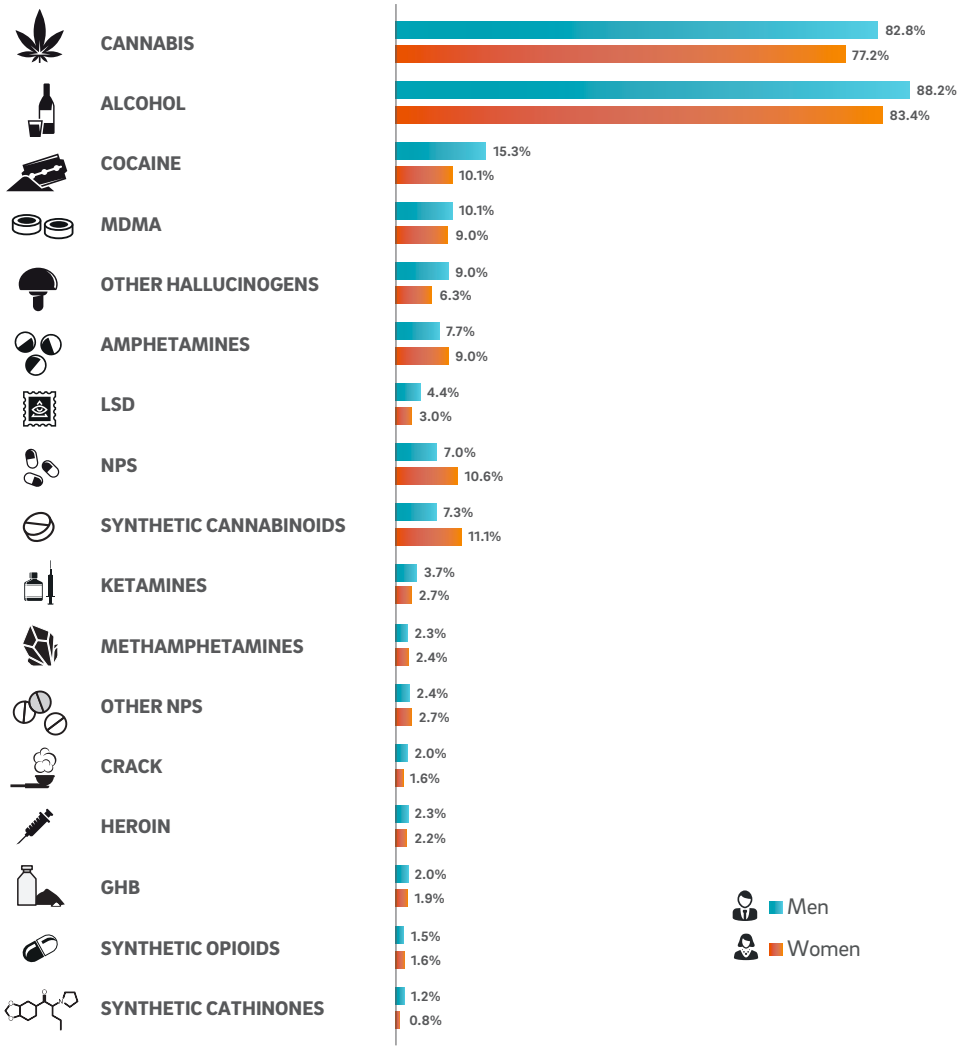


FIGURE 21.

Gender differences in last month prevalence of drug use among the targeted sample (%) (EWSD, 2018 - Berndt & Seixas, 2019)

MULTIPLE DRUG USE

> Even though single drug use is predominant, multiple drug use is reported by more than 40% of the respondents. The majority of the multiple drugs users (47.6%) used two different drugs during last year, a smaller proportion used three (21.7%), four (16.1%) or five up to ten (14.6%) different types of drugs (Fig. 22, 23).

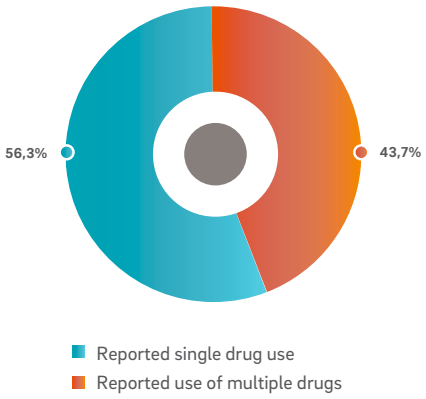


FIGURE 22.
Proportion of multiple drug users among the targeted sample (valid %) (EWSD, 2018 - Berndt & Seixas, 2019)

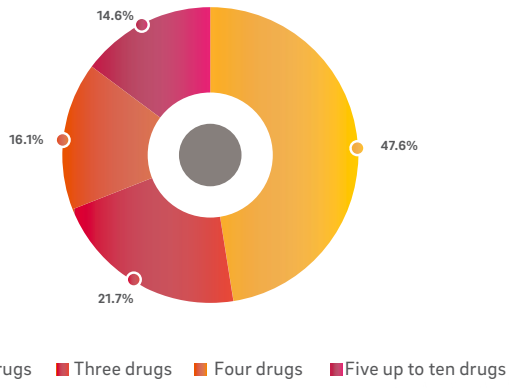


FIGURE 23.
Distribution of multiple drug users according to the number of drugs used (valid %) (EWSD, 2018 - Berndt & Seixas, 2019)

MARKET CHARACTERISTICS AND CONSUMPTION HABITS

> Cannabis is the most frequently used illicit drug – on average herbal cannabis (weed) is used 16 days per month and resin (hashish) is used 12 days per month. Respondents report smoking two to three joints of cannabis (herbal or resin) on average on a typical day and tend to buy four up to 4.6 grams of cannabis (herbal or resin) per purchase.

> According to the EWSD respondents, cocaine appears to be the most expensive drug and amphetamine the cheapest. Users buy on average 2.5 grams of cocaine and nine 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 and for free. Other means of supply are not significantly reported (Fig. 24).

FIGURE 24.

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

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 correlated: $r = 0.10$, $p < .05$). 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))".
- "Smoking marijuana or hashish regularly" is considered less dangerous than "trying cocaine or crack once or twice" or "having five 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 five or more drinks (alcohol) each weekend" are considered behaviours that imply a *moderate risk* or a *great risk* (see Fig. 25).

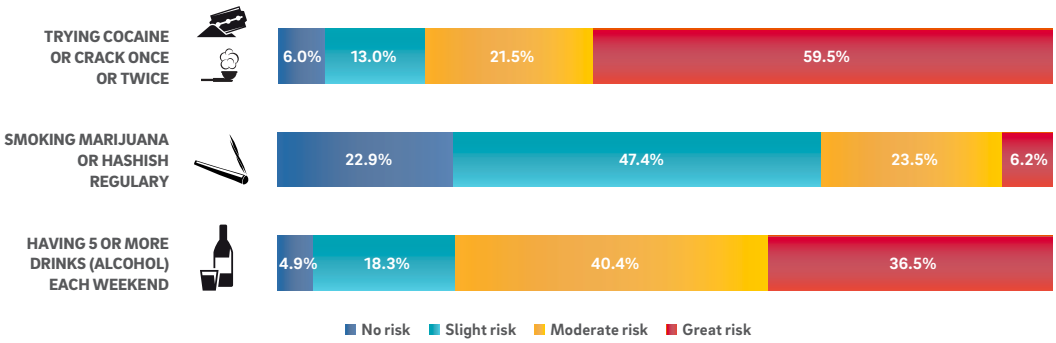


FIGURE 25.

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

DRUG USE AMONG RECREATIONAL USERS: IMPACT COVID-19 (MINI-EWSD: COVID-19, 2020)

> In order to assess the impact of the COVID-19 pandemic on recreational drug use and illegal drug market, between April and June 2020 (post-lockdown), an adapted version of the EWSD – the *Mini-EWSD: COVID-19* – was conducted in Luxembourg. The purpose of this study was to assess the impact of the COVID-19 related measures on drug consumption patterns, on drug acquisition behaviours, as well as perceptions on drug market changes (accessibility, price, purity, quantities) among a targeted convenience sample of recreational drug users in the G.-D. of Luxembourg.

> The study followed a similar methodology, recruitment strategy and inclusion criteria as previous EWSD editions (age above 18 years-old, residency in Luxembourg, and last year illicit drug use). Participation was fully anonymous, confidential and voluntary, as neither IP addresses nor any personal information were collected. In total, 420 respondents provided valid responses to the online survey. The sample included 278 men (66.2%), 132 women (31.4%) (N=10, 2.4% missing values). The majority of the respondents were aged 18-34 years-old (61.7%) followed by respondents aged 35-44 years-old (21.7%) (median age: 29 years-old).

> Detailed results of this study were published in the report "Mini-European Web Survey on Drugs (EWSD): impact of COVID-19 on drug use, acquisition behaviour and drug market in Luxembourg" (Berndt, Paulos, & Seixas, 2021). Highlights:

- Cannabis: 27.1% increased their frequency of use against smaller proportions of users who reduced (7.1%) or completely stopped (4.1%) their use since the implementation of the COVID-19 related restrictions. With regard to the amounts of cannabis used, data suggest that a higher proportion of users increased the amount of cannabis used per session/joint (9.8%) compared to the proportion of users who decreased the amount used (4.5%). These results point out that the COVID-19 pandemic affected cannabis users - the proportion of users who intensified their use appears to be higher compared to those who showed a reduction or interruption in consumption.
- Cocaine and MDMA: the use of cocaine and the use of MDMA appear to have been most affected. These are the two substances with the highest reported reduction in use – among the respondents, 6.6% reported a reduction in cocaine use and 5.7% in MDMA use. The reduction of the use of these stimulants is most likely related to reduced mobility, the closure of the nightlife and its economy, the cancellation of festive events, and the implementation of stay-at-home measures as implemented by the Luxembourg Government.

- o All illicit drugs: further analysis of behaviour change and patterns of use reveal that nearly half of the respondents (44.5%) declared using the same amount (21.3%) or more drugs (21.3%), compared to a quarter of the respondents (26.0%) who declared using less (12.9%) or not having used illicit drugs at all (13.1%).
- o The reasons reported to the increase in drug use include the relief of both boredom (15.2%) and anxiety or coping with the pandemic (6.9%), but also the stockpile of drugs (3.3%). The three main reasons given for a decreased use are the reduced availability of drugs to buy (7.1%), fewer opportunities to use drugs (6.9%), and/or a reduced ability to obtain drugs (6.4%).
- o With regard to perceived changes in purity, price and quantity received per purchase, the majority of the respondents agreed that there was nearly no change in the drug market concerning the purity/strength or the quantity of the drug obtained. Concerning the price, although slightly more than one-quarter (26.2%) reported an increase in price, no clear trend could be retained.

2.5. LOOKING AT DRUG USE ACROSS DIFFERENT GROUPS

> Figure 26 below shows the relative importance of certain drugs among different target groups and settings, each entailing unique characteristics. Globally, while cannabis is the most commonly used substance in festive settings by recreational drug users and by the general population, heroin and cocaine are the primary drugs reported by HRDU and less reported among recreational drug users or the general population.

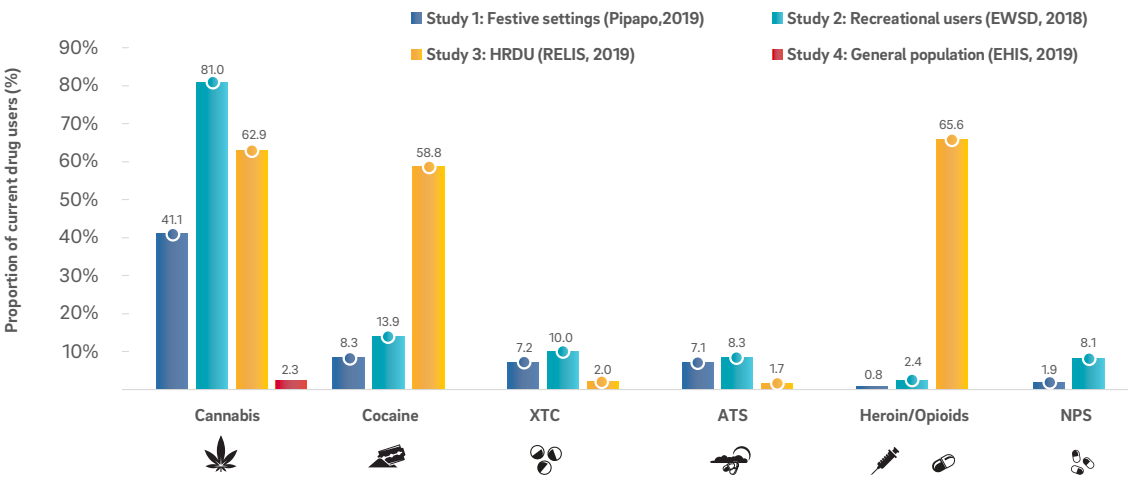


FIGURE 26.

Proportion of current drug use (last 30 days or less) per drug across different user groups (%)

3. DRUGS AND PRISON

3. DRUGS AND PRISON

3.1. DRUG-RELATED OFFENCES AMONG PRISONERS

In 2020, 743 new admissions were registered and among those, 22.9% were drug-related convictions (26.7% in 2019; 28.7% in 2018). According to the latest annual activity report from the penitentiary administration from 2020, drug-related imprisonments among males (17.8%) slightly increased compared to last year (15.9% in 2019; 18.0% in 2018; 22.0% in 2017, 24.9% in 2016, 26.0% in 2015). Offences involving physical violence represented 35.6% (37.5% in 2019), whereas offences of sexual violence accounted for 9.9% (10.0% in 2019) of those committed by convicted male offenders in 2020 leading to imprisonment.

Regarding females, drug offences that led to prison sentences decreased substantially in 2020 (7.1%) compared to previous years (25.0% in 2019, 19.0% in 2018). Other types of offences leading to imprisonment among females were related to theft/robbery (14.3% in 2020; 25.0% in 2019; 24.0% in 2018; 22.0% in 2017) and physical violence. The latter increased substantially in 2020 (64.3% in 2020; 44.0% in 2019; 19.0% in 2018) (Ministère de la Justice, 2021).

3.2. DRUG USE PRIOR TO AND DURING IMPRISONMENT

Drug use in prison remains a reality with major social and health consequences. However, as its use is strictly prohibited in prisons, the extent of the problem remains largely unknown in most European countries. In 2020, a study was conducted by the PFLDT in collaboration with the psychiatric nursery of the closed prison setting at the 'Centre Pénitentiaire de Luxembourg (CPL)' (Foulon, 2020) aiming at understanding drug use patterns of the prison population in the Grand Duchy of Luxembourg and their risk behaviours. The cross-sectional quantitative study used an anonymous, confidential and voluntary paper-pencil questionnaire based on the European Questionnaire on Drug use in Prison (EQDP) of the EMCDDA. The questionnaire was distributed to the prison population (n=488) by the end of August 2020 in four languages (English, French, German and Portuguese). Of these questionnaires, some were either not completed at all, contained refusals to each question, had clear inconsistent responses, or contained more than 50% of missing values. Following these criteria, 164 valid questionnaires were retained for statistical analysis.

SOCIO-DEMOGRAPHIC CHARACTERISTICS

- Regarding the gender distribution of retained respondents (n=164), 138 were male (84.1%) and 17 female (10.4%). The gender was missing for nine questionnaires (5.5%). The women's block had 18 prisoners on the day of the distribution of the questionnaire yielding that almost all women (94.4%) completed the questionnaire. Conversely, only 29.4% of the men prisoners (n=470) completed the questionnaire.
- More than half of the respondents were between 30 and 49 years old (56.7%), 20.1% were below the age of 30 years, a minority of respondents (3.1%) were between 50 and 59 years old, and 20.1% were above the age of 59 years.
- In total, 34.8% of the respondents declared being of Luxembourgish nationality, 42.7% declared an European nationality (37.8% from the European Union (EU) and 4.9% from outside EU), and 17.7% declared a nationality from outside Europe (4.8% missing-values).
- More than one-third of the respondents reported not living autonomously in a stable housing prior to their current incarceration (homeless, unstable housing, living in night shelters or in institutions; 32.8%).

LEGAL SITUATION

- In regard to the legal situation/status, 40.2% of the respondents reported being in pre-trial detention and 51.2% reported being already convicted.

- With regard to the type of offences, 20.1% of respondents reported having committed an offence against property (theft, burglary, etc.) and 30.5% declared a drug-related offence, among them 17.7% related to drug possession or use and 12.8% to trafficking.
- In terms of the length of time currently incarcerated, half of the respondents reported that they had spent less than 1 year in prison, one quarter less than 92 days, and another quarter more than 1095 days, i.e. just slightly less than 3 years. The rate of recurrent offenders is important among the study population: the average number of previous incarcerations was approximately 2, with a minimum of zero and a maximum of fourteen previous incarcerations.

DRUG USE BEFORE AND DURING PRISON

- Before imprisonment: the illicit drugs most commonly used before imprisonment are, by decreasing order of prevalence, cannabis (42.1%), cocaine powder (37.8%), crack cocaine (28.0%), and heroin (28.0%) (see Table 1 below). Half of the respondents who indicated using drugs before imprisonment stated that they continue to use drugs during their stay in prison.
- During imprisonment:
  - the psychoactive substances reported to be most consumed remain unchanged after prison entry: tobacco, alcohol and cannabis (respectively by 21.3%, 20.7% and 21.3% of respondents). Heroin, powder cocaine, and crack cocaine are reported to be used by 15.9%, 15.2%, and 12.8% of the respondents, respectively.
  - for all other substances, the trends are similar: except for consumption of methadone/buprenorphine and benzodiazepines; the number of respondents reporting substance use inside the prison is about half than those reporting substance use outside prison. This trend does, however, not apply to substances with low prevalence rates (five users or less), such as volatile substances, synthetic cathinones and other NPS, and other illicit substances (see Table 1) (Foulon, 2020).

TABLE 1.

Number of persons and prevalence (%) by substance before and during imprisonment (n=164)

Substance	Before imprisonment n (%)	During imprisonment n (%)
Tobacco	102 (62.2)	89 (21.3)
Alcohol	97 (59.2)	34 (20.7)
Cannabis	69 (42.1)	35 (21.3)
Synthetic cannabinoids (e.g. SPICE)	24 (14.6)	17 (10.4)
Cocaine (powder)	62 (37.8)	25 (15.2)
Cocaine « crack »	46 (28.0)	21 (12.8)
Heroine	46 (28.0)	26 (15.9)
Methadone (Mephenon)/Buprenorphine (Suboxone)	23 (14.0)	13 (7.9)
Other opioids (e.g. tramadol; fentanyl)	11 (6.7)	7 (4.3)
Benzodiazepines	25 (15.2)	15 (9.1)
Ketamine	10 (6.1)	6 (3.7)
Amphetamines (Speed)	25 (15.2)	7 (4.3)
Methamphetamines	12 (7.3)	6 (3.7)
Ecstasy/MDMA	32 (19.5)	8 (4.9)
LSD/ Mescaline/ Hallucinogenic mushrooms	19 (11.6)	5 (3.0)
Volatile substances (e.g. butane; propane)	5 (3.0)	4 (2.4)
Synthetic cathinones	4 (2.4)	3 (1.8)
Other NPS	5 (3.0)	4 (2.4)
Other illicit substance	5 (3.0)	3 (1.8)

Note: Missing values are excluded of the analyses, hence n<164 for certain variables.

3.3. RISK BEHAVIOUR AMONG PRISONERS

The national study conducted in 2020, assessing drug use before and during imprisonment, further assessed risk behaviour among prisoners (n=164): history of overdose, sharing of equipment, injecting as a consumption mode.

- 23.2% of the participants reported having experienced an overdose outside prison: 10.4% of respondents (n=17) reported an overdose in relation to opioids, and 12.8% (n=21) reported an overdose in relation to other substances.
- The figures for overdose in prison are lower: four respondents reported having suffered an overdose in prison in relation to opioids and six in relation to other substances (2.4% and 3.7%, respectively).
- With regard to injecting drug use, 37 respondents indicated that they had injected in the past, corresponding to 22.5% of the total number of respondents. As for sharing equipment (at least once in lifetime), 24 respondents (14.6%) indicated they had ever shared needles or syringes, 35 (21.3%) straws or equipment for sniffing, 34 (20.7%) spoons or cooking equipment, 54 (32.9%) a pipe or other smoking equipment, and 20 (12.2%) said they had shared a tattoo equipment. These risk behaviours concern both the time before and during imprisonment (Foulon, 2020).

3.4. KNOWLEDGE OF HARM REDUCTION PROGRAMMES IN PRISON

The 2020 national study on drug use in prison in Luxembourg further assessed knowledge of and participation in two existing harm reduction programmes specific to the CPL: the Safe Tattoo programme and the syringe exchange programme.

- Of the 164 respondents, 34.1% said they were aware of the Safe Tattoo programme and 9.1% reported having participated in it.
- Similarly, 29.9% said they were aware of the needle exchange programme, but only 6.7% benefited from it.
- This reveals that both harm reduction programmes are insufficiently known and participation rates may be improved (Foulon, 2020).

A Safe Tattoo programme was implemented in March 2017 at the CPL. This programme is a peer-to-peer project providing the opportunity to make a tattoo under appropriate hygienic conditions, thus preventing the transmission of communicable diseases such as HIV, hepatitis B and C. The Safe Tattoo project is subject to strict regulations. Interested inmates may apply to become official tattoo artists and undergo specific training. The training on hygiene also includes information on various communicable diseases. After passing the exam, the tattooist can make tattoos with professional equipment made available by the prison in the premises provided for this purpose and under the supervision of a member of the prison nursing staff. In 2018, eleven tattoo artists were trained and 70 persons got a tattoo. In 2020, another eleven tattoo artists were trained and 28 persons had a tattoo done. To get these tattoos, 37 appointments were made in 2020.

3.5 OTHER DATA ON DRUG USE PRIOR TO IMPRISONMENT

Everyone entering the closed prison setting (CPL) meets a staff member of the psychiatric nursery service (SMPP) during the first 24 hours, and completes an entry form. This form assesses socio-demographic data of the person entering prison, as well as the medical history and illicit drug use, particularly alcohol, heroin, cocaine, and cannabis. It should be stressed that alcohol use is only indicated if the person reports daily use and health consequences related to its use. The self-reported information collected via the entry form can be complemented by the results of an urinary test. The self-reported data collected through the questionnaire are nevertheless valuable and enable a better insight into drug consumption of the prison population prior to imprisonment.

- Out of the 683 entry forms completed over the year 2020, 164 people (24%) indicated misuse of alcohol, 128 (18%) declared using heroin, 227 (33%) using cocaine and 256 (37.4%) indicated a regular and abusive use of cannabis (SMPP, 2020)[9] .

Please note that during the months March to May, significantly less people entered prison compared to the rest of the year 2020, which is due to the COVID-19 pandemic and the restrictive measures implemented at the closed prison site (Centre Pénitentiaire de Luxembourg; CPL).

3.6 DRUG HEALTH RESPONSES IN PRISON

The implementation of health responses builds upon a health check of newly admitted prisoners both at the closed and semi-open national prison setting, which guides further interventions. A voluntary HIV screening test is proposed during the medical counselling session, whereas a simultaneous screening of other infectious diseases such as syphilis and hepatitis A, B and C is also proposed. In order to meet specific needs in terms of infectious diseases in prison settings, the CHL nursery established a specialised communicable disease counselling offer, which has been operational since 2011.

- In 2020, 592 serological tests were conducted among prisoners (2019: 734) to detect the presence of HIV, HCV, HBV or syphilis infections.
- 17.2% of the prisoners who tested positive for either of these infections were not aware of their status before entering prison (17.7% in 2019).
- By the end of 2020, 101 inmates were positive (2019: 104) for at least one communicable disease (HIV=12; HCV=82; HBV=13; syphilis=15).
- To prevent further contamination, vaccination against hepatitis B and A is recommended to those who present a negative serology. In 2020, 81 prisoners were vaccinated for hepatitis A (2019: approx. 80), 145 for hepatitis A + B (2019: approx. 185), and 230 for hepatitis B (2019: approx. 320) (Comité de surveillance du SIDA, 2021 – in preparation).

A structured syringes distribution programme (NSP) has officially been launched in 2005 by the CHL nursery in the framework of the global drug care programme in prison. In order to enrol, inmates have to make a written request. After an introductory counselling session, the inmate receives a kit containing two syringes that may subsequently be exchanged at the CHL nursery. Inmates in possession of a syringe kit are exempted from sanctions for detention of injection paraphernalia. The programme is under medical secrecy and operational while efforts are foreseen to increase the coverage and impact of the programme. Ascorbic acid, filters, stainless steel spoons, sterile physiological water, antiseptic wipes and small plasters are further available at the nurseries in prison. Condoms are also available at different discrete spots of the prison. The distribution of these latter materials is not statistically documented.

9 Information provided by the SMPP (Service de médicine psychiatrique pénitentiaire), based on the data collected through the 2020 entry forms.

- In 2020, 11 kits (19 kits in 2019) were distributed and 590 (900 in 2019) syringes were exchanged.
- The NSP in prison has continued since the outbreak of the COVID-19 pandemic, however, a strong decrease in demand was reported particularly during the lockdown in March/April 2020 (Comité de surveillance du SIDA, 2021, *in preparation*).

An opioid substitution programme (OST) is also available in both the closed and semi-open prison setting. Details on the OST programme in prison are presented in chapter 5 "Responses to health consequences".

4.

DRUG-RELATED HARMS AND HEALTH CONSEQUENCES

4. DRUG-RELATED HARMS AND HEALTH CONSEQUENCES

4.1. DRUG-RELATED INFECTIOUS DISEASES – HIV

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).

> RELIS self-reported data: the HIV prevalence rates based on self-declared data suggest a relatively stable situation since the 2016 peak linked to the HIV outbreak among HRDU and IDUs. While recent self-declared HIV figures are clearly inferior to 2016, 2020 data suggest a slight increase compared to 2019 – in 2020, the self-reported HIV rate was 7.3% among HRDUs (2019: 6.7%; 2016: 9.8%) and 10.5% among IDUs (2019: 8.7%; 2016: 13.2%) (see Fig. 27 and 28) (RELIS, 2020).

> Serology-based data: 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). The lowest proportion of IDUs transmission mode ever recorded was observed in 2011 (two cases). 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). Following the implementation of supplementary response measures in the framework of the national drug strategy and action plan, the national HIV and hepatitis action plan, and the recommendations formulated by the EMCDDA and the ECDC[10] after their country visit in 2018, the number of new HIV cases among IDUs has been decreasing again: it declined from 21 new cases in 2016 to ten in 2017, five in 2018, and three in 2019. In 2020, there were four new cases (Devaux et al., 2021) (see Fig. 29).

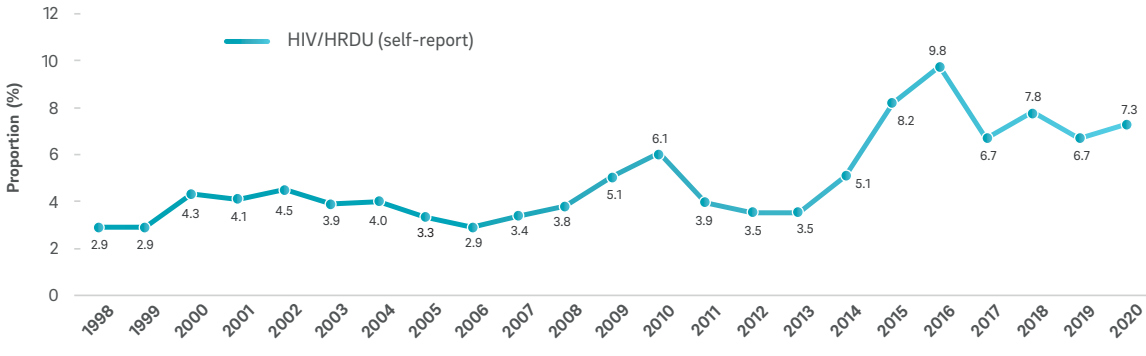


FIGURE 27.

Self-reported data on HIV infection rate among high-risk drug users (HRDUs) (1998-2020) (valid %) (RELIS, 2020)

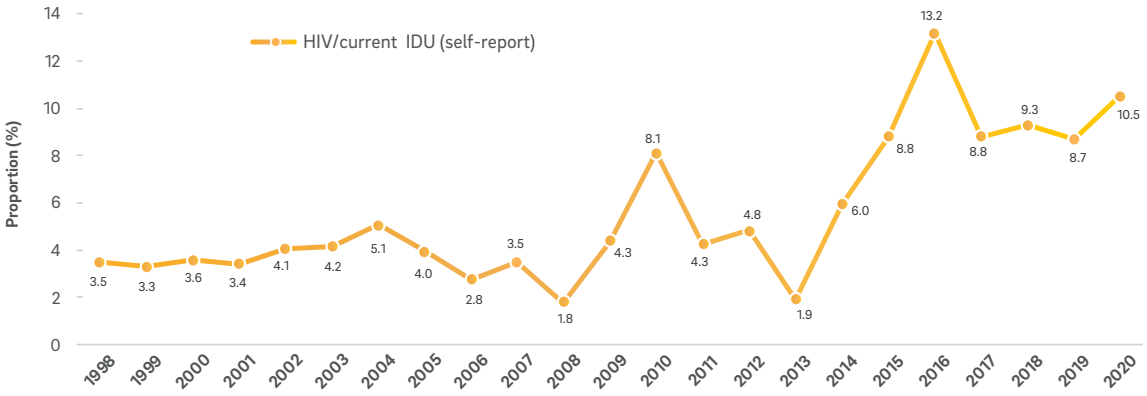


FIGURE 28

Self-reported data on HIV infection rate among current injecting drug users (IDUs) (1998-2020) (valid %) (RELIS, 2020)

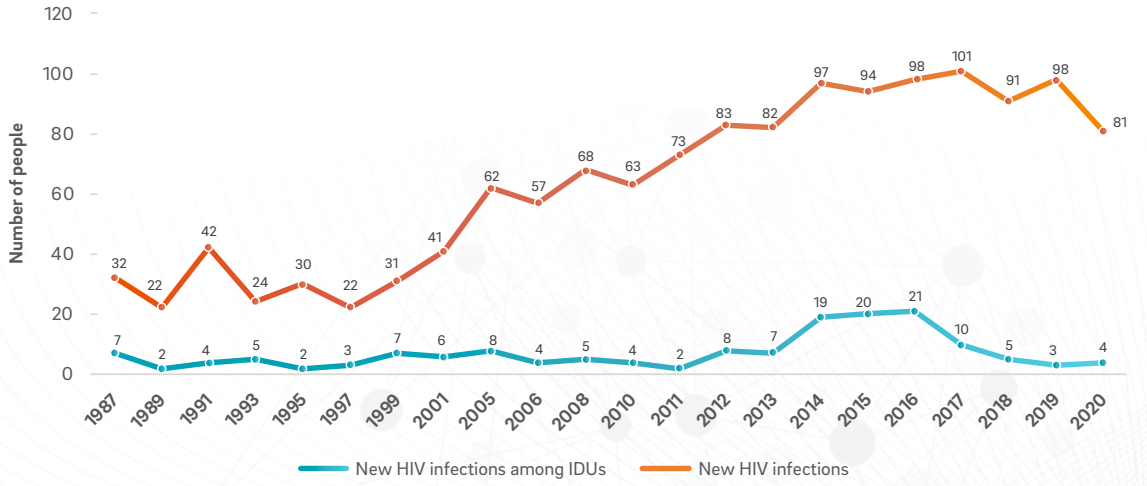


FIGURE 29.

Evolution of new HIV infections in the general population and among injecting drug users (IDUs) (1987-2020) according to the *Service National des Maladies Infectieuses* (Comité de surveillance du SIDA, 2021, *in preparation*)

> For the year 2020, a notable decrease has been observed in the number of HIV-infected patients among the general population: 81 infections compared to 98 in 2019. Despite this general decrease, HIV infections among IDUs remained stable compared to 2018 and 2019. In this regard, a report published in 2021 suggests that HRDUs perceived the availability of drug-related services as sufficient during the COVID-19 sanitary crisis. This relates in particular to the availability of «safer-use» and «safer-sex» equipment, medications, medical care and substitution treatments, whereas considered insufficient overall in Europe (Berndt et al., 2021).

> With regard to the 90-90-90 objectives from the ECDC, Luxembourg is among the best performing European countries (status 2018), having diagnosed 85% of those infected with HIV. Moreover, 89.2% of those diagnosed received antiretroviral therapy, whilst 88.8% of people in treatment had an undetectable viral load.

> Despite the decline in new infections, Luxembourg is continuing its prevention efforts by raising awareness of screening tests. To date, there are several ways to get tested for HIV: by a routine blood test in hospital or

laboratory of course, but also by a rapid diagnostic test. Since July 2019, an additional tool complements the existing screening options: the HIV self-diagnosis test, on sale in pharmacies and, since 23 November, in various stores across the country.

> New initiatives have emerged during the COVID-19 sanitary crisis in 2020. Following the temporary interruption of DIMPS mobile screening service (mainly addressing sex workers) during the COVID-19 lockdown (March/ April 2020), a new HIV self-test offer - available by mail - was established by the HIV Berodung, which has now become an additional prevention offer (Comité de surveillance du SIDA, 2021, *in preparation*). Moreover, the DropIn centre of the Red Cross (Croix Rouge) implemented an additional offer for drug users named "PASS BY" in September 2021. The "PASS BY" counter provides materials for safer sex and safer use, including (an exchange of) syringes and needles. A low-threshold nursery is available in case of medical urgencies.

4.2. DRUG-RELATED INFECTIOUS DISEASES – HCV

The HCV prevalence rate among HRDUs and particularly among IDUs has been at a high level since 2004:

> RELIS self-reported data: the HCV prevalence rates among HRDU and IDUs have been fairly stable at high levels since 2004. Between 2017 and 2018, the proportion of HRDUs infected by HCV decreased significantly from 54.7% to 39.8%, while it remained relatively stable in 2020 (36%) (41.6% in 2019). Among the IDUs in particular, an identical downward trend has been observed – 67.2% in 2017, 61.3% in 2018, 59.6% in 2019, 60.5% in 2020 (see Fig. 30).

> Serology-based data: in the framework of the national HCV-UD research project[11], serological data have been collected from a random sample of HRDUs since 2017, recruited at drug treatment centres (outpatient), harm reduction services, needle/syringe programmes, and in prison. Latest data from this study suggest an increase in the number of ever IDUs infected with HCV. Whereas in 2019, among 45 persons tested, 32 (71.1%) presented an HCV positive test result, in 2020, among nine persons tested, four presented a positive test result (44.4%) (see Fig. 30). These numbers are to be considered with caution as the impact of the sanitary crisis is clearly reflected in the substantial decrease in HCV screenings and the sample size compared to previous years.

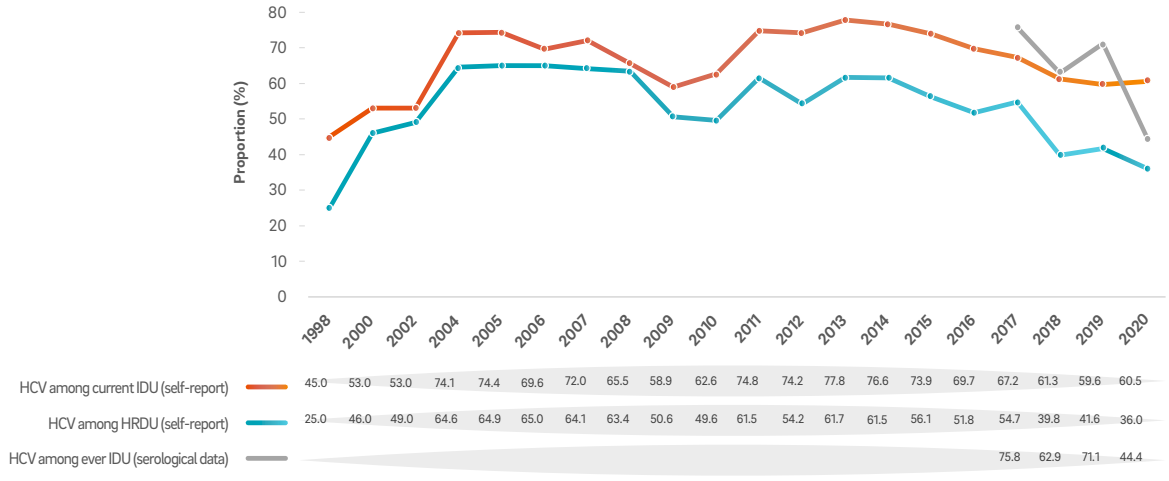


FIGURE 30.

Evolution of HCV rates among HRDUs and IDUs – self-reported and serological data (valid %) (1998-2020)
(Devaux et al., 2021; RELIS, 2020)

11 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 five 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.

Recent efforts have been made towards improvement in testing and linkage to care through harm reduction programmes in prisons and low-threshold agencies:

- Needle (and paraphernalia) exchange programmes (contributing to a decrease in direct contamination), availability of Opioid Substitution Treatment (OST) and Heroin Assisted Treatment (HAT) (contributing to the stabilisation of users and to a decrease of high-risk behaviours);
- Implementation of a new low-threshold medical service and OST programme at the Abrigado centre at the beginning of the COVID-19 pandemic jointly by the Ministry of Health and several specialised NGOs: marginalised drug users experiencing increased social exclusion have currently the possibility towards easy access substitution treatment, regardless of their social security status.
- Increasing testing and facilitating access to treatment for clients of drug treatment centres (often persons experiencing social exclusion and marginalisation);
- Besides these efforts, responses directed towards a greater stabilisation of the users (such as further developing Housing First offers) are in preparation (Ministère de la Santé, 2020).

4.3. DRUG-RELATED MORTALITY

Anonymised data are available on all direct overdose cases due to illicit drug use documented by contextual and forensic evidence. For each suspected overdose death case, post mortem toxicological evidence is provided by the department of legal medicine from the national health laboratory (Laboratoire national de santé; LNS) confirming or disconfirming the suspected overdose case. Hence, acute drug-related mortality refers to death cases attributed directly to the use of an illicit drug, possibly in combination with other types of substances and/or prescribed medicines. These death cases include overdoses and acute intoxications, voluntary, accidental or of undetermined intent.

- Most recent data available to the PFLDT indicate that drug-related mortality have shown a discontinuous decrease over the last years. Whereas in 2000, 26 acute drug deaths were registered, eight cases were reported in 2017, four in 2018, eight in 2019 and six in 2020. In 2020, a drug-induced mortality rate of approximately 1.38 per 100,000 inhabitants aged 15 to 64 years has been observed (LU 2019 population size 15-64y: 435,140) (Fig. 31).[12] Indirect drug-related deaths have known broad variations in number during the past years.

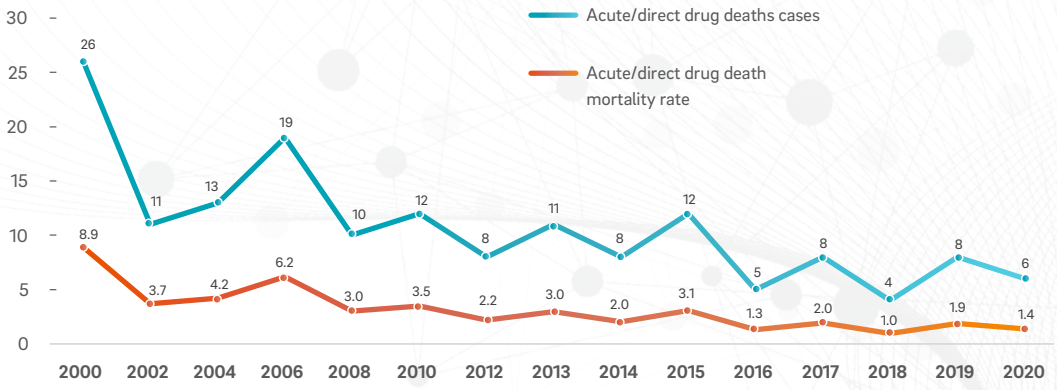


FIGURE 31.

Evolution of direct drug-related death cases and mortality rates per 100 000 inhabitants (RELIS, 2020)

12 As for Luxembourg, the figures for overdoses and infectious diseases are statistically speaking low, positive and negative changes in trends need to be interpreted with caution, as trends are not absolute. To allow more valid trend interpretations, regrouping of data or other methodological standardisation methods may be considered (e.g. regrouping the data by 3 years).

CHARACTERISTICS OF OVERDOSE VICTIMS

> Regarding the gender distribution of overdose victims, male death cases have generally outweighed female death cases. In 2020, four victims were male and two were female.

> The mean age at the moment of death has generally shown a discontinued increasing tendency over the past 27 years. In 2018, the overall mean age of victims was 41.3 years (min: 37y; max: 45y). Following the sharp decrease observed in 2019, mainly due to the fact that one case under the age of 20 was reported and absolute figures were low, statistically speaking (34.6 years-old: min: 16y; max: 50y), the average age of overdose victims was 41.5 years in 2020 (see Fig. 32). Male overdose victims had 38 years and female overdose victims had 48 years on average. Nevertheless, the number of victims aged less than 20 years remains relatively unchanged during the referred observation period.

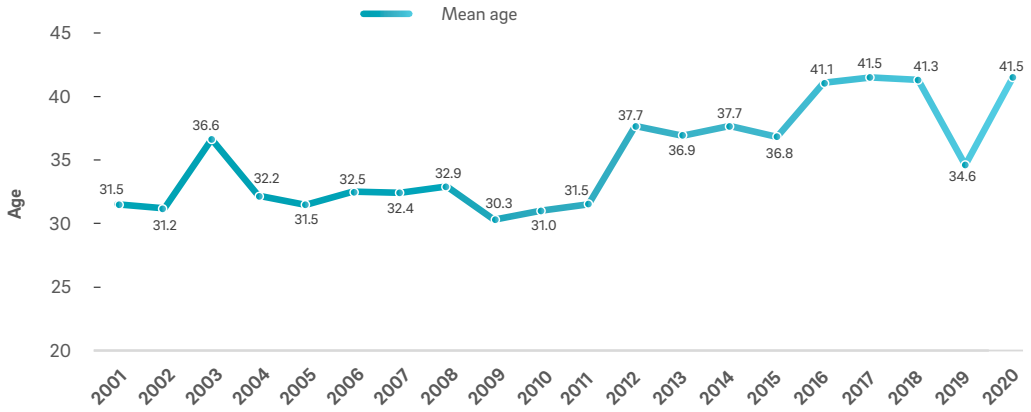


FIGURE 32.

Mean age (in years) of acute drug overdose victims 2001-2020 (RELIS, 2020)

> Also worth mentioning is that a majority of acute drug death victims are known by law enforcement agencies for their 'career' of drug possession and/or use (83% in 2020 and 50%in 2019). As far as the place of death is concerned, since 2004 approximately 50-65% of overdoses occurred at the victims' homes, followed by public places (such as parking areas, trains or public bathrooms). In 2020, 33% of the death cases occurred at home, 17% in the street and 50% in public places. Regarding the nationality of the fatal overdose victims, 66% were natives in 2020.

> Forensic data by the department of National Toxicology Laboratory on Health[13] show that the most frequently involved substance in overdose cases are opioids (heroin and methadone), followed by cocaine. It is relevant to emphasise that, since 2000, methadone presence in blood samples of overdose victims has been increasing. Regarding 2020 data, heroin was detected in three cases, methadone and cocaine were each present in four cases, and cannabis in three cases. Tranquilizers and/or other sedatives were additionally involved in five cases, other opioids (tramadol) in two cases, and antidepressants and/or insomnia medications in two cases. All cases showed polydrug use at the time of the overdose.

> The decrease of direct drug-related death cases is most likely and primarily due to the regionalisation and extension of the OST programme, as well as to the development of low-threshold facilities, in particular the opening 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 low-threshold centre including two supervised drug consumption rooms, run by the 'Fondation Jugend- an Drogenhëllef' (JDH), is operational since September 2019 in the southern city of Esch-sur-Alzette. Finally, yet importantly, a HAT programme has been launched in Luxembourg in March 2017.

13 Département de Toxicologie du Laboratoire national de santé (LNS).

ADDITIONAL INFORMATION ON OPIOID-RELATED DEATHS

Over the past 28 years, the forensic toxicology department of the national health laboratory has investigated the direct death cases related to opioids other than heroin, such as opioid prescription drugs (including OST). Results are presented in Figure 33 below:

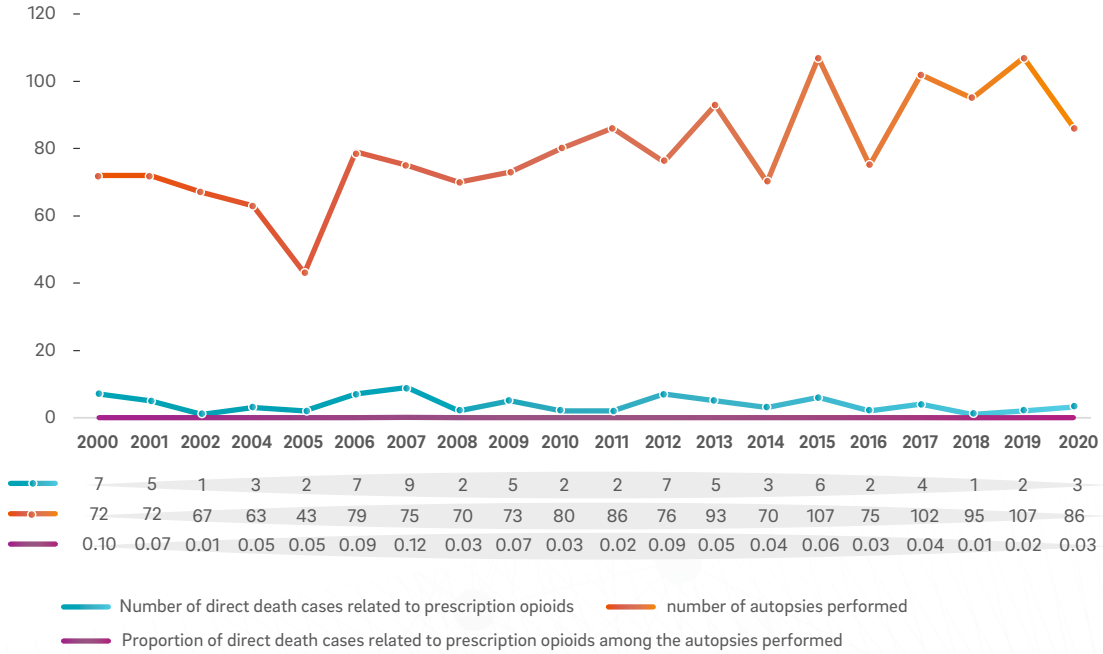


FIGURE 33.

Evolution of direct death cases related to prescription opioids 2000-2020 (LNS, 2020)

These data need to be interpreted in the light of the number of autopsies performed, as these have increased steadily over the years ranging from 72 in 2000, 80 in 2010, 107 in 2019 and 86 in 2020 (a decrease resulting from the COVID-19 sanitary crisis). Overall, direct death cases related to prescription opioids have remained fairly stable over the years, especially when considering developments of three or four years for more valid trend analysis. A decrease may even have occurred as the number of autopsies increased considerably over the years.

4.4. DRUG-RELATED ACUTE EMERGENCIES AND OVERDOSE INCIDENTS

Drug-related acute emergencies data are reported by the main low-threshold centres, both including two supervised drug consumption rooms (inhalation and injection) in Luxembourg City (Abrigado) and in the South of the country (Contact Esch).

> In 2020, 22 acute emergencies occurred at the Abrigado centre: ten with loss of consciousness classified as non-fatal overdose incidents and twelve without loss of consciousness.

> At the Contact Esch, twelve acute emergencies occurred in 2020. Eleven classified as 'moderate' and one severe non-fatal overdose incident.


STOP

5.

RESPONSES TO HEALTH CONSEQUENCES

5. PREVENTION AND RESPONSES TO HEALTH CONSEQUENCES

5.1. A FOCUS ON PREVENTION OF DRUG USE AND ADDICTIVE BEHAVIOUR

Prevention is a key pillar of the 2020-2024 National Drug Strategy and Action Plan encompassing a wide range of complementary approaches, areas and actors (Ministère de la Santé, 2021). Preventive interventions of drug use and addictive behaviours generally aim 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* prevention strategies target entire populations, *selective* prevention strategies target vulnerable groups that may be at greater risk of developing substance use problems, and *indicated* prevention strategies focus on individuals at-risk for developing substance abuse dependency. Selective actions for young people and their peers include prevention measures such as health education and promotion in school settings addressing attitudes and risk perceptions of drug use. The goal of these prevention measures is to increase awareness and critical views among adolescents, particularly regarding cannabis use, while also promoting harm reduction among recreational and high-risk drug users.

NEW DEVELOPMENTS, INTERVENTIONS AND EVENTS

The main actor in the field of drugs and addiction prevention is the 'CNAPA', the National Centre for Addiction Prevention, which refers to the centre formerly called 'CePT' (Centre de Prévention des Toxicomanies). The Centre was established in 1995 with the mission of addiction prevention and health promotion by developing and promoting ideas and strategies for a healthy and positive lifestyle.

The mission of CNAPA consists of:

- the development of a national concept for systematic and structured prevention activities. This goal is to be achieved in close collaboration and exchange with competent national and international institutions;
- the coordination of the work of various specialised institutions aiming to develop proposals for the establishment of new institutions;
- the development of education and continuous training (materials) for interlocutors and multipliers among adolescents, parents, teachers, but also among psycho-socio-educational staff, and others;
- the provision of information to the public and awareness raising by means of conferences, seminars, films, public events, etc.;
- the development of didactic material and its provision to the public;
- the provision of information to the public regarding existing treatment and support offers and to facilitate access to these offers.
- the implementation of epidemiological studies to enable adequate prevention work;
- the ongoing evaluation of the implemented interventions to adapt to trends and developments.

The CNAPA intervenes in a wide range of settings such as schools, extra-curricular institutions such as youth centres, or municipalities. Professional training but also teaching materials and projects in the field of addiction prevention targeting different national stakeholders are developed to best fit the needs of the latter, including children and young people. An example of a preventive intervention specifically addressing the prevention of cannabis use as developed by the CNAPA is the "Cannabiskoffer 2.0", which consists of didactic materials and interactive methods to be used in schools and non-formal education institutions among students above the age of 14.

Since 2019, a series of developments occurred:

- The "Rebound Norden" project - a continuation of a school-based project initiated in 2016 between the CNAPA, the FINDER Academy for Prevention and Experience Based Learning (Berlin) and the German association MUDRA (Alternative Youth- and Drughelp Nürnberg e.V.) focusing on alternative youth and drug care.
- The app called "Suchtberodung Online" was introduced in Luxembourg as a collaborative effort between the CNAPA, the Impuls treatment centre for adolescents and young adults, and the JDH Foundation. The "Suchtberodung Online" is a website/app offering online advice and counselling on addiction and related topics available 24/7. Released in December 2019, the app is considered to be an extension of existing services (i.e. outpatient and stationary treatment centres) providing addiction help. The app is free and allows users to have a professional online consultation, to ask questions regarding addictions and to track their drug use with a daily journal. Moreover, the app offers habit tracking, as well as information on different addictive substances.
- The first conference of the 'Suchtverband' ("National federation of agencies and services specialised in prevention, treatment and harm reduction in the field of addictions") took place. The conference was organised in collaboration with the Ministry of Health addressing the topic of "Prevention in community-based settings: approaches, examples from projects and perspectives" at the University of Luxembourg. Multiple workshops regarding community-based strategies for prevention work were held, notably the CNAPA workshop named "Addiction prevention in municipalities". Speakers from the University of Luxembourg, the CNAPA, the Ministry of Health, the Ministry of Education, the Suchtverband and local municipalities contributed.

As 2020 was a particular year due to the outbreak of the COVID-19 pandemic, most prevention activities were cancelled or postponed to 2021/2022. In 2020, CNAPA activities mainly focused on the development, revision and/or translation of print and online materials, while relevant prevention activities were provided online (online trainings, interactive workshops and support groups). More people contacted the telephone counselling service from the CNAPA during the year 2020 compared to the previous year, while people mostly requested information regarding alcohol and cannabis use.

The following CNAPA activities were particularly relevant in 2020:

- Continuous trainings focused on addiction prevention in general (through life and social competences), as well as information on psychoactive substances. Due to the pandemic, most face-to-face trainings were cancelled or rescheduled, few of them were still held online.
- Interactive workshops dedicated to young people mainly referring to the prevention of addictions in general ("Sprongkraaft am Alldag") or to different substances such as alcohol ("Alkohol - Wéi am grénge Beräich bleiwen"), tobacco and cannabis. Following several requests, the CNAPA advised and supported groups of students from different high schools on addiction prevention projects.
- Producing leaflets and publications such as "Bleif och doheem am grénge Beräich" containing useful advice and information related to behaviour in the face of the pandemic.
- Producing information materials on the consumption of substances (alcohol, cannabis, tobacco, benzodiazepines) during the health crisis with several FAQs for each substance. These texts, translated into three languages (FR, EN and DE) were published on www.covid19.lu, the official site of the government and the Ministry of Health, which lists useful information on health in times of health crisis.
- Following the "Wellbeing @ home" campaign from the "Ministry of National Education, Children and Youth", the CNAPA published an article "Emgang mat Alkohol nom Enn vun den Ausgangsbeschränkungen" (available at www.schouldoheem.lu).
- On the occasion of "World Drug Day - International Day against Drug Abuse and Illicit Trafficking" on June 26, 2020, the CNAPA sent a "Newsletter" under the theme "Better knowledge for better care" with the presentation of its new leaflets on alcohol, tobacco, cannabis, sleeping pills and tranquilizers.

- Helpful advices like "how to deal with stress in the current situation", "stay active and healthy" etc. were published during the health crisis. The CNAPA team prepared and recorded podcasts that can be found on the webpage of www.ara.lu: http://podcast.ara.lu/blog/2020/03/05/droge-rubrik-tubak/
- The CNAPA launched the "Suchtprävention in der Jugendarbeit" project. This project consists of an inventory and analysis of addiction prevention needs. In 2020, the CNAPA conducted interviews with the staff of youth centres that were continued in 2021, evaluated and supplemented by a report including recommendations.
- The CNAPA designed a practical guide "Alkohol, Tabak, Cannabis - mit Jugendlichen darüber sprechen" targeting parents, in order to help better understand, accompany and support their children.
- The "Fro No" telephone service which provides Information and orientation for the general public remained active in 2020.
- For the educational sector and other multipliers the CNAPA held continuous trainings such as: "Fit 4 Life - Suchtprävention einmal anders", "Cannabiskoffer 2.0 - Methoden für die präventive Praxis", "Tom & Lisa - Präventionsworkshop zum Thema Alkohol für Schulklassen", "Kleines Drogen ABC - Fragen und Antworten", " Motivierende Gesprächsführung bei konsumierenden Jugendlichen ". Actions related to other projects such as "Localize it! ", "Suchtberodung online" and "You move" continued although they were adapted to the COVID-19 sanitary restrictions[14].

UNIVERSAL, SELECTIVE AND INDICATED PREVENTION

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 on 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 CNAPA assists schools with the implementation of school-based prevention activities. Moreover, the CNAPA 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. Despite the sanitary crisis, the prevention sessions conducted by the police took place in an online format. 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 provided to teachers, staff working in the psycho-socio-educational field, but also directly to adolescents. In 2020, due to the COVID-19 related restrictions, the typical trainings, information sessions and seminars were held online or replaced by videos produced in cooperation with the National Youth Service (Service National de la Jeunesse - SNJ).

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 for instance and on avoiding social exclusion. Activities are also carried out in recreational settings and with high-risk groups, such as at-risk families, users of multiple drugs 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 laws, 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

14 For further information, please consult: http://cept.lu/fr/activites/manege/

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 have been proven to be more effective. Young drug users may be referred by police forces or the public prosecutor to this programme. An increase of offences among young adults regarding possession and/or use of cannabis has been observed in recent years. The "Choice" and "Choice18+" programmes' actions were highly impacted by the COVID-19 sanitary crisis. During the highly restrictive periods, face-to-face interventions (e.g. counselling sessions) had to be replaced by phone, video calls or text messaging.

The NGO 4Motion asbl runs a project called 'Pipapo', which operates an information desk at recreational and festive settings. Their information desk generally provides a wide range of leaflets on sexuality, risks of drug use with regard to various substances, drug use prevention and harm reduction as well as earplugs, condoms, alcohol breath testing and water to visitors and partygoers. The staff of 'Pipapo' is available at their information desk to discuss about concerns or to answer questions from visitors. 'Pipapo' also offers DrUg CheCKing (DUCK) to allow for testing of substances, including NPS, used in these settings. In 2020, 'Pipapo' prevention activities were highly affected due to the cancellation of cultural, nightlife and festive events, in accordance with the COVID-19 related restrictions. As a response, the concept "Party safe" was developed and implemented on the national level, mainly in Luxembourg City, through streetwork interventions. The interventions were conducted by trained staff and aimed at providing key guidelines to "party safe", including in the COVID-19 context. Finally, in 2020 Pipapo launched the project 'Pipapoter", which is a consultation service, offered alongside the drug checking service (DUCK). For further information on this specific harm reduction service, please see section 5.2 below.

With regard to **indicated prevention**, early detection is a priority for young people showing high-risk behaviour in school settings and at home. Further interventions are provided by psychiatric care services.

5.2. TREATMENT AND HARM REDUCTION RESPONSES AVAILABLE IN LUXEMBOURG

Specialised drug treatment offers in Luxembourg include inpatient and outpatient responses. These responses rely on government support and are provided through specialised harm reduction and 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 and state-financed 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.

In 2020, the impact of the COVID-19 sanitary crisis on the functioning of national drug treatment and harm reduction institutions was substantial. In the beginning of the pandemic, a major impact on existing offers has been observed. Services progressively found alternative ways to function and offered their services in alternative formats - remote consultations progressing gradually towards physical consultations, while keeping the social distancing measures. While continuity of treatment was guaranteed, some services reduced the number of new treatment entrants (such as residential treatment service not admitting any new patient during the confinement period), and/or their capacities such as limiting the number of places at the supervised drug consumption rooms or provided materials (e.g. syringes and needles) through windows.

HARM REDUCTION AND LOW-THRESHOLD SERVICES

- Currently two agencies offer harm reduction services for HRDU in the Centre of the country (CNDS: Abrigado and JDH: K28). The JDH Foundation further offers harm reduction services in the South (Contact Esch) and in the North (Contact Nord) of the country. Services include offers such as day and night shelter and supervised injection and inhalation facilities (in the Centre and in the South).
    - In July 2005, the first supervised drug injection room opened in Luxembourg City. It was integrated into the low-threshold centre Abrigado providing day care, night shelter (42 beds) and low-threshold services to drug users. In 2015, a second supervised drug consumption room specifically for the purpose of inhalation got operational at the Abrigado centre.

- Supervised drug consumption rooms, one for injection and one for inhalation, integrated in the harm reduction facility (Contact Esch) in the southern city of the country Esch-sur-Alzette, opened in September 2019 and are run by the JDH Foundation.
- The supervised injection facility at Abrigado provides eight places, and the blow/inhalation room six places, whereas the supervised injection and blow facilities at Contact Esch provide four places each.
- Another low-threshold offer run by the JDH Foundation was implemented in the northern city of Ettelbruck in 2014 (Contact Nord).

The Pipapo project from the NGO 4Motion asbl acts on both prevention and harm reduction through the DrUg CheCKing (DUCK) project – targeting drug users in recreational/festive settings. The DUCK project allows for testing of substances, including NPS, used in these settings. While users have the opportunity to have a sample of their product analysed anonymously, and express the presumed characteristics and desired effects of the product, the DUCK project provides an opportunity to increase awareness on the risks that are associated with drug use and guides users towards a more responsible use. The samples received by the DUCK service are deposited at the National Health Laboratory (LNS) for analysis and destroyed afterwards. The expected characteristics of the sample, as expressed by its user(s), are hence compared with the results of the spectrochemical analyses carried out by the LNS.

Pipapo has recently expanded its services to online counselling and information provision on drugs. Moreover, following a budgetary increase allocated by the Ministry of Health in 2020, drug users can now also make an appointment on various weekdays at the main location/building of the Pipapo to get their products tested or to discuss the results of the laboratory analysis in person with one of the trained psychologists of the Pipapo team ('Pipapoter').

In 2020, the DUCK team collected 83 samples for the purposes of drug checking. The laboratory results corresponded usually to the substance expected by the consumer.

The majority of the samples were supposed to contain MDMA. Results confirmed the presence of MDMA and showed very high purities in the samples analysed. Eight samples supposed to contain cocaine were tested. Laboratory results revealed that two of the samples contained pure cocaine. Moreover, five ketamine samples were analysed. As in 2019, in 2020 ten samples of suspected cannabis (herbal, resin and wax) were analysed. Among those, two were suspected CBD samples. The results of the suspected cannabis samples revealed extremely high purity (THC > 75%) in the wax samples. The increasing demand for cannabis testing may be explained by the presence of synthetic cannabinoids and the increase in the supply of CBD cannabis products in the Grand Duchy of Luxembourg. Finally, one sample of suspected NPS (spice) was analysed and confirmed by the laboratory analysis (Paulos et al., *in preparation*).

OUTPATIENT TREATMENT SERVICES

- The JDH Foundation, created in 1986, is the main treatment provider at the national level. It provides various psychosocial, therapeutic and medical care services for consumers of illicit drugs, including HRDUs, drug-dependent parents and their children, mothers and pregnant women providing intervention to strengthen the parenting skills, and their relatives. The JDH Foundation runs three regional antennas that are situated in Luxembourg City (Centre), in Esch-sur-Alzette (South), and in Ettelbruck (North).
- 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 users searching for treatment 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 Quai 57 also offers counselling in other regions of Luxembourg, such as Rédange, Grevenmacher, Mersch, Diekirch, Marnach and Esch-sur-Alzette.
- The treatment service Impuls (Solidarité Jeunes asbl) provides, in the framework of youth protection, psychosocial and therapeutic assistance to young people (generally below the age of 21y) and their families when they are confronted with the consumption of legal and illegal psychoactive substances. The treatment service Impuls has their main seat in Luxembourg City, while there are also antennas in the North (Ettelbruck) and South of the country (Esch-sur-ALzette).

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);
- Hôpitaux Robert Schuman (sites Zithaklinik and Hôpital Kirchberg) – HRS (Luxembourg City - Centre).

INPATIENT TREATMENT SERVICES

- The national residential therapeutic centre at 'Syrdall Schlass' called 'Centre Thérapeutique de Manternach' (CTM) managed by the Centre Hospitalier Neuro-Psychiatrique (CHNP) is situated in the East of Luxembourg. The CTM 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. Patients are allowed to follow substitution treatment in-house. Mothers and/or fathers accompanied by their children may also follow a therapeutic programme at the CTM. The goal of the therapeutic community is to help each individual to allow a life without drugs and to reintegrate into society and work. The therapeutic programme of the CTM 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 consult first the Alternativ Berodungsstell orientation office in Luxembourg City. All patients have to go through detoxification before entering the therapy.
- A specialised residential rehabilitation centre for youngsters (Centre Thérapeutique Putscheid - CHNP) was opened in the beginning of 2007 in the North of the country under the management of CHNP. The rehabilitation centre can accommodate up to twelve people of both genders, between 12 and 17 years old, who suffer from a psychiatric disorder or a social behaviour disorder, sometimes accompanied by the abuse of psychoactive substances or a post-traumatic dysfunction. While adolescents usually stay between 4 and 6 months, the centre provides therapeutic counselling to adolescents and facilitates family, school/professional and/or social reintegration.

THERAPEUTIC COUNSELLING TREATMENT SERVICES IN PRISON

The TOX-Programme was reorganised and named 'SuchtHëllef' in the beginning of 2020. The programme SuchtHëllef implemented in the closed prison (Centre Pénitentiaire de Luxembourg - CPL) and in the semi-open prison site in Givenich (CPG) has established several psycho-educational activities. It is a therapeutic counselling programme of individualised rehabilitation, not time-limited, allowing clients to participate in activities that are in line with their previously established therapeutic plan. The programme allows the clients to combine drug treatment counselling and other necessary steps towards socio-professional reintegration.

POST-THERAPY / AFTER-CARE

- Post-therapeutic centre in Schoenfels: 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 substance addiction. It provides post-therapy, time-limited housing and daytime occupation notably to ex-drug or ex-alcohol dependant adults who intend to lead a life without drugs/alcohol. A total number of fifteen people who have successfully completed inpatient drug treatment and therapy can be accommodated for a limited time in the residential centre. The post-therapy centre has two main aims:
  - To offer professional and social reintegration;
  - To avoid accommodation in emergency care facilities after the end of inpatient therapy and provide follow-up in a protected setting.

  During the year 2020, 59 adults (2019: 61) contacted the Post-Therapy Centre either to come and work as a volunteer or under a so-called "integration contract" within the framework of the REVIS[15] or to submit their application for admission. During 2020, 22 different people were accommodated at the Post-Therapy Centre (25 in 2019). At the end of 2020, 25 people were on the admission list and will be able to join the Post-Therapy Centre in 2021 (21 in 2019).
- "Post-Cure Service" (CHNP): the aim of this offer is to provide after-care for people having completed their therapy at the CTM (Therapeutic Centre Manternach) or abroad. The project team provides support to clients living in community housing facilities or in apartments located in several areas of the country (Rosport, Moersdorf, Junglinster, Grevenmacher, Wasserbillig, Berg, Echternach, Ettelbruck, Warken and Ingeldorf). The objectives of the "post-cure service" are: a) abstinence and continuous development of skills towards abstinence from illicit drug use; b) professional/social reintegration and stabilisation through the acquisition and consolidation of personal skills; c) physical and mental stability; d) solidarity across the community/life group; e) support in the education of clients' children; f) provision of professional support to clients beyond their after-care stay. In 2020, the activities of the post-cure service from the CHNP were affected by the COVID-19 sanitary crisis, particularly a reduction in face-to-face interviews and in the socio-educational activities, which could not be developed as initially planned. Nonetheless, in 2020 36 housing places were attributed (31 adults and 5 children) and 6 clients were followed and received support while living in their own houses.
- Supervised housing services "Les Niches": the supervised housing service from JDH offers a communitarian house for senior drug users. This housing facility allows responding to the specific needs of this group. The number of senior drug users in need of housing services is increasing. In 2020, the "Niches" were also impacted by the COVID-19 restrictions, as significantly less visits took place at the housing facilities, slightly less drug users could be offered housing, and appointments by clients in the office were often replaced by phone calls. In 2020, 57 housings were offered (2019: 59), while the number of adults accommodated in the housings remained stable (2020 and 2019: 67). In total, eighteen children were accommodated in 2020 (2019: 19). Data from the "Niches" reveals an increasing proportion of aging drug users: while in 2019 11.94% of the clients benefitting from the housing offer were above the age of 55, this proportion increased towards 16.42% in 2020. The proportion of clients above the age of 40 reached 83.59% in 2020 (82.07% in 2019) (Rapport annuel JDH, 2021).

As shown in Figure 34, 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.

15 Revenu d'inclusion sociale (REVIS) - income scheme for social inclusion

FIGURE 34.

Map of the geographical coverage of specialised drug agencies in the Grand Duchy of Luxembourg (status 2021)

Note: the prison sites in Luxembourg (CPL and CPG) offer both therapeutic counseling services (Suchthëllef) and OST treatment to the inmates who use(d) drugs.

5.3. PROVISION OF DRUG TREATMENT

In 2020, 1,453 clients were reported by specialised outpatient drug treatment units, representing 179 clients less than the previous year (1,632 in 2019). These include the treatment centres of the JDH Foundation (n=435; 2019: 479), Impuls (n=449; 2019: 589), Quai 57 (n=473; 2019: 450), and the Alternativ Berodungsstell (n=96; 2019: 114). This decrease in provision of treatment is explained by the impact of the COVID-19 related restrictive measures on the functioning of the specialised outpatient drug treatment offers. The number of clients in other national in- and outpatient therapy therapeutic agencies is depicted in Table 2, whereas Figure 33 shows how the total number of patients has been evolving over the past decade in both in- and outpatient services.

TABLE 2.

Overview of harm reduction services and drug treatment provision in the Grand Duchy of Luxembourg

				Definition	Number of clients/client-contacts in 2020	Total clients in treatment in 2020
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 pharmacologically assisted	1,453	1,453
	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	146,271[16]	
	Outpatient OST	General Practitioners (GPs) and JDH		Opioid Substitution Treatment (OST) is made available to opioid users and can be accessed through the general practitioners (GPs) or the JDH substitution treatment programme	1,034	1,034
	Mobile outreach unit	MOPUD/X-Change Project		Mobile van promoting "safer use" and "safer sex" with the ultimate goal of harm reduction and reducing risks of infectious diseases transmission	15[17]	
Inpatient	Hospital-based drug treatment	CHL, CHEM, CHdN, Zithaklinik	Public/ Government	The patient is staying overnight, pharmacologically assisted or not (including detoxification)	173[18]	173
	Therapeutic communities	Syrdall Schlass - Centre Thérapeutique de Manternach (CTM)		The patient is staying overnight, is provided a psychological, long-term treatment, may be pharmacologically assisted or not (no detoxification). Detoxification is required before entering the community	55	55
	Prisons	Programme SuchtHëllef (CPL, CPG)		The patient incarcerated in prison can submit a request to enter a specialised drug treatment (SuchtHëllef programme). He/she may be pharmaceutically assisted (no detoxification)	334[19]	334
		OST treatment in prison (CPL, CPG)		The patient incarcerated in prison can continue a previously prescribed OST treatment or begin OST in prison	142	142
						3,191[20]

16 Number of client-contacts (the number of individual-clients is not registered).

17 Number of client-contacts (the number of individual-clients is not registered): The mobile outreach unit (MOPUD/X-Change) counted 15 contacts in 2020 (219 clients in 2019). The MOPUD/X-Change remained suspended in Luxembourg City due to major construction works and it was operational although with limited activity in Esch-sur-Alzette.

18 Please note that the total number of clients for hospital-based residential drug treatment is an accurate estimate based on exact figures provided by three hospitals (CHL n=63; Zitha n=70; CHEM n=28) and an estimate for one hospital CHdN (n=12) (with a smaller capacity unit for patients with drug addiction).

19 Please note that for prisons, there are two sites: one closed and one semi-open prison. Data from 2020 aggregate both sites - the number of clients per site is not available. Both sites (CPL and CPG) offer individual drug counselling therapy, whereas the closed site (CPL) additionally offers group therapy. It is unknown whether clients benefit from both individual and group therapy at once, therefore double counting is not excluded.

20 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 or more in case he/she used several harm reduction and/or treatment services during a given reporting year.

The number of clients visiting specialised treatment services has been showing a slight discontinuous increase since 2002. A modest continuous increase has also been observed since 2015. In 2020, as a result of the COVID-19 sanitary crisis, the number of registered clients decreased significantly compared to previous years (2020: 3,190; 2019: 3,450) (multiple counts included - see footnote) (see Fig. 35).

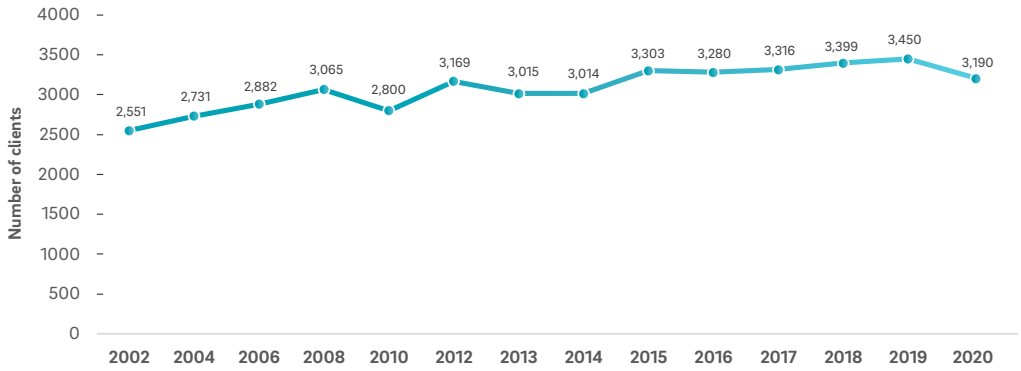


FIGURE 35.

Trend of total number of clients at in- and outpatient treatment 2002-2020 (RELIS, 2020)

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 in case he/she used several services during a given reporting year.

5.4. PATTERNS OF USE AND CHARACTERISTICS OF TREATMENT DEMANDERS

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

> The primary drugs involved in treatment demand in Luxembourg have consistently been opioids. In 2020, slightly less than half of all treatment demands were related to opioid use (48.8%), which is comparable to the proportion of treatment demands in the year before (2019: 46.2%). In 2018, slightly more than half of all treatment demanders 51.6% were treated for primary opioids' misuse (see Fig. 36).

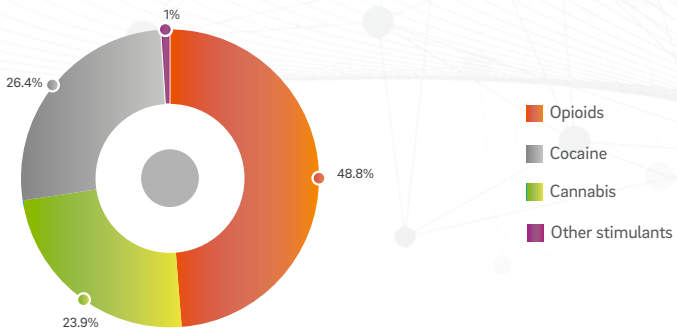


FIGURE 36.

Proportion of treatment demands by primary drug in 2020 (valid %) (RELIS, 2020)

- In total, 26.4% of all clients enter treatment for problems related to their cocaine use, revealing cocaine as the second most reported drug in treatment demands. This proportion has increased with regard to 2019 (19.7%), confirming the increasing trend observed in previous years (see Fig. 36). Cocaine remains highly prevalent on the illicit drug market.
- While in 2019, cannabis was the second most reported drug in treatment demands by specialised treatment facilities (33.6%), the proportion of treatment demands related to primary cannabis use decreased to 23.9% in 2020 (2018: 25.8%; 2017: 16.2%). Despite the particular 2020 decrease (certainly reflecting the impact of COVID-19 sanitary crisis), a general increase in the number of cannabis treatment demanders has been reported by the specialised treatment institutions in recent years. The increase in cannabis treatment demanders may be due to higher THC levels identified in cannabis products (see also Chapter 6), that have been related to a higher risk of mental health and social problems. However, this finding has to be interpreted with caution as the proportion of data coming from the treatment service targeting adolescents/young adults (Impuls) increased significantly in 2019 compared to previous years. As this institution predominantly receives treatment demands related to cannabis use, the proportions of treatment demanders by primary drug use have consequently been affected, which biases the comparability with previous years.
- Other illicit drugs represent only a small proportion of treatment demands (approximately 1% of all treatment demands concern other stimulant drugs such as amphetamines or ecstasy) (see Fig. 36, 37).

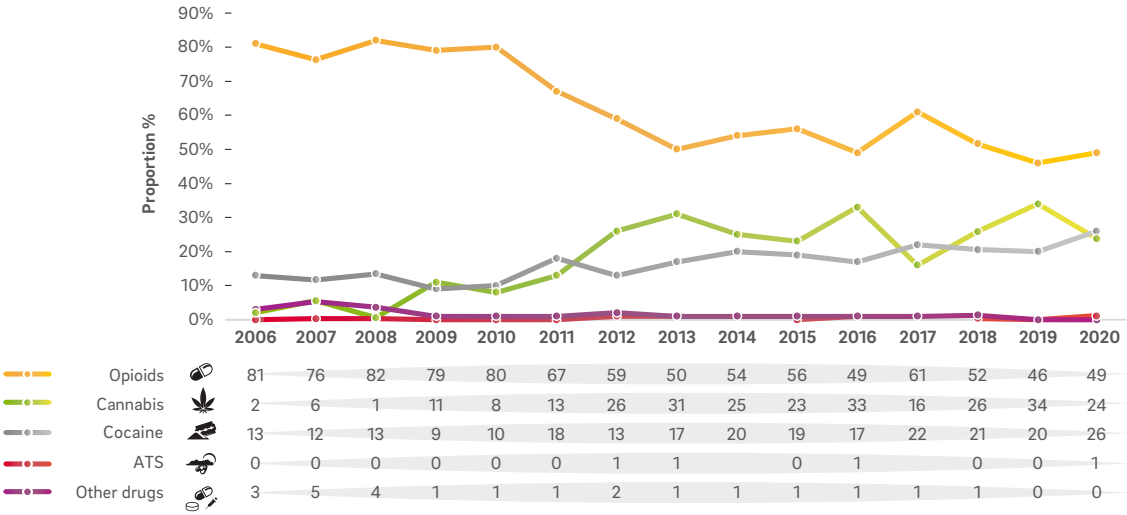
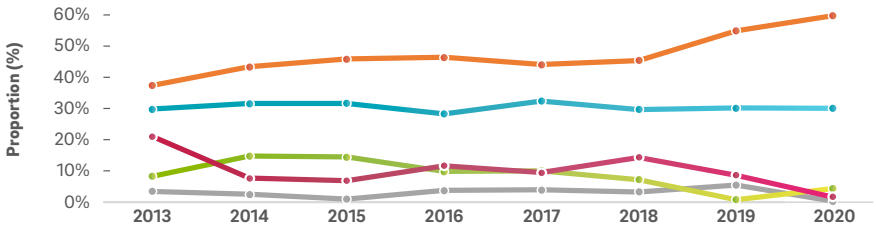


FIGURE 37.

Trends in the proportion of clients entering treatment by primary drug used 2006-2020 (valid %) (RELIS, 2020)

- When looking at the primary route of administration of the main drug, the proportion of drug injecting clients in treatment has remained largely stable (about 30%) over the past years.
- The proportion of clients using smoking/inhaling as main route of administration has nevertheless increased from around 37.4% in 2013 to 59.7% in 2020 (54.9% in 2019). However, this increase also has to be seen in the light of the evolution of the characteristics of the sample (i.e. more cannabis users).
- Other routes of administration are less prominent - sniffing seems to have become less popular over the past years, and there is no consistent trend for swallowing or other routes of administration (see Fig. 38).



Route of administration

	2013	2014	2015	2016	2017	2018	2019	2020
injection	29.8	31.6	31.7	28.3	32.4	29.7	30.2	30.3
inhalation/smoke	37.4	43.4	45.9	46.4	44.1	45.4	54.9	59.7
swallowing	3.5	2.5	1.0	3.8	3.9	3.3	5.5	0.5
sniffing	8.3	14.8	14.5	9.8	10.1	7.2	0.8	7.0
other	21.1	7.7	6.9	11.7	9.5	14.4	8.7	2.5

FIGURE 38.

Route of administration by primary drug for all drug treatment entrants (valid %) (RELIS, 2013-2020)

- The proportion of clients entering treatment *for the first time* has been increasing over the past years (2016: 24.5%; 2018: 26.8%; 2019: 35.2%). In 2020, a decrease was nonetheless observed (28.9%). This decrease should be interpreted with caution as it certainly reflects the impact of COVID-19 sanitary crisis both on treatment demand and on the capacity of the treatment institutions to accept new clients.
- The number of *new* treatment demanders for cannabis reached a peak in 2019 with almost two-third of all new treatment demands being related to the primary use of cannabis (62.7%). However, it should be noted that the relative share of data provided by the Impuls treatment service targeting adolescents/young adults mainly for cannabis related problems increased significantly in 2019 compared to previous years. In 2020, persons showing primary cannabis use represented 50% of the new treatment demanders.
- In 2020, 29.3% of the *new* treatment demanders were primary opioid users (2019: 25.4%) and 19.0% were primary cocaine users (2019: 11.9%). These data suggest an increasing trend, notably in terms of primary cocaine use.
- The mean age of all treatment demanders has generally been increasing during the last 20 years (2020: 36.8y; 2019: 34.6y; 1997: 28y).
- In 2020, 78.6% of all the treatment entrants were male and 20.9% female (0.5% not stated/missing) (2019: 77.2% male; 22.8% female). A comparable proportion has been observed among *new* treatment entrants - 81.0% male and 19% female (2019: 76.9% male and 23.1% female).

5.5. OPIOID SUBSTITUTION TREATMENT

Opioid Substitution Treatment (OST) is a 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 Foundation since 1989. Moreover, substitution treatment licenses can be granted to medical doctors, office-based general practitioners and specialised agencies if meeting training requirements and if respecting the obligation to notify substitution treatment demands to the Directorate of Health. The JDH Foundation mainly provides oral methadone whereas freelance state accredited medical doctors may also provide other substitution medications, specified by law. OST medications registered in Luxembourg include methadone, buprenorphine, morphine-based medications and diacetylmorphine (heroin - only in the framework of the national HAT programme). 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: 1,248 patients; 2008: 1,050 patients - multiple counts excluded). Since 2013, a fair stabilisation in the number of OST patients has been recorded (2020: 1,034; 2016: 1,085; 2011: 1,128) (Fig. 39).

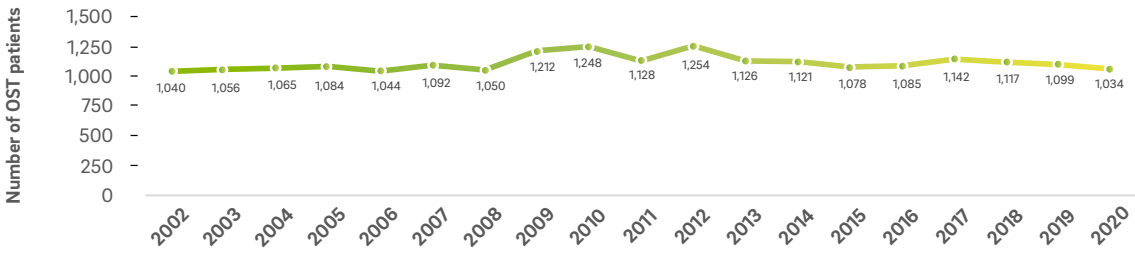


FIGURE 39.

Evolution of the number of opioid substitution treatment (OST) patients 2002-2020 (RELIS, 2020)

Note: for comparability reasons, the number of OST patients reported refer exclusively to the CNS register. OST patients in prison are excluded (N=142)

The majority of OST patients are men (approximately 75%) and their average age has been increasing over recent years – (44y in 2020; 43y in 2019; 42y in 2017; 38y in 2014). The patients aged 45y or more represent approximatively 46% of the OST patients (48% in 2019). The majority of OST patients receive prescribed methadone (+/- 90% in 2019), followed by buprenorphine and naloxone.

An Heroin Assisted Treatment (HAT) pilot project, coordinated by the Directorate of Health, is run by the JDH Foundation since 2017. The prescription of diacetylmorphine is not to be seen as a low-threshold measure, but as a supplementary form of substitution treatment. In 2019, a proportion of about 76.8% of all clients in the JDH OST programme were prescribed methadone/Mephenon®, and 23.2% were prescribed diacethymorphine (DIAM), whereas in 2020, 76.6% were prescribed methadone/Mephenon® and 22.7% DIAM (HAT).

LOW THRESHOLD OST

In a rapid response to the COVID-19 crisis, the Ministry of Health developed in close collaboration with the Abrigado centre, the JDH foundation and the association Médecins du Monde a medical permanence providing low-threshold OST. Since the beginning of the COVID-19 sanitary restrictions, this service provides three weekly medical counselling slots in order to provide medical care and referral. Additionally, there is nursery open seven days a week. In order to guarantee OST, Abrigado has been working in close collaboration with a local pharmacy providing essential medicines. Marginalised drug users experiencing a situation of increased social exclusion have now access to low-threshold substitution treatment independently of their social security status, while take-home dosages of OST are delivered in particular cases. Some clients come on a daily basis to get their medication; others can take away up to three days' worth of medication at a time. Every client is registered in the service system and each client's treatment journey is documented and adapted as necessary. The drivers behind the rapid implementation of this first low-threshold OST programme were in particular the risk of an emerging shortage of drugs on the illicit market (linked to the closure of national borders), the risk of lower access to OST associated with tighter controls, and the increased risk of overdoses.

OST PROVISION IN PRISON

With regard to the provision of OST in prison, official figures show that in 2020, 25.9% of the inmates received OST, representing a total number of 142 persons (see Table 3) (2019: 146 persons; 22.7%). In 2020, the average dose of distributed methadone was 29 mg per day (2019: 27 mg per day) for methadone, and 10 mg per day for distributed Suboxone® (2019: 9.8 mg per day). The average duration of treatment episodes in 2020 was 111 days for the methadone and 245 days for the Suboxone® (2019: 128 days for methadone and 254 days for Suboxone®).

TABLE 3.

Number of prisoners receiving opioid substitution treatment (2014-2020)

Year	2014	2015	2016	2017	2018	2019	2020
Methadone	181	165	172	204	159	136	134
Suboxone®	66	46	33	26	10	10	8
Total (persons)	247	211	205	230	169	146	142

Source: SMPP, 2020

5.6 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 in drug counselling centres, drop-in centres for sex workers and at-risk populations, low-threshold centres such as the supervised drug consumption rooms, 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 2017, and a second supervised drug consumption room opened in the most populated city in the South of the country in September 2019. An additional counter providing materials for safer sex and safer use, including (an exchange of) syringes and needles, is available at the DropIn centre of the Red Cross since September 2021. Low-threshold nursery services are provided in case of medical urgencies.

- The number of person-contacts indexed by low-threshold facilities has steadily increased since the opening of the first drug consumption rooms in 2005 (2005: 47,739). In 2020, 146,271 contacts in various national harm reduction services were registered; a lower number compared to the previous year (2019: 164,420) and presumably a result of the COVID-19 related restrictions (see Fig. 40).
- In 2020, all JDH low-threshold services reported approximately 15,837 client contacts including K28 in Luxembourg City, Contact Nord, and the Contact Esch, which also includes supervised drug consumption facilities. This decrease in linked to the COVID-19 sanitary crisis and represents a 34% decrease in comparison with 2019. The highest decrease was observed in Contact Nord (50% less client-contacts than in 2019).
- The low-threshold harm reduction centre Abrigado reported approximately 110,302 client contacts in 2020, including CAARUD (62,528), the medical service (5,074) and client contacts at the supervised drug consumption facilities (42,700) (N.B. these figures do not exclude multiple counting).
- The DropIn service from the Red Cross counted a total number of 4,321 individual clients and 15,811 client contacts (2019: 10,149).
- The mobile outreach unit is one of the main responses to better reach drug users outside the opening hours of the different services participating in the needle exchange programme. The MOPUD/X-Change is a cooperation project between the JDH, the Abrigado centre and the HIV-Berodung of the Red Cross primarily targeting drug users (safer-use and harm-reduction). MOPUD/X-Change has been on hold due to the construction work on

the site where it used to be stationed. As of June 2019, a "streetwork" has been set up to analyse the scene and find a new place in Luxembourg City. Numerous construction sites, especially in the station area and the lack of adequate alternatives, have conducted MOPUD/X-Change to stop functioning temporarily in the city centre. Since July 2020, MOPUD/X-change is stationed at different locations in the southern city of Esch-sur-Alzette. The COVID-19 crisis impacted significantly the outreach mobile unit, hence in 2020 a significant decrease in the number of client-contacts was observed (2020: 15; 2019: 214) (N.B. these figures do not exclude multiple counting). Currently a working group is reflecting on the further national decentralisation of the MOPUD/X-Change to extend this offer further to the north of the country.

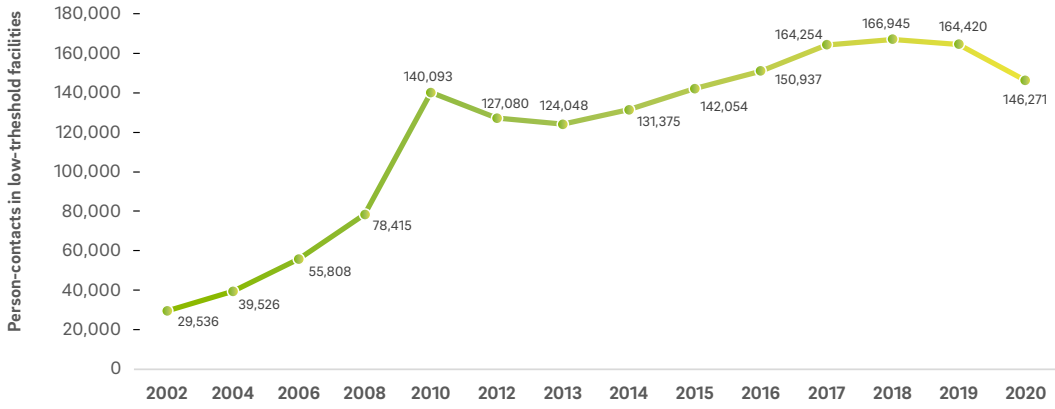


FIGURE 40.

Evolution of the overall number of person-contacts with low-threshold facilities (2002-2020)

SYRINGE AND NEEDLE EXCHANGE PROGRAMME

- The number of clean syringes distributed in the framework of the national needle exchange 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.
- In 2020, most likely due to the COVID-19 sanitary crisis, the number of distributed syringes by specialised agencies with needle syringe programmes (NSP) decreased to 394,690 (2019: 430,078) (see Fig. 41).
- The vast majority of injectors (2020: 99.9%; 2019: 99.1%) procure their syringes in specialised agencies (predominantly the Abrigado centre) followed by pharmacies and decreasingly via automatic dispensers.
- Return rates of used syringes had been slightly decreasing in recent years (2018: 89.4%; 2017: 92%; 2016: 94%), which may be partly related to the higher prevalence and frequency of cocaine injection among national HRDUs. The fact that cocaine users experience more cravings and inject significantly more often than heroin users, due to a relatively shorter duration of the drugs' effect, may lead to higher risk behaviours, such as sharing needles rather than returning and exchanging them. From the total number of syringes provided in 2020 by special agencies with NSP (394,690), 333,056 were actually returned. Hence, for every 100 sterile syringes provided, 85 used syringes were recollected (exchange rate of 84.6%).
- To be stressed that syringes not recollected by specialised services may not necessarily be discarded in public spaces as users may dispose these at home or at other disposal or recycling facilities.

FIGURE 41.

National distribution of sterile syringes 1996-2020 including specialised agencies, prisons, vending machines and supervised drug consumption rooms (RELIS, 2020; Comité de surveillance du SIDA, 2021, *in preparation*)

6. DRUG MARKETS AND CRIME

6. DRUG MARKETS AND CRIME

6.1. 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 priorities, activity and efficiency of law enforcement strategies. Availability and supply indicators should be interpreted with caution as they rely on the interplay of 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 quantities of illicit substances seized over the past 2 decades.

CANNABIS

Cannabis is the most frequently used illicit psychoactive substance:

- The prevalence of cannabis use among treatment demanders increased steadily since 2012 reaching its highest peak in 2019 with 33.6% of clients reporting cannabis as their primary drug of use. A decrease in the proportion of treatment demanders with primary cannabis use was observed in 2020 (23.9%), however, arguably due to the impact of the COVID-19 sanitary crisis on data collection procedures.
- A high prevalence of cannabis use is in line with high seizure figures - the number of cannabis seizures has risen from 167 to 1,315 between 1994 and 2019, while the quantity of cannabis seized achieved a peak in 2019 with 371 kg. In 2020, the number of seizures (2020: 1,142 seizures; 2019: 1,315 seizures), and amounts seized (2020: 102 kg; 2019: 371 kg) decreased compared to 2019, but remain high and reflect the relevance of cannabis in the national illicit drug market (Fig. 42, 43).
- Overall, seizures of cannabis-based products represented 67.2% (1,142 out of 1,699 total seizures) of the total number of seizures in Luxembourg in 2020 (2019: 70.1%).
- 678 seizures of herbal cannabis were reported by national law enforcement authorities with a total of 89.7kg (2019: 651 seizures with 98.17 kg). Resin has typically been less represented than herbal cannabis in seizures data. In 2018 and 2019, it represented approximately 30% of the total seizures, while in 2020 it represented 18.8% of the total seizures with 320 seizures and 11.89 kg seized (2019: 545 seizures and 272.56 kg seized).
- Regarding cannabis plants, seven plants were seized in the framework of two seizures in 2020 (2019: 3 seizures of 22 plants).

HEROIN

Although heroin has a long history of use at the national level, the quantities of heroin seized seem to follow an unstable trend:

- According to law enforcement data, heroin seizures in Luxembourg increased between 2012 (2.65 kg) and 2015 (8.04 kg). Since then, the amounts of heroin seized ranged between relatively low values (1 kg and 3 kg), except for 2019 when 6.4 kg were seized. In 2020, a total 1.5 kg of heroin were seized in 149 seizures.
- Most of other opioids seized in 2020 were Mephenon® (1.4 kg) (2019: 580 tablets[21]) and methadone in liquid form (286.2 ml) (2019: 95 ml).
- A significant increase in the number of seizures of *speedballs* (mixture of heroin and cocaine) was reported in 2020 (2020: 65 seizures; 2019: 7 seizures).

21 2019 and 2020 Mephenon seizures were reported in different units.

COCAINE

Cocaine seizures are highly variable since the beginning of the nineties and police data refer to high quantities seized in 2000, 2015, and again in 2018:

- In 2020, the number of cocaine seizures dropped significantly, although the amount seized increased compared to the year before: 11.23 kg in 191 seizures (2019: 1.75 kg in 235 seizures). The amount of cocaine seized remains largely below the peak of 2018 when 216 seizures and a record amount of almost 347 kg were seized by the national law enforcement authorities.
- Despite the high variations in the number and quantity of cocaine seized in the past years, the increased proportion of HRDUs and recreational drug users reporting cocaine use suggest a growing availability of the drug on the market.
- The average purity of cocaine is stable compared to 2019 (see subsection 6.3.).
- Crack (cocaine-base) seizures have not been reported to date by national authorities, although freebasing is reported by field agencies.

OTHER STIMULANTS

Ecstasy-like substances (XTC/MDMA) and amphetamine-type stimulants (ATS) are still popular, particularly in festive settings, and seizure figures suggest a similar trend:

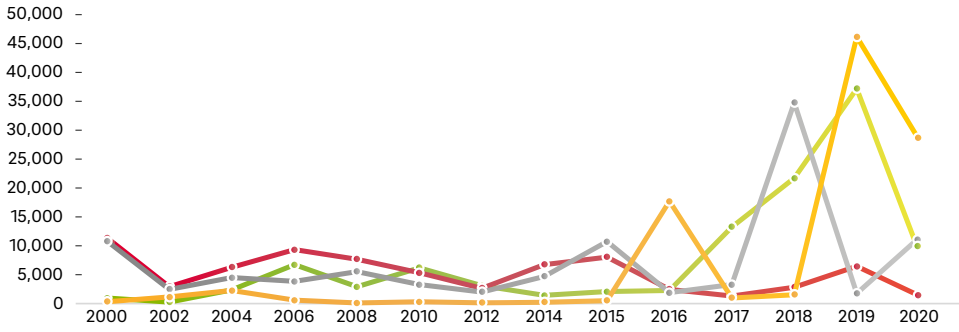
- In 2019, an historical record was registered with 46,059 XTC/MDMA tablets/pills seized within 32 seizures. Despite a decrease in the number and amount of XTC/MDMA seized in 2020, figures are indicative of a high presence of these substances at the national level (2020: 28,969.5 tablets in 17 seizures)
- Marginal amounts of ATS and methamphetamines were seized in 2020 (9.14 gr of ATS and 19.4 gr of methamphetamines), similar to 2019 (56.80 gr of ATS and 2.44 gr of methamphetamines) (see Fig. 42, 43).

HALLOCINOGENIC DRUGS

- Seizures of hallucinogenic drugs are rare, suggesting low presence of these substances on the national market.
- In 2020, 2 blotters of LSD (2019: 68 blotters and 28.3 ml), 2 blotters of 1P-LSD, 1 bottle of PCP and an additional 1.5 gr of PCP were seized.
- More important seizures of psychoactive mushrooms have been reported in recent years, with 105.8 gr of psychoactive mushrooms in 2020 and 1.23 kg in 2019.

OTHER SUBSTANCES

- No reliable evidence exists thus far on the presence of fentanyls or other synthetic opioids on the national street-drug market.
- It is worth noting that the substance khat has been seized in high quantities in 2018 (78.23 kg), while a lower amount was seized in 2019 (8.5 kg). In 2020, a new increase in the amount of khat seized by the national law enforcement agencies was observed (18.2 kg).
- Until 2019, NPS including synthetic cannabinoids have been identified and seized in Luxembourg, although at a modest level. In 2020, 21 NPS seizures of low quantities were reported.

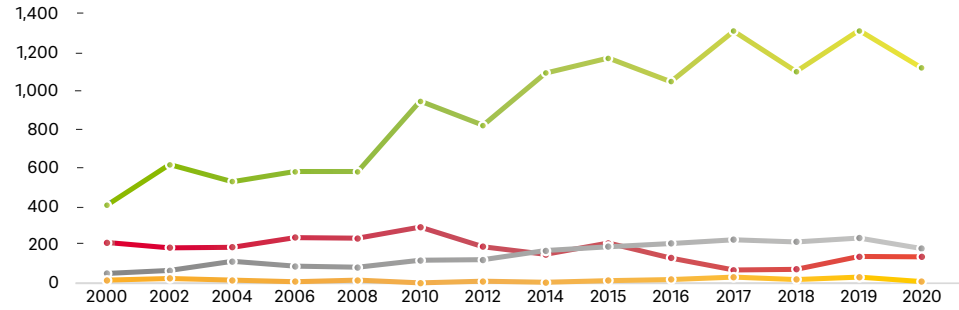


	2000	2002	2004	2006	2008	2010	2012	2014	2015	2016	2017	2018	2019	2020
Cannabis (gr./10)	955	252	2,369	6,700	2,882	6,197	3,084	1,392	2,055	2,248	13,246	21,633	37,099	10,161
Heroin (gr.)	11,358	2,957	6,255	9,298	7,673	5,297	2,648	6,732	8,041	2,492	1,304	2,863	6,401	1,472
Cocaine (gr.)	10,757	2,486	4,481	3,825	5,519	3,257	2,013	4,695	10,703	1,862	3,254	34,683	1,751	11,234
MDMA/XTC (pills)	318	1,139	2,232	555	107	291	137	247	543	17,639	965	1,564	46,059	28,970

FIGURE 42.

Total quantities of main national yearly seizures: cannabis, heroin, cocaine, MDMA/XTC (1996-2020)
(Specialised Drug Department of the Judicial Police, 2020)

Note: For 2018, the quantity of cocaine was reported as gr/10 (total seizure 346.828 kg).



	2000	2002	2004	2006	2008	2010	2012	2014	2015	2016	2017	2018	2019	2020
Cannabis	406	616	528	581	580	947	821	1,093	1,170	1,048	1,311	1,101	1,315	1,142
Heroin	211	185	187	238	234	292	190	150	208	132	69	73	138	149
Cocaine	51	66	113	89	83	119	122	169	190	207	226	215	235	191
MDMA/XTC (pills)	15	26	15	9	16	2	10	4	14	20	32	20	32	17

FIGURE 43.

Total number of main national yearly seizures: cannabis, heroin, cocaine, MDMA/XTC (2000-2020)
(Specialised Drug Department of the Judicial Police, 2020)

6.2. TRENDS IN DRUG PRICES

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: HRDUs and recreational drug users. The figures below report the trends regarding average prices of the drugs mainly used by HRDUs (heroin, cocaine, herbal cannabis and cannabis resin) (Fig. 44) and the drugs mainly used by recreational drug users (Fig. 45).

According to HRDUs:

- In recent years, prices have been moving 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 per gram have been decreasing since 2010 – the price of cocaine dropped the most (from 143.7€/gr in 2010 to 76.0€/gr in 2020), which might be linked to a higher availability on the illicit market.
- According to the most recent data available (2018), the average prices of cannabis products on the illicit domestic market (herbal cannabis and resin) have been relatively stable over the last decade (Fig. 44).

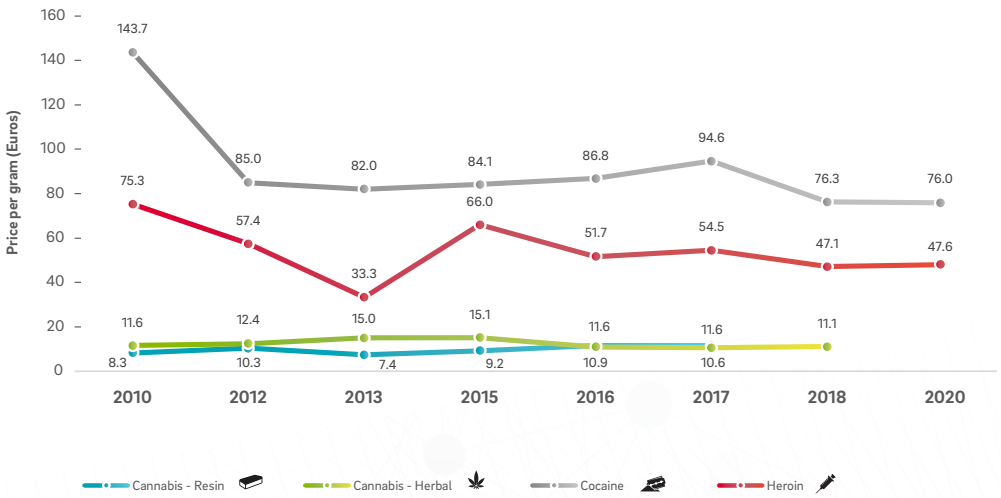


FIGURE 44.

Trends on the price of illicit drugs assessed among HRDUs in Luxembourg (2010-2020)
(Specialised drug department of the judicial police; CNDS Abrigado, 2020).

Note: Only cocaine and heroin prices were updated in 2020. Latest cannabis resin and herbal average prices were reported in 2018.

According to a targeted group of recreational drug users as assessed by the European Web Survey on Drugs (EWSD)[22] implemented in Luxembourg in 2018:

- Cocaine is more expensive (on average 65€/gr) than all other drugs consumed by recreational users.
- Cannabis prices are on average 14.5€/gr for resin and 16.7€/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 increased consumption.
- MDMA/XTC (on average 8.7€/tablet) and ATS (on average 7.3€/tablet) are the cheapest controlled illicit drugs on the national market (Fig. 45).

22 Trends data are not available since the EWSD study is not a routine survey, and only implemented punctually.

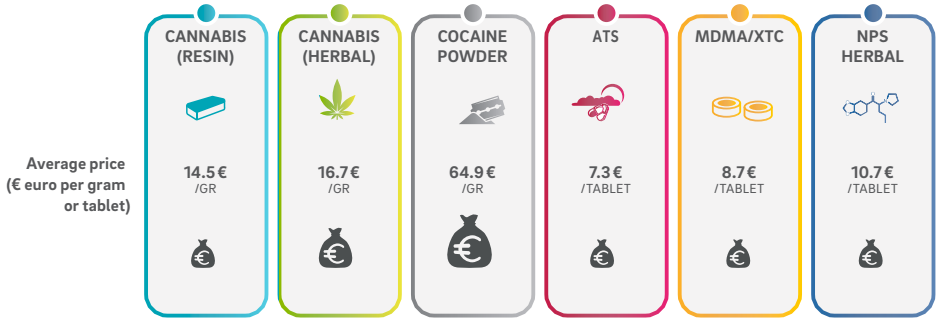


FIGURE 45.

Prices of illicit substances according to respondents of the EWSD, 2018 (Berndt & Seixas, 2019)

> Given the outbreak of the COVID-19 sanitary crisis, drug prices (and purity) were expected to be affected, mainly because of the reduced presence of dealers in streets and the assumed decline in cross-border trade (due to border closures and implementation of restrictive measures). However, findings from the mini-EWSD COVID-19 study and a study on the impact of COVID-19 on HRDUs, complemented by individual statements and oral communications with national experts, suggest that the illicit drug market in the Grand-Duchy of Luxembourg adapted quickly and did not show significant changes in drug prices during and after the lockdown. Only a small proportion of recreational drug users and HRDUs reported a reduced availability and access to common drugs, a decrease of the quality and/or purity of the drugs, and a decrease in the quantity obtained per purchase. Likewise, only few recreational users reported an increase in price, which was confirmed by HRDUs (Berndt, Paulos, & Seixas, 2021; Berndt, Seixas, Teyssier, & Origer, 2021).

6.3. TRENDS IN DRUG PURITY

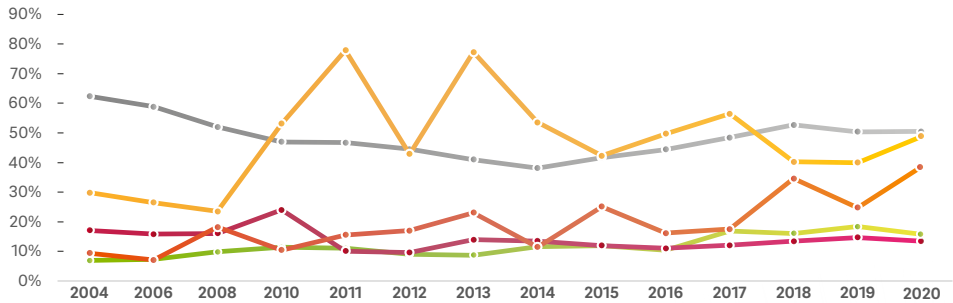
The National Health Laboratory (LNS) provides purity data and toxicological analysis of psychoactive substances. This allows for trend analysis of the purity of drugs at the street level in Luxembourg.

> Cannabis: even though the average purity of THC products has been (discontinuously) increasing at a moderate pace, cannabis with remarkably high THC concentrations has been seized on the national market in recent years. Considering all types of cannabis products, the average THC concentration was 14.5% in 2020 (2019: 18.4%) and the maximum THC concentration found was 72.7% (2019: 60.1%). Regarding herbal cannabis in particular, in 2020, the average concentration of THC was 11.8% (2019: 12.8%) with a maximum concentration of 37.6% (2019: 44.5%). The average concentration of THC in resin cannabis was 23.8% (2019: 27.8%) with maximum concentration of 57.3% in 2020 (2019: 60.1%).

> In recent years, the presence of CBD-dominant cannabis products (THC < 0.3%) on the market has been increasing and does not ease law enforcement practices by the judicial police in case of suspicion of illicit cannabis possession/use. In order to account for the influence of the rising number of seizures of joints with relatively low THC concentrations (≥ 0.3% although <1%), since 2021 the analysis of cannabis purity is additionally conducted based on the criteria THC ≥ 1%. Taken into account this higher THC concentration threshold, the overall average purity of cannabis products reaches 15.8% (12.8% for herbal and 25.8% for resin).

> Heroin: Marked variations in average heroin purity have been observed over the past years. However, since 2015, average purity of heroin seems to be witnessing a certain stability, ranging between 11% and 15%. In 2020, the average purity of heroin remains within this range, with a slight decrease compared to 2019 (2020: 13.4%; 2019: 14.7%). Past years' analysis suggest that the purity of the heroin available in the Luxembourg illicit drug market varies significantly (in 2020: min: 0.13% - max: 37.0%; in 2019: min: 2.0% - max: 55.4%)

- Cocaine: between 2004 and 2014, the purity of cocaine decreased. Since 2014, cocaine purity has been increasing with average values figuring around 50% in recent past years – 2020: 51.0%; 2019: 50.4%; 2018: 52.9%. The variations in purity continue to increase (in 2020: min: 0.12% - max: 100%; in 2019: min: 0.3% - max: 96.7%).
- Other stimulants: The average purity of amphetamine-type stimulants (ATS) at the national level has been discontinuously increasing. After a slight decrease observed between 2018 and 2019 (2018: 34.6%; 2019: 24.8%), in 2020 the average purity of ATS reached its highest value since 2004 (2020: 38.6%; 2004: 9.44%). With regard to MDMA/XTC, marked variations have been observed over the past 15 years. In comparison to 2019, an increase has been observed in the average purity of these substances (2020: 49.7%; 2019: 40.0%) (Fig. 46).



	2004	2006	2008	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cannabis (THC)	6.9	7.4	9.8	11.3	11.0	9.1	8.7	11.6	12.0	10.3	16.9	16.1	18.4	14.5
Cocaine	62.4	58.8	52.0	46.9	46.7	44.5	41.0	38.1	41.6	44.4	48.4	52.7	50.4	51.0
Heroin	17.1	15.8	16.1	24.0	10.1	9.6	13.9	13.5	11.9	11.0	12.0	13.4	14.7	13.4
ATS	9.4	7.1	18.2	10.4	15.6	17.0	23.1	11.4	25.1	16.2	17.5	34.6	24.8	38.6
MDMA/XTC	29.8	26.4	23.5	53.1	77.9	42.9	77.3	53.6	42.3	49.7	56.4	40.2	40.0	49.7

FIGURE 46.

Trends in average purity of illicit drugs at street level (%) (2004-2020) (LNS, 2020)

6.4. DRUG-RELATED CRIME

The number of police records for presumed offences against the modified 1973 drug law have been showing a discontinuous increase throughout the last 20 years (2001: 1,455; 2020: 2,968). The last 10 years have been marked by important variations revealing an unstable trend with regard to the number of referred police records (Table 4). In 2020, 2,968 records were registered (2019: 2,994; 2018: 2,284).

In 2020, the specialised drug unit of the Judicial Police reported 1,726 offenders involved in traffic and/or use of illicit substances, a lower number compared to the previous year (Table 4). The majority of the offenders were involved in personal possession or use (approximately 95%), whereas only a small proportion of the offenders were involved in supply or trafficking of drugs.

TABLE 4.

Number of national law enforcement interventions (2001-2020)

Year	2001	2003	2006	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Drug Law Enforcement Records:																
S.P.J.	216	239	190	110	121	134	165	44	17	9	80	45	21	51	212	64
Police[23]	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	2,647	2,798
Customs[24]	113	95	186	228	328	443	477	232	203	156	113	48	146	167	135	104
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**	**2,994**	**2,968**
Offenders:																
S.P.J.	321	369	248	128	121	131	164	44	17	9	77	44	14	27	127	49
Police	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	1,719	1,619
Customs	182	148	320	350	325	439	407	221	200	147	110	41	130	145	106	58
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**	**1,952**	**1,726**

Source: Specialised drug unit of the Judicial Police, 2020

The number of arrests for drug-related offences show relative variations, but are typically situated between 150 and 200 per year. Some years have been marked by particularly high numbers of arrests for drug-related offences, such as the year 2018 (232). Since 2018, the number of reported arrests has been decreasing, particularly in 2020 (2019: 186; 2020: 119) (Fig. 47). Similar to previous years, cannabis was the most frequent substance involved in drug-related arrests, followed by cocaine and heroin.

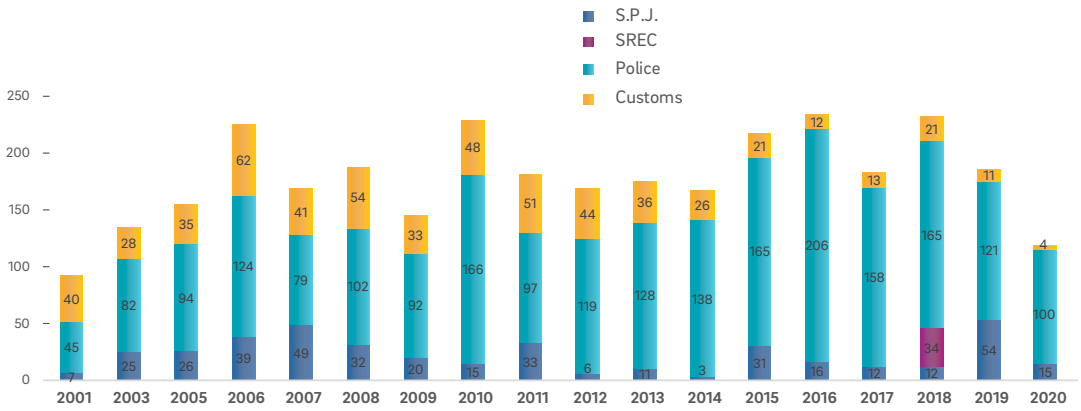


FIGURE 47.

Distribution of the number of drug law offences related arrests per service (2001-2020) (Specialised drug unit of the Judicial Police, 2020)

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

CHARACTERISTICS OF DRUG LAW OFFENDERS

> In 2020, the population of drug law offenders was composed of 86.9% males (2019: 87.8%), a proportion that has generally been varying between 79% and 90% during the past decade.

23 Includes the « Service de Recherche et d'Enquête Criminelle » (Luxembourg ville, Esch-sur-Alzette, Diekirch, Grevenmacher)

24 The original report can be downloaded from : https://gouvernement.lu/fr/publications.html?b=0

- Since 1997, non-natives have been representing the majority of drug law offenders (2020: 53.3%; 2019: 52.6%), natives represent a bit less than half of the drug law offenders (2020: 42.6%; 2019: 46.5%), and those with unknown nationality a minority (2020: 4.1%; 2019: 5.2%).
- In 2020, the percentage of minors (< 18y) among drug law offenders remained stable compared to 2019 (2020: 9.0%; 2019: 8.4%).
- In 2020, 20.2% of offenders were aged 19 years-old or below (2019: 18.9%), 42.4% between the age of 20 and 29 years (2019: 42.7%), 21.4% between 30 and 39 years (2019: 22.5%), 15.9% above the age of 40 years (2019: 11.3%), whereas for 0.1% the age was not reported. These figures are comparable to previous years.

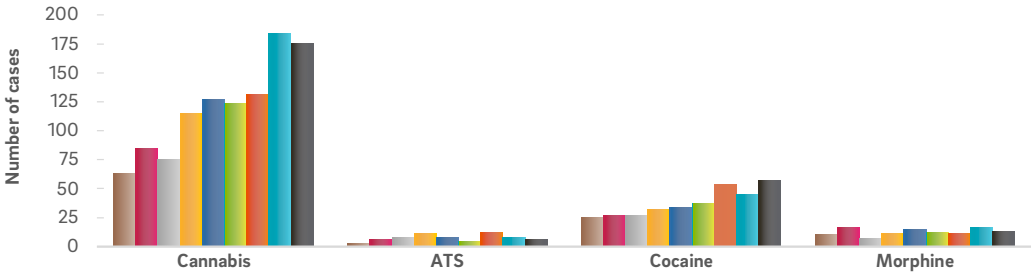
Moreover, the routine data protocol of the national drug monitoring system (RELIS) that records all persons in treatment in a given year includes a series of drug-related offences' items based on self-report. The following results summarise the situation observed in the past years:

- In 2020, 83.3% of drug users indexed by specialised harm reduction or treatment services reported at least one episode of conflict with law enforcement agencies during their lifetime (2019: 75.8%) and 61.8% reported multiple law enforcement contacts (49.8% in 2019).
- 79.8% of the valid RELIS respondents (2019: 72.3%) have shown one or more law enforcement contacts for whom the reason of the law offence is known.
- The proportion of contacts with the law enforcement for other reasons than presumed offences against the drug law (e.g. petty crime such as criminality linked to drug supply or fights) lies between 30% and 40% in recent years (2020: 37.1%; 2019: 33.9%).
- 17.4% of indexed RELIS population already served one single prison sentence during lifetime (2019: 19.9%), whereas the proportion of the RELIS population having served more than one prison sentence reached 42.3% in 2020 (2019: 28.9%), while 40.4% reported to have never been in prison (2019: 51.3%).

6.5. DRUGS AND DRIVING

In Luxembourg driving, operating, or being in control of a motor vehicle while impaired by alcohol or other drugs (including those prescribed by physicians), to a level that renders the driver incapable of operating a motor vehicle safely in traffic, is considered a criminal law offence (Ministère d'Etat, 2011). In collaboration with the national judicial police, the forensic toxicology department of the national health laboratory (Laboratoire National de Santé - LNS) in Luxembourg has been investigating the presence of drugs among (suspicious) driving law offenders in traffic over the past years.

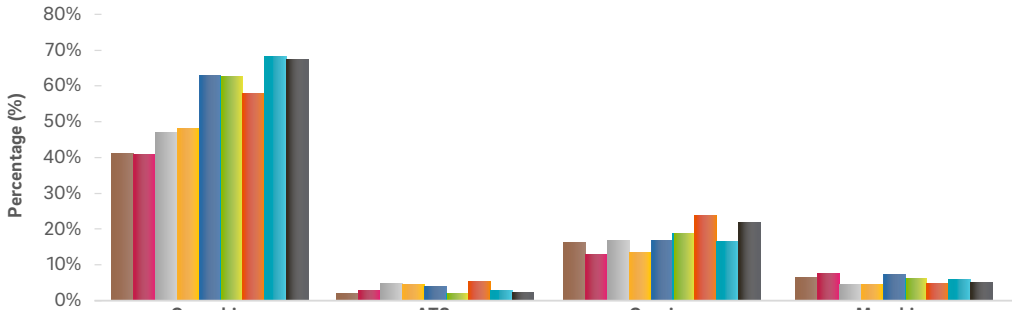
- Results from the years 2012 onwards reveal that among those tests that were performed on delivered samples from the judicial police to detect the presence of drugs when driving, cannabis was mostly detected, followed by cocaine, prescription drugs and amphetamine-type substances (ATS).
- 2020 data reveal that among the 260 examinations performed (2019: 270), 175 (67.3%) tested positive for cannabis (2019: 184; 68.1%), 57 (21.9%) for cocaine (2019: 45; 16.7%), thirteen (5.0%) for morphine (2019: 16; 5.9%), and six (2.3%) for ATS (2019: 8; 3.0%) (Fig. 48, 49).
- With the introduction of a new drug-test to detect controlled drugs or alcohol by saliva samples among drivers of motor vehicles in traffic by mid-2012 ("Drugwipe 5S"), accompanied by a respective law change (Ministère d'Etat, 2015), both the number and the validity of the tests performed increased (therefore comparisons to data from previous years are to be avoided).



	Cannabis	ATS	Cocaine	Morphine
2012	63	3	25	10
2013	85	6	27	16
2014	75	8	27	7
2015	115	11	32	11
2016	127	8	34	15
2017	124	4	37	12
2018	131	12	54	11
2019	184	8	45	16
2020	175	6	57	13

FIGURE 48.

Number of cases tested positive for the presence of controlled drugs when driving 2012-2020 (Service de Toxicologie médico-légale, LNS)



	Cannabis	ATS	Cocaine	Morphine
2012	41.2	2.0	16.3	6.5
2013	40.9	2.9	13.0	7.7
2014	46.9	5.0	16.9	4.4
2015	48.1	4.6	13.4	4.6
2016	62.9	4.0	16.8	7.4
2017	62.6	2.0	18.7	6.1
2018	58.0	5.3	23.9	4.9
2019	68.1	3.0	16.7	5.9
2020	67.3	2.3	21.9	5.0

FIGURE 49.

Percentage % of the cases tested positive for drugs among the samples tested for presence of controlled drugs when driving 2012-2020 (Service de Toxicologie médico-légale, LNS)

These figures hence need to be interpreted in the light of the number of tests performed that have been varying, though generally increased, over the past years (Table 5).

TABLE 5.

Number of examinations for driving under the influence of controlled drugs in road traffic per year

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020
Number of tests	153	208	160	239	202	198	226	270	260

Source: Service de Toxicologie médico-légale, LNS

Figure 50 depicts an increasing trend for the proportion of positive cases detected for driving under the influence of drugs from 2012 onwards. For proper interpretation, it needs to be considered that tests are not performed randomly, but in case of suspicion of impaired driving, which explains the high positive rates. Moreover, one needs to keep in mind that on one hand, the number of people in traffic has increased due to a general increase of the population, while on the other hand, the driving license applications and the new registrations of motor vehicles in road traffic also increased significantly in the Grand Duchy of Luxembourg (STATEC, 2021).

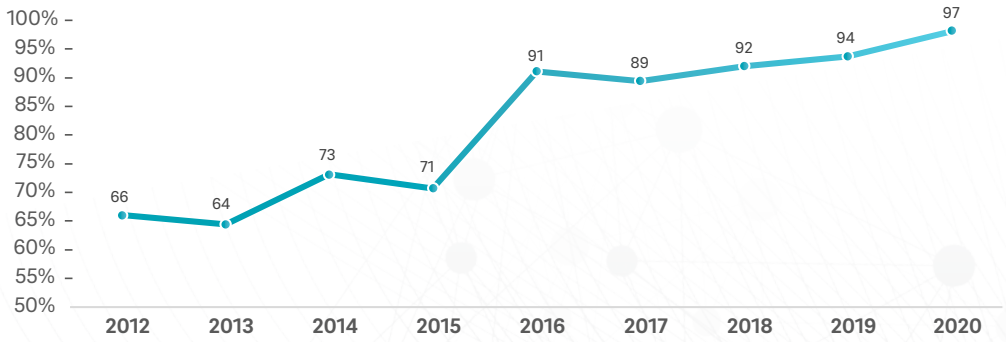


FIGURE 50.

Evolution of driving under the influence of drugs: rate of positive cases (%) among the total number of tests performed in case of suspicion of impaired driving (2012-2020) (Service de Toxicologie médico-légale, LNS)

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CONFLICT OF INTEREST

No conflict of interest has been declared by the authors.

LIST OF ABBREVIATIONS

ATS	Amphetamine-type stimulants
CAARUD	Centre d'accueil et d'accompagnement à la réduction des risques pour usagers de drogues
CePT	Centre de Prévention des Toxicomanies
CHL	Centre Hospitalier de Luxembourg
CHNP	Centre Hospitalier Neuro-Psychiatrique
CNAPA	Centre National de Prévention des Addictions
CNDS	Comité National de Défense Sociale
CNS	Caisse Nationale de Santé
COVID-19	Coronavirus Sars-CoV-2 2019 Disease
CPG	Centre Pénitentiaire de Givenich
CPL	Centre Pénitentiaire de Luxembourg
CTM	Centre Thérapeutique Syrdall Schlass Manternach
ECDC	European Centre for Disease Prevention and Control
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 user
JDH	Fondation Jugend- an Drogenhëllef
LIH	Luxembourg Institute of Health
LNS	Laboratoire national de santé
NPS	New Psychoactive Substance(s)
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
REVIS	Revenu d'inclusion sociale
REITOX	Réseau Européen d'Information sur les Drogues et les Toxicomanies/European Information Network on Drugs and Drug Addiction
SMPP	Service de Médecine Psychiatrique Pénitentiaire
XTC/Ecstasy	Ecstasy (MDMA)

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