European Monitoring Centre for Drugs and Drug Addiction

European Drug Report 2023: Trends and Developments (single PDF version)

The *European Drug Report 2023: Trends and Developments* presents the EMCDDA's latest analysis of the drug situation in Europe. Focusing on illicit drug use, related harms and drug supply, the report contains a comprehensive set of national data across these themes and key harm reduction interventions.

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The *European Drug Report 2023: Trends and Developments* presents the EMCDDA's latest analysis of the drug situation in Europe. Focusing on illicit drug use, related harms and drug supply, the report contains a comprehensive set of national data across these themes and key harm reduction interventions.

Introductory note

This report is based on information provided to the EMCDDA by the EU Member States, the candidate country Türkiye, and Norway, in an annual reporting process.

The purpose of the current report is to provide an overview and summary of the European drug situation up to the end of 2022. All grouping, aggregates and labels therefore reflect the situation based on the available data in 2022 in respect to the composition of the European Union and the countries participating in EMCDDA reporting exercises. However, not all data will cover the full period. Due to the time needed to compile and submit data, many of the annual national data sets included here are from the reference year January to December 2021. Analysis of trends is based only on those countries providing sufficient data to describe changes over the period specified. The reader should also be aware that monitoring patterns and trends in a hidden and stigmatised behaviour like drug use is both practically and methodologically challenging. For this reason, multiple sources of data are used for the purposes of analysis in this report. Although considerable improvements can be noted, both nationally and in respect to what is possible to achieve in a European level analysis, the methodological difficulties in this area must be acknowledged. Caution is therefore required in interpretation, in particular when countries are compared on any single measure. Caveats relating to the data are to be found in the online Statistical Bulletin, which contains detailed information on methodology, qualifications on analysis and comments on the limitations in the information set available. Information is also available there on the methods and data used for European level estimates, where interpolation may be used.

Overview of content

Please note that the links below go to online pages but this content is also available within this PDF.

1. The drug situation in Europe up to 2023

This page draws on the latest data available to provide an overview of the current situation and emerging drug issues affecting Europe, with a focus on the year up to the end of 2022. The analysis presented here highlights some developments that may have important implications for drug policy and practitioners in Europe.**The drug situation in Europe up to 2023**

2. Drug supply, production and precursors

An analysis of the supply-related indicators available on the commonly used illicit drugs in the European Union suggests that availability remains high across all substance types. On this page, you can find an overview of drug supply in Europe based on the latest data, supported by the latest time trends in drug seizures and drug law offences, together with 2021 data on drug production and precursor seizures. **Drug supply, production and precursors – the current situation in Europe**

3. Cannabis

Cannabis remains by far the most commonly consumed illicit drug in Europe. On this page, you can find the latest analysis of the drug situation for cannabis in Europe, including prevalence of use, treatment demand, seizures, price and purity, harms and more. **Cannabis – the current situation in Europe**

4. Cocaine

Cocaine is, after cannabis, the second most commonly used illicit drug in Europe, although prevalence levels and patterns of use differ considerably between countries. On this page, you can find the latest analysis of the drug situation for cocaine in Europe, including prevalence of use, treatment demand, seizures, price and purity, harms and more.**Cocaine – the current situation in Europe**

5. Synthetic stimulants

Amphetamine, methamphetamine and, more recently, synthetic cathinones are all synthetic central nervous system stimulants available on the drug market in Europe. On this page, you can find the latest analysis of the drug situation for synthetic stimulants in Europe, including prevalence of use, treatment demand, seizures, price and purity, harms and more**Synthetic stimulants – the current situation in Europe**

6. MDMA

MDMA is a synthetic drug chemically related to the amphetamines, but with somewhat different effects. In Europe, MDMA use has generally been associated with episodic patterns of consumption in the context of nightlife and entertainment settings. On this page, you can find the latest analysis of the drug situation for MDMA in Europe, including prevalence of use, seizures, price and purity and more. **MDMA – the current situation in Europe**

7. Heroin and other opioids

Heroin remains Europe's most commonly used illicit opioid and is also the drug responsible for a large share of the health burden attributed to illicit drug consumption. Europe's opioid problem, however, has evolved over the last decade in ways that have important implications for how we respond to problems in this area. On this page, you can find the latest analysis of the drug situation for heroin and other opioids in Europe, including prevalence of use, treatment demand, seizures, price and purity, harms and more. **Heroin and other opioids – the current situation in Europe**

8. New psychoactive substances

The market for new psychoactive substances is characterised by the large number of substances that have appeared in this area and that new compounds continue to be detected each year. On this page, you can find an overview of the drug situation for new psychoactive substances in Europe, supported by seizure data and information from the EU Early Warning System on substances detected for the first time in Europe. New substances mentioned include synthetic cannabinoids, hexahydrocannabinol, synthetic cathinones, new synthetic opioids, benzimidazole opioids. **New psychoactive substances – the current situation in Europe**

9. Other drugs

Alongside the more well-known substances available on illicit drugs markets, a number of other substances with hallucinogenic, anaesthetic, dissociative or depressant properties are used in Europe: these include LSD, hallucinogenic mushrooms, ketamine, GHB and nitrous oxide. On this page, you can find the latest analysis of the situation regarding these substances in Europe, including seizures, prevalence and patterns of use, treatment entry, harms and more.**Other drugs – the current situation in Europe**

10. Injecting drug use

Despite a continued decline in injecting drug use over the past decade in Europe, this behaviour is still responsible for a disproportionate level of health harms. On this page, you can find the latest analysis of injecting drug use in Europe, including key data on prevalence at national level and among clients entering specialised treatment, as well as insights from studies on syringe residue analysis and more. **Injecting drug use – the current situation in Europe**

11. Drug-related infectious diseases

People who inject drugs are at risk of contracting infections through the sharing of drug use paraphernalia. On this page, you can find the latest analysis of drug-related infectious diseases in Europe, including key data on infections with HIV and hepatitis B and C viruses.**Drug-related infectious diseases – the current situation in Europe**

12. Drug-induced deaths

Drug-induced deaths are those that are directly attributable to the use of drugs. On this page, you can find the latest analysis of drug-induced deaths in Europe, including key data on overdose deaths, substances implicated and more. **Drug-induced deaths – the current situation in Europe**

13. Opioid agonist treatment

Opioid users represent the largest group undergoing specialised drug treatment, mainly in the form of opioid agonist treatment. On this page, you can find the latest analysis of the provision of opioid agonist treatment in Europe, including key data on coverage, the number of people in treatment, pathways to treatment and more.**Opioid agonist treatment – the current situation in Europe**

14. Harm reduction

Harm reduction encompasses interventions, programmes and policies that seek to reduce the health, social and economic harms of drug use to individuals, communities and societies. On this page, you can find the latest analysis of harm reduction interventions in Europe, including key data on opioid agonist treatment, naloxone programmes, drug consumption rooms and more. **Harm reduction – the current situation in Europe**

15. Annex tables

These tables, produced specifically for the European Drug Report, provide national data for estimates of drug use prevalence including problem opioid use, substitution treatment, total number in treatment, treatment entry, injecting drug use, drug-induced deaths, drug-related infectious diseases, syringe distribution and seizures. The data are drawn from and are a subset of the EMCDDA Statistical Bulletin 2022, where notes and meta-data are available. The years to which data refer are indicated. In addition, for some indicators, these data tables also provide total values for EU as well as for EMCDDA reporting countries, 'EU+2' (EU Member States, Türkiye and Norway).

European Drug Report 2023 annex tables

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Reitox national focal points
Reitox is the European information network on drugs and drug addiction. The network is comprised of national focal points in the EU Member States, the candidate country Türkiye, Norway and at the European Commission. Under the responsibility of their governments, the focal points are the national authorities providing drug information to the EMCDDA.

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1. The drug situation in Europe up to 2023 – an overview and assessment of emerging threats and new developments

This page draws on the latest data available to provide an overview of the current situation and emerging drug issues affecting Europe, with a focus on the year up to the end of 2022. The analysis presented here highlights some developments that may have important implications for drug policy and practitioners in Europe.

Last update: *16 June 2023*

EVERYWHERE, EVERYTHING, EVERYONE The complex challenge of addressing contemporary drug-related problems

Illicit drugs have a significant impact on European health and security

A key message from the 2023 *European Drug Report* analysis is that the impact of the use of illicit drugs is now seen almost **everywhere** in our society. Almost **everything** with psychoactive properties has the potential to be used as a drug. This means that **everyone**, whether directly or indirectly, can be affected by illicit drug use and the problems associated with it.

Everywhere

Today, drug issues have an impact almost everywhere. Domestically, they are manifest in and exacerbate other complex policy problems, such as homelessness, the management of psychiatric disorders, and youth criminality. We are also observing greater levels of violence and corruption driven by the drug market in some countries. Internationally, drug problems are growing in many low- and middle-income countries, undermining governance and development and adding to the already considerable public health and security challenges many countries face.

Everything

Increasingly, we are observing that almost everything with psychoactive properties can appear on the drug market, often mislabelled or in mixtures, leaving consumers potentially unaware of what they are using, increasing health risks and creating new law enforcement and regulatory challenges.

Everyone

The impact of the developments we are seeing means that everyone is in some way likely to be impacted by illicit drug use, the operation of the drug market and the problems associated with it. Directly, we see this in those who develop problems and need treatment or other services. Indirectly, we see it in the recruitment into criminality of vulnerable young people, the strain on health budgets and the social costs for communities that feel unsafe or where institutions or businesses are undermined by corruption or criminal practices.

The drug situation in Europe in 2023 – an overview

Availability of most illicit substances remains high

An analysis of the supply-related indicators for the commonly used illicit drugs in the European Union suggests that availability remains high across all substance types. The market is now characterised by the relatively widespread availability of a broader range of drugs, which are often available at high potency or purity. Large seizures of drugs being trafficked to Europe in intermodal shipping containers

have continued to be detected, with commercial supply chains a key target for infiltration by organised crime groups. Europe also remains an important production area for some substances, especially synthetic drugs and cannabis.

Greater diversity in drug availability and use is creating new health and policy challenges

High drug availability has been accompanied by a greater diversity in the substances on the illicit drug market, exposing consumers to a wider range of psychoactive substances. These include new synthetic drugs, for which knowledge about the health risks is often limited. This raises concerns about the potential for the greater use of illicit substances in general and the increased risks associated with some of them. People who use drugs may be at greater risk of adverse health outcomes, including poisonings and deaths, through consuming, possibly unknowingly, higher-potency or more-novel substances, or mixtures of substances where drug interactions may increase the potential health harms.

Evidence-based and joined-up responses can work, but they are often not sufficiently available

Although important knowledge gaps remain, research and investment in service development means that in the areas of drug prevention, treatment, harm reduction and support to recovery, we now have a better understanding of what interventions are likely to be effective. The interrelated nature of problems associated with drug use and other complex social policy issues also means that there is a greater recognition of the need for more integrated and comprehensive responses. Synergies are therefore needed with policy and practice in other important areas, including housing support, generic healthcare, youth and elderly services, mental health provision and the criminal justice system. However, both the availability of drug-specific responses and examples of well-developed, integrated models of care are extremely heterogeneous at the European level and, in many countries, there is a need to invest more in both of these areas.

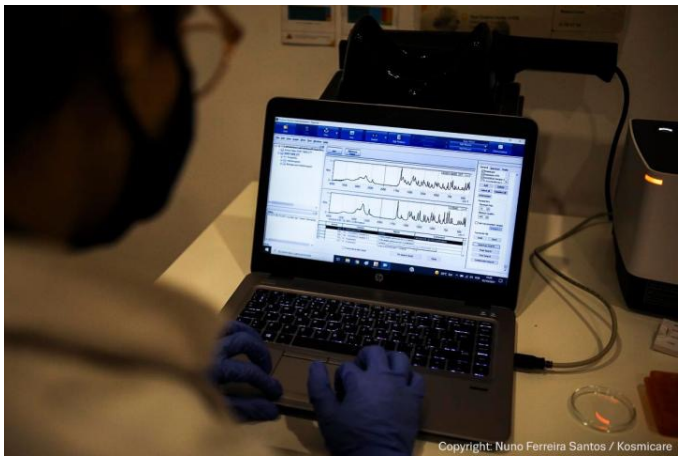
Responding to more diverse and complex needs

Growing support for implementing evidence-based substance use prevention

Substance use prevention aims to stop or delay the use of psychoactive drugs. It also may help those who have started to use substances to avoid the development of drug use disorders. However, historically, not all approaches utilised in this area have been found to be effective, and interest in the identification and implementation of evidence-based prevention programmes has been increasing. Achieving this objective is now supported by the establishment of prevention programme registries, training initiatives and the development of quality standards. The European

Prevention Curriculum is designed to improve the overall effectiveness of prevention efforts. More than 25 EU Member States and neighbouring countries now have national European Prevention Curriculum trainers. Prevention efforts are also supported by Xchange, a European online registry of evaluated prevention interventions.

Provision of harm reduction services needs to be further strengthened



The use of illicit drugs causes a range of acute and chronic harms and is a recognised contributor to the global burden of disease. Related harm reduction responses, such as opioid agonist treatment and the provision of sterile equipment to people who inject drugs, are now widely accepted as making an important contribution to healthcare provision. However, coverage and access to these types of interventions remain inadequate in some EU Member States compared with the estimated needs. Some countries have also invested in newer services, such as drug consumption rooms, take-home naloxone programmes and drug checking facilities. The availability of these services remains more limited. Moreover, there is generally less consensus among countries on the extent to which these measures are appropriate responses. A need exists, therefore, for further research and evaluation studies to strengthen the evidence base required for informing policy deliberations in this area.

Europe's rapidly evolving drugs situation creates new challenges for harm reduction and risk communication

Greater diversity in drug availability and use is also creating new challenges for the development and implementation of services to reduce harms. These services are needed to help mitigate health risks arising from more complex consumption patterns, new substances and mixtures of substances. There is, for example, a need to consider what constitutes effective harm reduction approaches to the use of substances, whether they are synthetic opioids, synthetic stimulants, new types and forms of cannabis products, as well as dissociative drugs such as ketamine. A growing concern is the implications of the inadvertent consumption of potent substances or mixtures of substances. Key policy considerations here include the risk behaviours which harm reduction services target, the evidence base that supports their work, and what constitutes standards for quality of care. There is also a parallel need to develop effective risk communication strategies to alert consumers to the evolving risks in this area, particularly those associated with new substances, drug interactions, high-potency products, or routes of administration.

Investment needed to achieve targets for reducing the burden of infectious diseases

People who inject drugs are at risk of contracting infections such as viral hepatitis B and C (HVB and HCV) and the human immunodeficiency virus (HIV). HIV infections associated with drug injecting have been falling over the last decade but concern exists that the low number of new infections observed in the most recent data may reflect, in part at least, a delay in diagnosis due to a disruption of testing caused by the COVID-19 pandemic.

There are also other signals that greater investment is needed if the target of ending AIDS and the epidemic of viral hepatitis in Europe is to be achieved by 2030. Local HIV outbreaks at city level associated with stimulant injecting have been a recurrent problem in Europe in the last decade, suggesting that more efforts are needed to reduce these harms. Over half of new HIV cases among people who inject drugs were diagnosed late, increasing the risk of associated morbidity and mortality. Needle and syringe provision is important for reducing disease transmission, but only a few countries currently achieve the targets recommend by the WHO for this kind of provision. Barriers to the uptake of HCV testing and treatment also exist in many countries, resulting in undiagnosed and untreated infections.

Enhanced toxicological and forensic data sources are needed to inform policies and actions

The 2023 *European Drug Report* highlights the growing importance of synthetic drugs, the appearance of novel substances, new production practices within the drug market, and the fact that many of the harms associated with drug consumption are exacerbated by interactions between drugs, knowingly or unknowingly consumed together. The continued detection of synthetic cannabinoids alongside natural cannabinoids in herbal material raises similar concerns. All these issues provide support to a conclusion running throughout the analysis we provide this year: that forensic and toxicological information sources have become essential elements for understanding developments both in the drug market and on the health implications of changing patterns of drug consumption. Currently, these sources are not sufficiently available, and this inhibits our understanding of important issues such as the role that polydrug consumption patterns play in drug overdoses. Positively, however, from 2024, the new EUDA will launch a European network of forensic and toxicological laboratories, with the aim of strengthening capacity and information resources in this area.

Implications of the war in Ukraine for Europe's drug situation

Over a year into Russia's invasion of Ukraine, the country remains caught in the grip of a humanitarian crisis, with Ukraine's health and social systems seriously impacted by the conflict. The war has made access to healthcare, including drug treatment, more difficult to deliver. In order to provide continuity of care to people in opioid agonist treatment, Ukraine's Ministry of Health has established partnerships with a range of non-governmental organisations. Alongside this, Ukrainians continue to seek refuge in the European Union. EU countries have needed to scale up their capabilities in order to provide care for displaced people who use drugs. An important element of this has been providing access to language services, as well as recognising the parallel need to provide accommodation, social welfare and childcare support. The devastation of essential infrastructure and the volatility of the conflict have made the operation of drug monitoring systems and analysis of changes to the drugs situation within Ukraine extremely difficult. What does emerge from the available information is that heroin availability within Ukraine appears to have declined; however, synthetic drug production and use appear to have been less affected. Heroin trafficking through Central Asia and the Caucasus and through the Black Sea to Europe also appears to have been disrupted by the war. A possible consequence of this is that trafficking activities on other routes into Europe may have increased.

Cannabis: new challenges for policy and practice

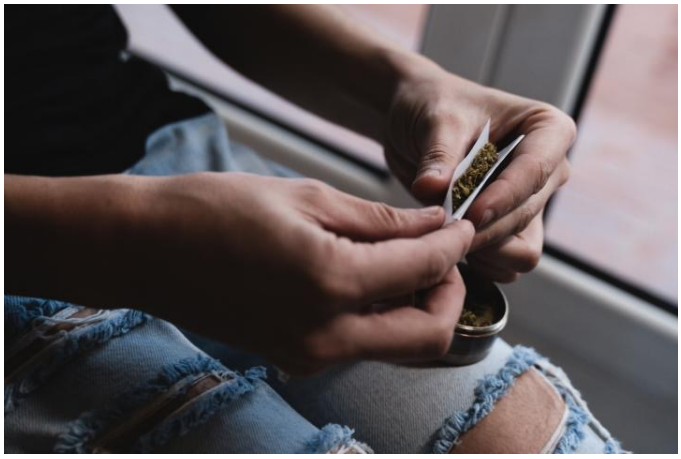
National cannabis policies and regulatory challenges are becoming increasingly complex

Policies and regulatory responses to cannabis are increasingly faced with new challenges posed by new forms and uses of this substance. Developments in this area appear to be influenced in part by the creation of recreational cannabis markets in the Americas and in part by greater commercial interest in developing consumer products that contain extracts from the cannabis plant. The scope of national cannabis policies in Europe is gradually widening and now encompasses, in addition to the control of illicit cannabis, the regulation of some forms of cannabis for therapeutic purposes and the emergence of commercial products that contain derivatives from the cannabis plant.

Baseline data are needed to assess the impact of possible changes in cannabis regulation

Some EU Member States are also changing their policy approach to recreational cannabis use. In December 2021, Malta legislated for home growing and cannabis use in private, alongside non-profit communal growing clubs, for recreational purposes. Germany is planning to permit home growing and non-profit clubs, and Luxembourg is planning to permit home growing; both countries expect a system of sales to be developed later. The Netherlands is piloting a model for a closed cannabis supply chain for cannabis coffeeshops, and Czechia has also announced plans for a regulated and taxed distribution system. In addition, non-EU Switzerland has started to authorise pilot trials of sales or other distribution systems for specific residents within certain cities. Regardless of the nature of any policy change in this area, an assessment of its impact will be dependent on the existence of good baseline data to provide a basis for ongoing monitoring and evaluation.

Understanding the public health implications of the high availability and use of cannabis products



Cannabis remains the most commonly consumed illicit substance, and in 2021 the quantities of cannabis resin and herbal cannabis seized reached their highest level in a decade, indicating the continuing high availability of this drug. Overall, this year's analysis concludes that there is a need for a better understanding of the problems experienced by cannabis users and the existing referral pathways and treatment options. Cannabis is reported to be responsible for a significant share of Europe's new drug treatment admissions, but the situation appears quite heterogeneous between countries, both in terms of the current situation and reporting practices. A recent EMCDDA review observed increased availability of psychosocial treatments, such as cognitive behavioural therapies, to those experiencing cannabis use problems, but overall there is still a need to understand better the extent to which cannabis users seek help for their problems and what types of services are likely to be appropriate to meet needs in this area.

Diversification and adulteration

There is also an increasing diversity of cannabis products available in Europe. These include high-potency extracts and edibles, which have been linked to acute toxicity presentations in hospital emergency departments. In 2021, there was an overall increase in reports of herbal material where THC or other natural cannabinoids were found alongside synthetic cannabinoids. This has fuelled concerns that cannabis products, usually of low THC content, are being adulterated with potent synthetic cannabinoids, highlighting the importance of toxicological analysis to detect these substances. Adulterated herbal materials can look like natural cannabis and can therefore be mis-sold as cannabis to unsuspecting consumers. Some synthetic cannabinoids are extremely potent and have been linked to fatal and non-fatal overdoses. Cannabis edibles are food products, typically 'sweets' infused with cannabis extract, which have become increasingly available on the illicit European market since 2021. These products pose risks because of their THC content and the possibility that they may be mistaken for legitimate commercial products, especially by children. Some of these edible products are available in packaging that resembles commercial products and some samples have also been found to contain synthetic cannabinoids, increasing further the health concerns in this area.

HHC – the first semi-synthetic cannabinoid appears on the European illicit drug market

Diversity on the cannabis market increased further in May 2022, when the first semi-synthetic cannabinoid, hexahydrocannabinol (HHC), was identified as being available in Europe. HHC is chemically similar to delta-9-tetrahydrocannabinol (delta-9-THC), the main psychoactive substance in cannabis, and it appears to have broadly similar effects. However, neither the pharmacology nor the toxicology of HHC in humans has been studied in detail. During 2022, HHC was identified in two thirds of EU Member States, and it has been commercially marketed in some EU Member States and sold as a 'legal' alternative to cannabis. HHC may be sprayed onto or mixed with low-THC herbal cannabis, which may appear and smell similar to illicit cannabis. It has also appeared in vapes and food products. HHC is believed to be synthesised from cannabidiol (CBD), which in turn is extracted from low-THC cannabis (hemp). Since its emergence, other semi-synthetic cannabinoids have also been detected, suggesting commercial interest in this area. The newness of these cannabis forms and the lack of empirical evidence means that there is considerable uncertainty about the possible impact of these substances on human health.

Cocaine and synthetic stimulants have become more important

Historically high cocaine availability

In 2021, EU Member States seized a record 303 tonnes of cocaine. The trafficking of large volumes of cocaine through Europe's major seaports, in intermodal commercial shipping containers, is a significant factor in the high availability of this drug in Europe today. The impact of high cocaine availability is reflected in concerns about an increase in both health-related problems and levels of crime, including violent crimes associated with drug market activities. Large seizures also reflect the increased efforts made by law enforcement to disrupt trafficking through major European ports. However, there are also signals that trafficking groups are increasingly exploring new approaches to reduce the risk of detection. There is evidence to suggest, for example, that they are targeting potentially vulnerable smaller ports in the European Union and in neighbouring countries. There is also now a well-established secondary cocaine production industry in Europe that facilitates the use of innovative methods for trafficking, which can make the detection of cocaine concealed in commercial cargoes more challenging.

Increasing evidence of the negative impact of high cocaine availability

Cocaine is now the second most frequently reported drug, both by first-time treatment entrants and in the available data on acute drug toxicity presentations to sentinel hospital emergency departments. The available data also suggest that the drug was involved in about a fifth of overdose deaths in 2021. Due to methodological challenges, cocaine-associated mortality is likely to be under-reported in our current data sets. Increased availability also appears to be associated with some signs of a possible diffusion of cocaine use into more marginalised groups, with cocaine injection and the use of crack cocaine reported in some countries.

Synthetic stimulants – more diversity in the illicit drug market linked to risks for public health

Alongside cocaine, the consumption of synthetic stimulants is associated with risks to both physical and mental health. Most indicators suggest that amphetamine remains the most commonly used illicit synthetic stimulant in Europe. However, there is increasing diversity in the drug market in this area, with signs that both methamphetamine and synthetic cathinones are now contributing more significantly than in the past to Europe's stimulant-related problems. Consumers may view different stimulants as functionally similar and be willing to try new products based on their availability in the market. As synthetic stimulants may also be available in similar-looking powders or pills, consumers may sometimes be unaware what particular stimulant or mixture of stimulants they are consuming. These drugs can also be found in tablets marketed as MDMA. Overall, developments in this area mean that people who use drugs may be at greater risk of adverse health outcomes, including poisonings, acute and chronic mental health problems, infectious diseases and deaths, through consuming, possibly unknowingly, higher-potency or more-novel substances and engaging in high-risk behaviours.

Greater recognition of the role played by stimulants in harms associated with drug injecting

People who inject drugs are at greater risk of contracting blood-borne infections or dying from a drug overdose. Despite a continued decline in injecting drug use over the past decade in Europe, this behaviour remains responsible for a disproportionate level of the harm associated with illicit drugs. Historically, heroin has been the main drug associated with injecting. However, other drugs, including stimulants and medicines, are also now more commonly injected, either alone or in combination with heroin or other opioids. Injecting stimulants is associated with high-frequency injecting patterns of use, and has been linked to local HIV outbreaks in cities in Europe. Injecting poorly dissolved synthetic stimulants, medicines or crack cocaine can also increase the risks of vascular damage or acquiring a bacterial infection. Polydrug injection can also increase the risk of drug overdose. Understanding the harms linked to changing patterns of injecting drug use is therefore key to designing interventions to reduce the harm associated with this behaviour.

Signals of increased volatility in the MDMA market but concerns still exist about the availability of high-purity products

Current data suggest an overall relatively stable situation in respect to MDMA consumption, although there is considerable heterogeneity at national level. This follows a period in which indicators of MDMA use suggested a temporary decline in use during the early phases of the COVID-19 pandemic, when social distancing measures disrupted nightlife and other social events associated with the use of this substance. Europe remains an important centre for MDMA production, both for domestic consumption and for export to non-EU markets. With a typical MDMA content of 161 to 173 milligrams, the overall strength of tablets remains high by historical standards, and this has generated concerns about the risk of health harm for consumers. However, there have been some recent signals that suggest a possible decline in production volumes, and some reductions have been noted in the MDMA content of tablets. It is unclear whether these signals indicate that producers are having problems sourcing the precursor chemicals, or whether they are switching to the production of other substances that are more in demand or more profitable, or whether the market is responding to a perceived consumer demand for lower-strength products. However, overall, high-purity tablets and powders still remain available on the European market, and this information is important for informing prevention and harm reduction interventions in this area.

Greater diversity in drug availability and use

Signs that ketamine has become an established drug of choice among some groups

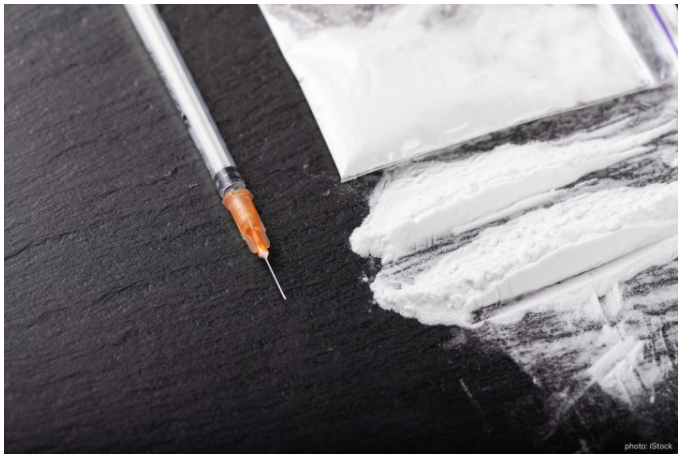
The quantity of ketamine seized and reported to the EU Early Warning System on new psychoactive substances varies considerably over time, but has remained at relatively high levels in recent years. This, along with other information, suggests that ketamine is likely to be consistently available in some national drug markets and has become a more established drug of choice for some groups. Ketamine is commonly snorted, but can also be injected. It has been linked to various dose-dependent acute and chronic harms, which in long-term users can include urological complications and bladder damage. Ketamine may also be found added to other drug mixtures, including MDMA powders and tablets. It is also found in mixtures sold as ‘pink cocaine', a product that appears to be attracting increasing consumer interest. In Europe, the term pink cocaine usually refers to mixtures of ketamine with other synthetic drugs, such as amphetamines or MDMA. As noted elsewhere

in the 2023 *European Drug Report*, people using mixtures of drugs may be unaware of the substances they are consuming, or that interactions between different drugs can expose them to elevated health risks.

Health concerns triggered by the use of nitrous oxide among young people

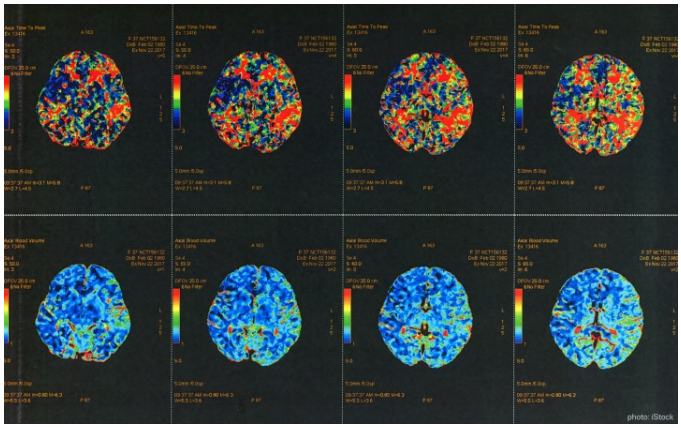
A recent EMCDDA review noted that in a number of EU Member States, there are signs of an increase in the use of nitrous oxide, also known as laughing gas, for the purposes of intoxication. Nitrous oxide has a number of commercial uses, and there is a debate on the extent to which this substance is associated with negative health risks, especially in episodic users. However, the intensive and chronic use of nitrous oxide has been linked to health harms including poisonings, burns and lung injuries and, in some cases of prolonged exposure, nerve damage from vitamin B12 deficiency. In some European cities, the disposal of the smaller stainless-steel canisters has also become a drug-litter issue. This drug appears to have become more accessible and cheaper, with the increased availability in some countries of larger gas canisters aimed at recreational users, which may also increase the risk of lung damage, due to the higher pressure of their contents. Therefore, taken together, the information available would suggest that there appears to be a strong argument for drug prevention and harm reduction services to address this substance in their work. Currently, regulatory approaches to the sale and use of this substance vary between countries.

Signals that the availability and production of synthetic cathinones in Europe is increasing



Marketed as replacement substances for drugs such as amphetamine and MDMA, synthetic cathinones, such as 3-MMC and 3-CMC, are also sometimes mis-sold as other substances. Although seizure numbers remain relatively low, very large quantities of synthetic cathinones have been found in some individual seizures, usually originating from India. This, together with evidence that synthetic cathinones are also being produced in Europe, suggests that these substances are becoming more available in Europe, where they have the potential to play an increasing role in the stimulant market in the future. Developments in this area also create new challenges for law enforcement, for example, chemically masked and non-controlled forms of synthetic cathinones have been trafficked into Europe for subsequent local conversion into controlled cathinones. Given the volumes of precursor chemicals seized, it appears likely that large-scale production for the European and possibly other markets may now be taking place.

Possible adverse consequences of growing interest in the therapeutic potential of psychedelic drugs



Both clinical and public interest has been growing in the possible therapeutic use of some psychedelic substances, including novel and little-known substances. A growing number of clinical studies are exploring the potential of a range of psychedelic substances to treat different mental health conditions. Some research appears promising, however, generalising in this area is difficult, partly because much of the research is still in its infancy, partly because of the large number of chemicals under review and partly because of the wide range of conditions that are being studied. These developments have received considerable media attention, creating a concern that they may encourage greater experimental use of these substances without medical support, potentially putting some vulnerable individuals at risk of suffering adverse consequences. At the same time, there is evidence of unregulated programmes being operated both within the European Union and elsewhere, in which the use of psychedelic substances is included as part of a wellness, therapeutic or spiritually oriented intervention.

More complex opioid-related challenges

Europe's opioid problems are evolving

Heroin remains Europe's most commonly used illicit opioid and it also remains the drug responsible for a large share of the health burden attributed to illicit drug consumption. However, the data available also suggest that heroin no longer plays as central a role as it once did and synthetic opioids appear to be playing a more significant role in opioid-related problems in some countries. The quantity of heroin seized by EU Member States more than doubled in 2021 to 9.5 tonnes, while Türkiye seized a record 22.2 tonnes. Despite these large seizures, only marginal changes have been seen in the price or purity of heroin at retail level and, overall, the data available indicate that heroin availability remains relatively high. Nonetheless, there is little evidence of any significant increase in recruitment into heroin use, with indicators suggesting that, in most countries, users of the drug are an ageing cohort, many of whom will have a long history of contact with drug and other support services.

Heroin is playing a less significant role in opioid-related problems but remains a significant cause of harm

While heroin continues to be involved in the majority of opioid-related deaths overall, the number of countries in which this is the case has decreased. Data on acute drug toxicity presentations to hospital emergency departments also suggest that, in some cities, other opioids have overtaken heroin as a driver of presentations. Heroin has also declined in relative importance as a reason for seeking specialised drug treatment. In many ways, the observation that heroin is playing a less central role in drug problems can be viewed as a positive development; however, there are some important caveats here. Europe's population of people who use heroin remains large, and their health and support needs are becoming more complex. Polydrug use patterns have become common among opioid users, and drug interactions – often where heroin is used alongside other substances – appear to have become a more significant component in increasing the risk of harm. In addition, established and novel synthetic opioids are becoming more associated with both drug-related morbidity and mortality and, in some countries, are now the main driver of opioid-related problems.

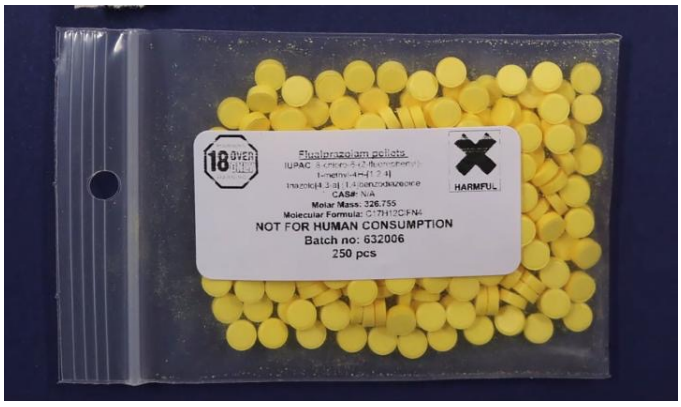
Multidisciplinary support needed to treat an ageing cohort of opioid clients

Current estimates suggest that opioid agonist treatment was received by about half of those engaging in high-risk opioid use in the European Union in 2021, an estimated 511 000 (524 000 including Norway and Türkiye). The evidence available supports opioid agonist treatment, with positive health and social outcomes observed, which include reductions in the risk of mortality. Over 60 % of clients in opioid agonist treatment, however, are now aged 40 or older, while less than 10 % are under 30 years old. This means that services have to address a more complex set of healthcare needs in a population that is becoming ever more vulnerable. Effective referral pathways are required to more generic services offering treatment for conditions associated with the ageing process. The treatment of this often highly marginalised group also needs to respond to a complex set of problems related, not only to their drug use, but also to mental health issues, social isolation, employment and housing. An increased emphasis on establishing effective multi-agency partnerships with generic health and social support services is therefore required.

Need to better understand the role played by polydrug use in opioid mortality

Opioids, usually in combination with other substances, remain the substances most commonly implicated in drug-induced deaths. While overall trends in deaths where opioids are implicated appear stable, the proportion of deaths in older age groups is increasing. The role played by heroin in overall rates of death appears to be decreasing in some countries. It is also important to note that where heroin is implicated, it is rarely found in isolation, indicating polydrug use is the norm. Where detailed toxicological information is available, in deaths where heroin is implicated, other opioids and medications are often also found to be present and may have played a contributing role. Deaths where stimulants are implicated, often alongside opioids, appear to be rising in some countries, and stimulants are more commonly implicated in deaths occurring among younger age cohorts. It is necessary therefore to recognise that patterns of polydrug use play an important role in drug-induced mortality, and this underlines the need for improved toxicological information. Drug interactions can also mean that service delivery models may need to be reviewed; for example, the use of either stimulants or synthetic opioids, in combination with heroin, has implications for the effective delivery of some interventions designed to reduce the risk of drug overdose. Overdoses involving potent synthetic opioids, for example, may require the administration of multiple doses of the opioid antagonist naloxone.

Interactions between new benzodiazepines and opioids



A lack of toxicological information currently means that the role benzodiazepines play in opioid-induced deaths is not sufficiently understood. Non-controlled and new benzodiazepines are available in Europe; however, data limitations make it difficult to comment on the scale of their use. Nonetheless, the evidence available is sufficient to indicate that these substances may have important consequences for health, especially when consumed in combination with other drugs. They are often very cheap and may be used by young people in combination with alcohol, sometimes resulting in potentially serious health reactions or aberrant behaviour. They have also been linked to increasing the risk of opioid overdose death and, in the most recent data, the proportion of overdose deaths involving benzodiazepines increased in some countries. An example of the complexity that can now exist in the drug market in this area comes from Estonia, where recent seizures have been made of mixtures containing both the new synthetic opioid metonitazene and bromazolam, a new benzodiazepine.

New synthetic opioids

Drug problems in North America provide an example of how changes in patterns of opioid availability and use can have important implications for public health. In this world region, potent fentanyl derivatives have, to a large extent, displaced prescription opioids and heroin to become the main driver of an epidemic in opioid-induced deaths. New synthetic opioids are reported in Europe and may be becoming more common in some areas, but currently the patterns of availability and use are very different to those found in North America, with significant problems with these drugs mostly restricted to some northern and Baltic countries. In 2021, EU Member States reported around 140 deaths associated with fentanyl. A significant share of these, however, are thought to be associated with fentanyl diverted from medical use. While this is likely to be an underestimate, it is not comparable with the many thousands of fentanyl-related deaths reported during the same period in North America. Nonetheless, between 2009 and 2022, a total of 74 new opioids have been identified on the European drug market, with the EU Early Warning System receiving formal notifications of one additional new synthetic opioid in 2022 and three in the first four months of 2023. Most of the new opioids detected in recent years, however, do not belong to the fentanyl group but rather to the highly potent benzimidazole (nitazene) opioids. The available information from seizures, syringe residues and toxicological findings reported by the Baltic countries suggest an increase in availability and harms (including drug-induced deaths) during 2022 in these countries, particularly related to benzimidazole opioids and the fentanyl derivative carfentanil. Recent seizures have also found new synthetic opioids in mixtures containing a new benzodiazepine and the animal sedative xylazine. These combinations, respectively known as 'benzo-dope' and 'tranq-dope', have also been reported in North America, where they have been associated with an increased risk of overdose death. As new synthetic opioids are highly potent, a small amount is sufficient to produce a large number of typical doses and can pose an increased risk of life-threatening poisoning. This means that even if problems in this area are relatively limited at present, this group of substances represents a threat, with the potential to impact more significantly on European health and security in the future.

Europe needs to be prepared for possible implications of the ban on opium poppy cultivation in Afghanistan

Most heroin consumed in Europe originates from opium poppies grown in Afghanistan. In April 2022, the Taliban announced a ban on opium poppy cultivation, raising the question of what implications this will have for opioid use in Europe. Following the Taliban's takeover of the country in August 2021, estimated opium poppy cultivation increased in 2022 by nearly a third. Preliminary information for 2023, however, suggests that the area under cultivation has been substantially reduced. Moreover, parallel measures introduced

to reduce methamphetamine manufacturing seem to have resulted in this form of drug production becoming less visible, and it may have been curtailed to some extent. Although more evidence is required to verify these conclusions, the information currently available does suggest a significant reduction in both opium and methamphetamine production in Afghanistan in 2023 is a possibility. There are a number of reasons, however, why the longer-term impact of the ban on opium poppy cultivation is difficult to predict. The economic hardship faced by farmers in the country may, for example, make sustaining this restriction over time politically difficult. In addition, the existence of stocks, and the fact that it usually takes over 12 months before the opium harvest appears in the European retail drug market as heroin, also makes it too early to predict the impact on drug availability in Europe. Nonetheless, if the ban on opium cultivation is enforced and sustained, it could have a significant impact on heroin availability. A previous short-lived ban on opium production in Afghanistan led to heroin shortages in Europe which, in some countries, have been associated with long-term changes in patterns of opioid consumption. This means it would be prudent for Europe to be prepared to respond to any possible impact of a potential decline in heroin availability from 2024 onwards. One possible consequence could be increased demand for treatment for opioid-related problems. A concern is that any shortage in the availability of heroin may drive an increase in demand for synthetic opioids. As developments in this area currently remain uncertain, intensive monitoring is required. Should changes be observed, mitigating measures may be needed, which could include increasing treatment capacity, reviewing harm reduction strategies and introducing more robust enforcement measures to target synthetic opioid supply. Finally, there may be a risk of additional security challenges, such as an increase in the flows of irregular migrants from Afghanistan due to a worsening economic situation among the country's rural poor.

2. Drug supply, production and precursors – the current situation in Europe

An analysis of the supply-related indicators available on the commonly used illicit drugs in the European Union suggests that availability remains high across all substance types. On this page, you can find an overview of drug supply in Europe based on the latest data, supported by the latest time trends in drug seizures and drug law offences, together with 2021 data on drug production and precursor seizures.

Last update: *16 June 2023*

Increased public health, social and environmental risks from diversifying synthetic drug production

An analysis of the supply-related indicators available on the commonly used illicit drugs in the European Union suggests that availability remains high across all substance types. In addition, the market is now characterised by the relatively widespread availability of a broader range of drugs, which are often available at high potency or purity. These include new or more-novel substances, where both consumer and scientific knowledge about the health risks may be limited. There is also a growing diversity in the forms in which substances may be available on the market and, in some cases, the routes of administration by which they may be consumed. Taken as a whole, these developments increase concerns that there is a potential for the greater use of illicit substances overall, and that the risks associated with some substances may be growing. In particular, there are worries that people who use drugs may be at greater risk of adverse health outcomes, including poisonings and deaths, through consuming, possibly unknowingly, higher-potency or more-novel substances.

Globalisation in the operational methods used by organised crime groups appears to be an important facilitator of high drug availability in Europe. There is evidence of a closer involvement of European drug producers and traffickers with international criminal networks, resulting in more resilience in the flows of illicit drugs into and out of the European Union. Various countries in South America, West and South Asia and North Africa remain important source areas for illicit drugs entering Europe, while China and India remain important source countries for new psychoactive substances, with India's role possibly becoming more important for some substances. Drug precursors and related chemicals are also often reported to be sourced from China.

Large seizures of drugs in intermodal shipping containers have continued to be detected in the last few years, suggesting that this form of trafficking was not seriously disrupted during the pandemic period. Elsewhere, there is evidence that the market has largely adapted to any disruption caused by measures introduced during the pandemic and possibly also resulting from the current war in Ukraine. A common concern is that drug trafficking operations increasingly target legitimate commercial infrastructure involved in global trade, with documented attempts to infiltrate supply chains and to exploit key staff either through intimidation or corrupt practices. This is reflected in the increased importance given to targeting of this threat by law enforcement agencies. More generally, and particularly in countries where large volumes of drugs are known to enter or be produced in Europe, there is a growing recognition among policymakers and the public that countering the violence and corrupt practices associated with

drug market operations is an issue of growing importance.

The scale and complexity of illicit drug production within Europe continues to grow, and Europe remains a production region for cannabis and synthetic drugs; cannabis production is generally for European consumption, while synthetic drugs are also manufactured for non-EU markets. In 2021, a total of 434 illicit synthetic drug production laboratories, including some large-scale facilities, were dismantled in the European Union. A review of these production sites not only revealed the considerable capacity existing for synthetic drug production in Europe but also the growing diversification of production processes used for some drugs. Compared with 2020, in 2021 the number of laboratories dismantled for producing cocaine and methamphetamine increased, remained stable for amphetamine, while a slight decline was seen for synthetic cathinones sites. The detection of MDMA sites also decreased by a quarter, possibly reflecting a move towards the production of other synthetic substances. However, these data must be interpreted with caution, both because of the possible impact of the pandemic on police actions and reporting and because the relative efficiency of law enforcement in detecting production sites may be influenced by many factors. The detection of separate facilities for cocaine production, extraction, cutting and packaging does suggest, however, that cocaine production is now well-established in Europe and that more-innovative methods are being used to facilitate the entry of this drug into Europe.

Innovation in production processes is also evident from some recent seizures of chemicals that can be used to manufacture the precursor chemicals needed to produce amphetamine, methamphetamine and MDMA and thus circumvent the controls in place to reduce the availability of these drugs. Examples also exist of the trafficking of chemically masked synthetic cathinone derivatives that are intended for post-import conversion into cathinones suitable for sale in the European Union.

While not common, combination laboratories or multiple-drug production sites also continued to be detected between 2017 and 2020. These are usually found to be producing a number of different stimulant drugs, such as amphetamine or MDMA with methamphetamine, in the same location. Interestingly, more EU Member States reported dismantling methamphetamine production sites in 2021 and seizing precursors for its production, adding to fears that the availability of this drug may be diffusing to more countries. It should be noted that methamphetamine production is often destined for export to lucrative markets outside the European Union. Increased laboratory detections and precursor seizures suggest that Poland is likely to be an important location for synthetic cathinone production in Europe. It remains unclear to what extent this production is for European markets or export to non-European countries.

The use of a wider set of chemicals to create both new substances and different synthesis processes for more established drugs presents a complex challenge for customs, law enforcement and legal regulation. Illicit synthetic drug production within the European Union for export and local markets remains a source of risks to public health, both to people consuming the potentially hazardous substances and from the environmental damage their production can have locally. As essential logistical supply chains are a key target for infiltration by organised crime groups, attempts to corrupt the workers and officials are becoming a more important component of the negative effects of illicit drugs markets on communities through their associated violence and corrupt practices.

Key data and trends

Drug supply trends

- Indexed trends, overall, show that the quantities of all drugs seized in the European Union increased between 2011 and 2021, particularly in the past 5 years, although there has been some fluctuation in the quantities of amphetamine and methamphetamine seized in the last 3 years.
- Between 2011 and 2021, the largest increases have been for cocaine (+416 %), herbal cannabis (+260 %), methamphetamine (+135 %), heroin (+126 %), MDMA (+123 %), cannabis resin (+77 %) and amphetamine (+42 %). Sizeable consumer markets for these drugs exist in Europe, however, it is likely that increases in quantities seized reflect, at least partially, the larger role played by Europe as a place of production, export and transit for these drugs.
- Interpreting trends in drug seizures is complicated by the fact that they are influenced by policing and law enforcement strategies and priorities, the success or otherwise of trafficking groups to avoid detection, and any underlying change in availability and use.
- Around 1 million seizures were reported in 2021 in the European Union, with cannabis products being the most frequently seized, accounting for three quarters of the number of all seizures.
- In terms of numbers, fewer seizures were made in 2021 than in 2011 of cannabis resin (–37 %), herbal cannabis (–6 %), cocaine (–3 %), amphetamine (–18 %) and heroin (–40 %). This may reflect changes in policing practices as opposed to changes in consumption patterns or drug availability.
- The largest increases observed in the number of seizures between 2011 and 2021 were for methamphetamine (+121 %) and MDMA (+42 %).

Figure. Drug seizures in the European Union — number of reported drug seizures, breakdown by drug, 2021 (%)

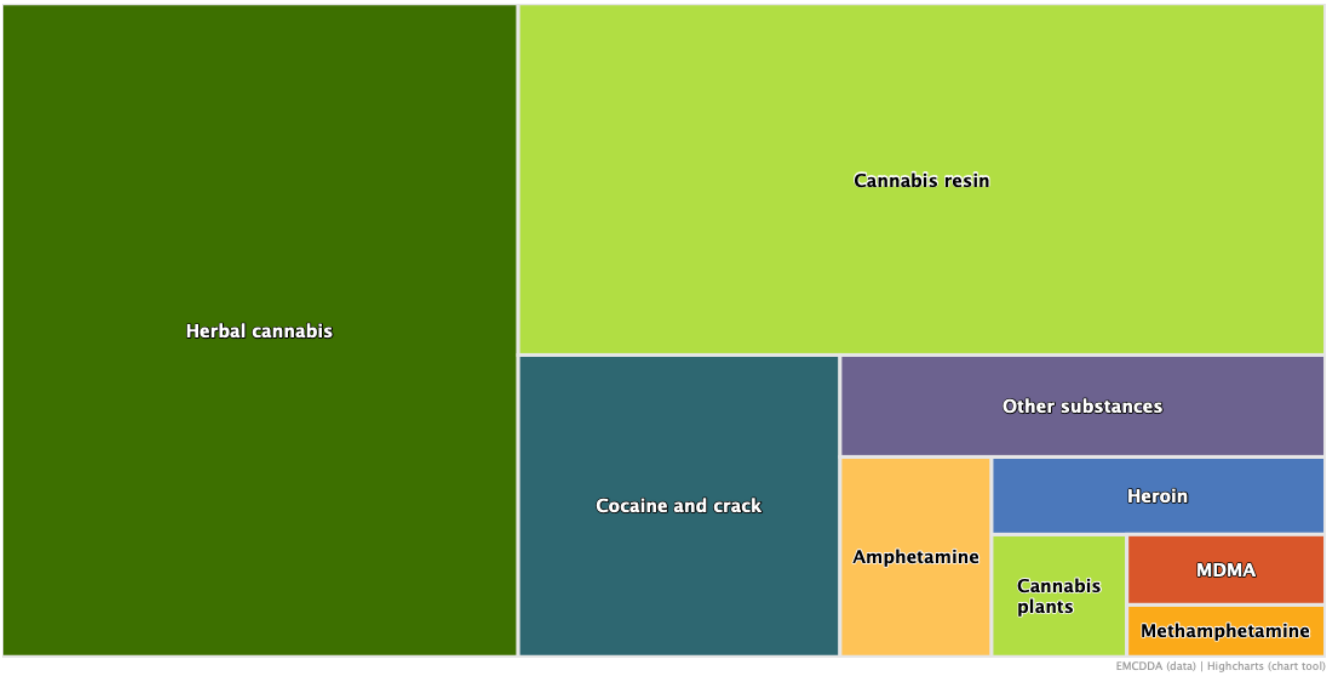


Figure. Drug seizures in the European Union — number of drug seizures, indexed trends (2011 = 100)

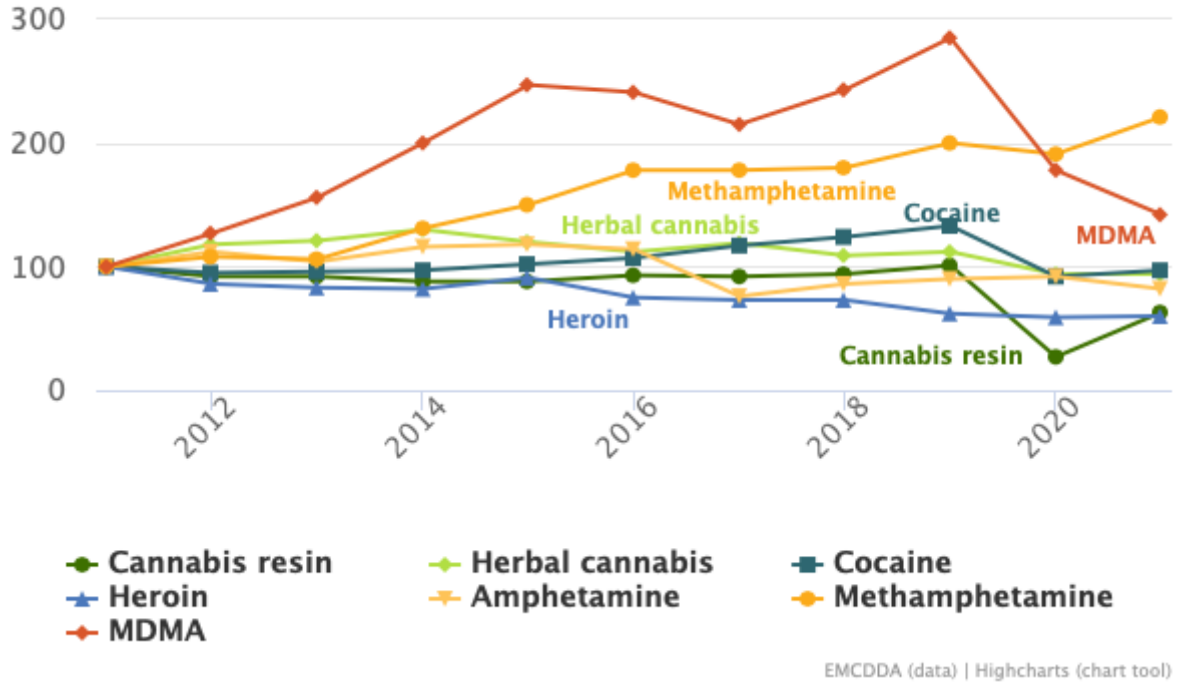


Figure. Drug seizures in the European Union — quantity of drugs seized, indexed trends (2011 = 100)

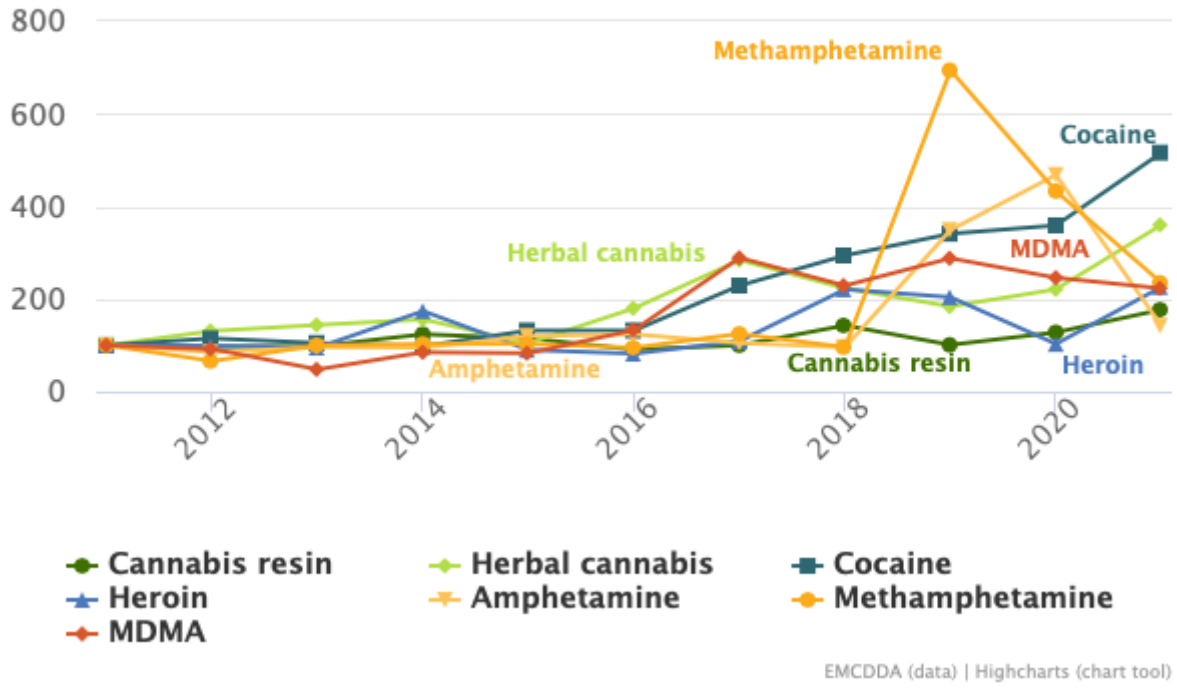


Figure. Drug seizures in the European Union — number of seizures in 2021

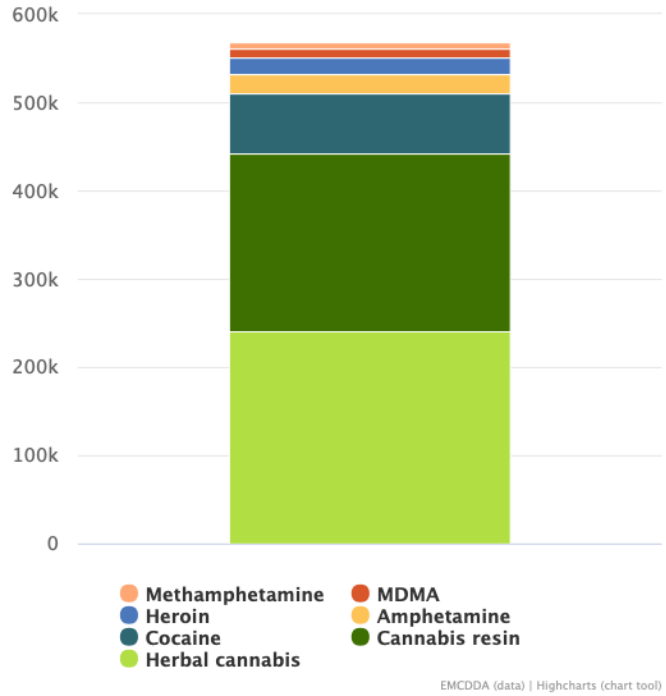
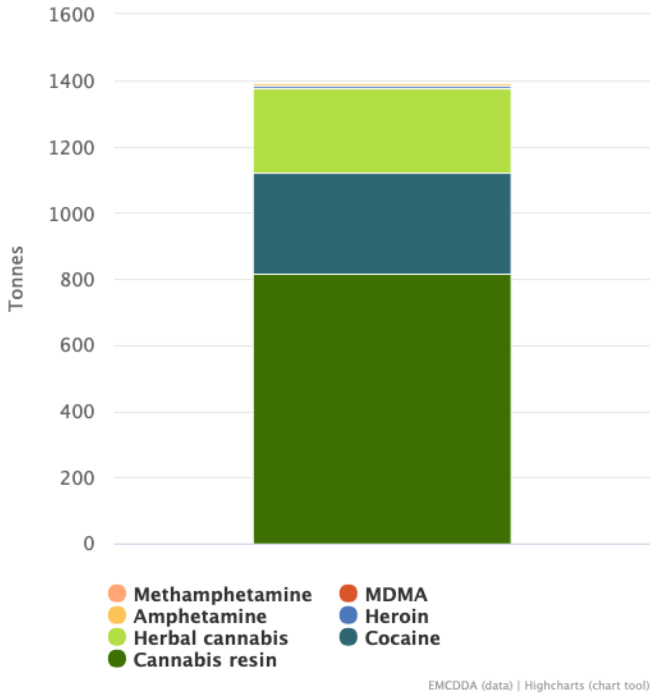


Figure. Drug seizures in the European Union — quantity seized in 2021 (tonnes)



Drug law offences trends

- In 2021, an estimated 1.5 million drug law offences were reported in the European Union, an increase of 24 % since 2011. More than three quarters of these offences (77 % or 1.1 million) relate to use or possession for personal use.
- Of the estimated 1.5 million drug law offences, the drug mentioned in the offence is reported in just under 1 million offences, of which 746 000 were for possession or use, 180 000 were for supply-related offences and 11 600 were for other types of offence. Definitions of what constitutes a supply-related offence may vary between countries.
- With approximately 566 000 reported offences in 2021, cannabis accounted for more than three quarters of the use or possession offences (76 %), for which the drug is known, and just over half or 100 000 of the drug supply offences (55 %). The predominance of cannabis in both supply and possession offences reflects the drug's leading position among illicit substances; it also attests to the policy importance of this drug.
- Drug supply offences remain at higher levels than in 2011 for all drugs except heroin.

Figure. Drug law offences — possession/use offences, indexed trends (2011 = 100)

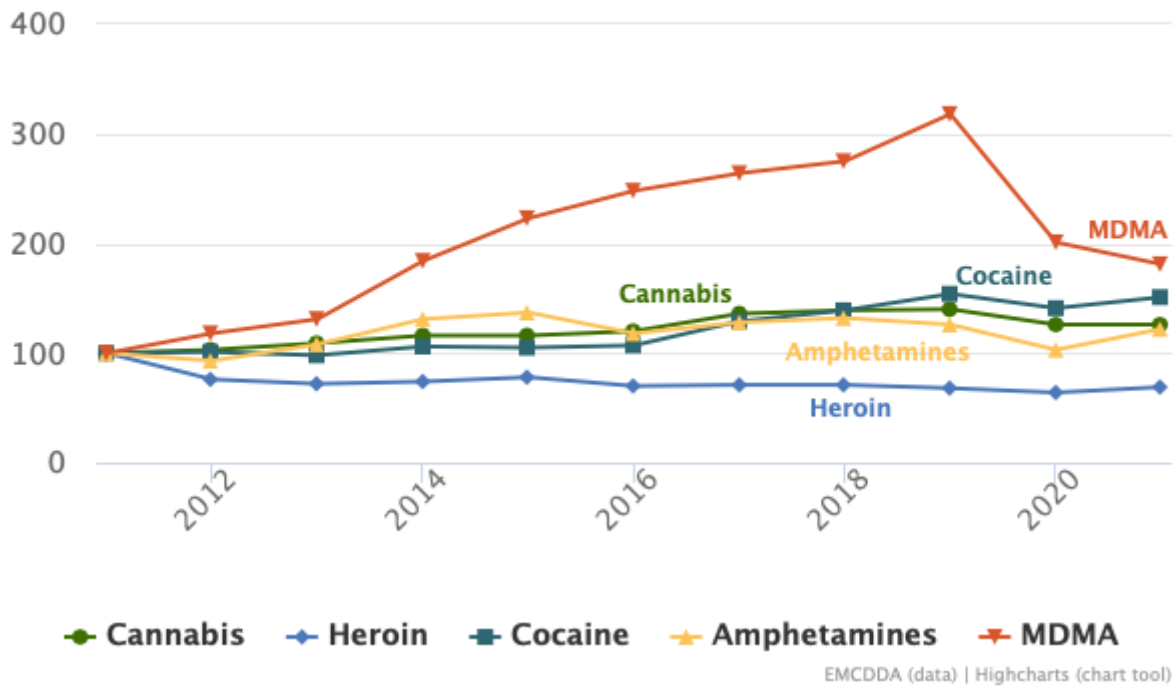


Figure. Drug law offences — supply offences, indexed trends (2011 = 100)

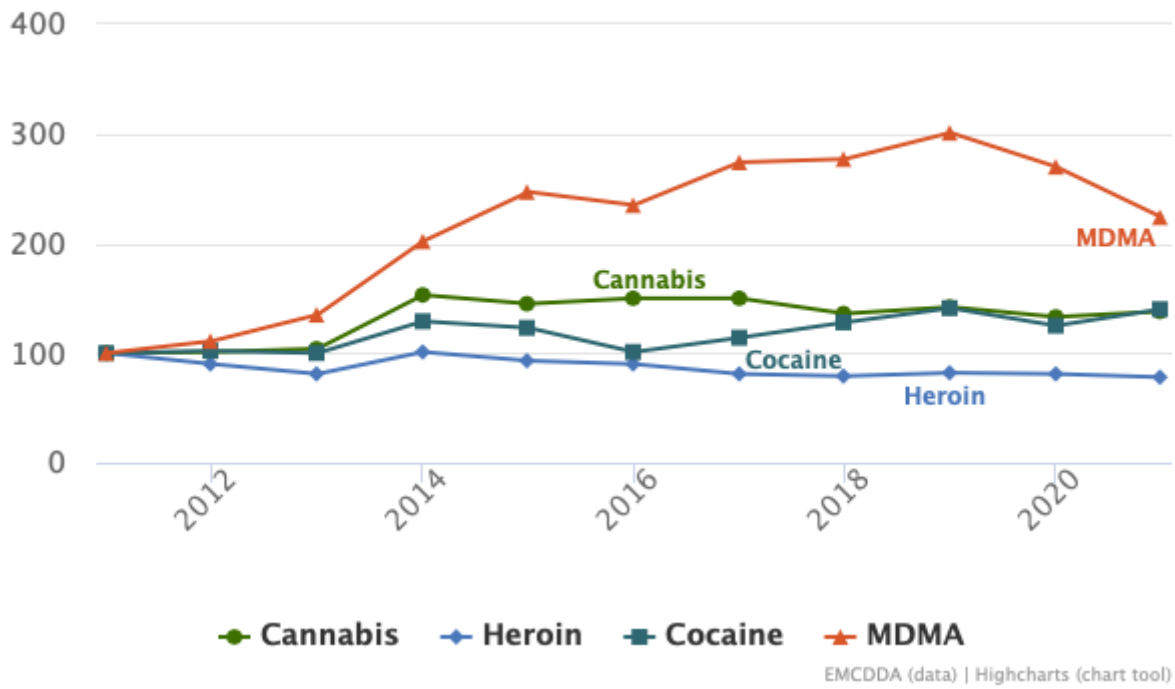
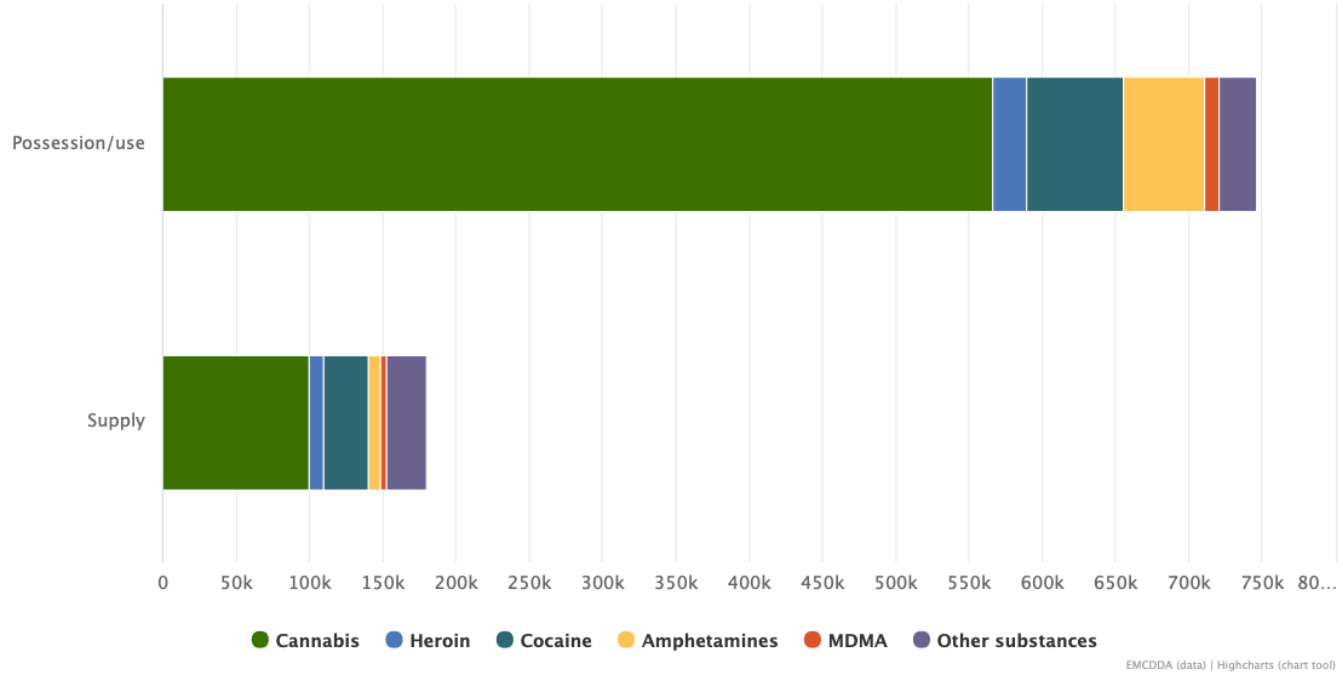


Figure. Drug law offences — number of offences, supply and use/possession



Data for offences for which the drug involved has been reported.

EU production and precursors data for 2021

- **Cannabis:** EU Member States reported 11 600 seizures, amounting to 4.3 million plants and 32.5 tonnes in 2021 (2.8 million plants and 50 tonnes in 2020).
- **Heroin:** Three heroin production sites were dismantled in the European Union (Netherlands) in 2021 (4 in 2020). Four seizures of the heroin precursor chemical acetic anhydride, amounting to 5 730 litres (5 110 litres in 2020), were reported by Belgium, Latvia and the Netherlands.
- **Cocaine:** In 2021, EU countries reported dismantling 34 cocaine laboratories (23 in 2020). Spain reported dismantling 16 cocaine laboratories, Belgium reported 11 sites related to cocaine processing, and the Netherlands dismantled 7 cocaine secondary extraction laboratories (some of which were large-scale sites). Furthermore, 14 cutting or packaging locations were discovered in the Netherlands. Some large seizures of the precursor chemical potassium permanganate in the Netherlands (637 kilograms, in two seizures) and Belgium (387 kilograms, in two seizures) confirm that large-scale cocaine production steps take place in the European Union.
- In 2021, seven EU Member States reported dismantling 105 amphetamine laboratories (102 in 2020): Germany (35), the Netherlands (32), Poland (25), Belgium, Bulgaria and Spain (4), and Sweden (1). In Germany and Poland, the sites included conversion laboratories where amphetamine oil was processed into powder (28 and 15 sites respectively). According to German authorities, the oil in conversion laboratories typically comes from the Netherlands.

- **Methamphetamine:** Twelve EU Member States reported dismantling 261 methamphetamine laboratories (213 in 2020), including multiple medium- and large-scale facilities in Belgium (9) and the Netherlands (15). In Czechia, 188 mostly small- to medium-scale methamphetamine laboratories were detected in 2021 (182 in 2020). Seizures of the precursors ephedrine and pseudoephedrine amounting to 723 kilograms (both powders and tablets) were reported by 15 EU Member States in 2021 (955 kilograms by 12 EU Member States in 2020).
- In addition, 5 100 litres of BMK (4 750 litres in 2020) and 4.5 tonnes of MAMDPA, used to make PMK, for MDMA manufacture, and 9.7 tonnes of MAPA, used to make BMK, for amphetamine or methamphetamine manufacture, were seized in the European Union in 2021.
- **MDMA:** The Netherlands reported 12 MDMA laboratories in 2021 (21 in 2020), with Belgium reporting 2 and France 1. MDMA tableting sites were reported by Poland (2) and Spain (1). Seizures of MDMA precursors increased to 2.5 tonnes in 2021, from 2 tonnes in 2020.
- **Cathinones:** In 2021, 15 synthetic cathinone production sites were dismantled (18 in 2020), 14 in Poland and 1 in the Netherlands, including some large-scale sites. At the site of the MDMA laboratory found in France in 2021, 3-methylmethcathinone (3-MMC) was also being processed. Seizures of synthetic cathinone precursors amounted to 555 kilograms in 2021, of which more than half was seized in Poland (311 kilograms).
- In 2019, Dutch police seized 350 kilograms of the uncontrolled 3-MMC chemical analogue *N*-acetyl-3-MMC, of Indian origin, likely intended for post-import conversion to the controlled drug 3-MMC.
- **Other drugs:** The Netherlands reported the dismantling of one ketamine laboratory.
- **Dumping sites:** In 2021, a total of 228 dumping sites for drug production waste and equipment (195 in 2020) were reported by Belgium (24) and the Netherlands (204).

Summary of seizures of EU scheduled precursors and non-scheduled chemicals used for selected drugs produced in the European Union, 2021

Table. Precursors associated with MDMA production

Substance	Quantity seized
Glycidic derivatives of PMK (kilograms)	1577
Piperonal (kilograms)	< 1
PMK (litres)	895
Safrole (litres)	2

Table. Precursors associated with amphetamine and methamphetamine production

Substance	Quantity seized
APAA (kilograms)	50
APAAN (kilograms)	
Benzaldehyde (kilograms)	11
Benzylcyanide (kilograms)	2006
Glycidic derivatives of BMK (kilograms)	737
MAMDPA (kilograms)	4464
MAPA (kilograms)	9650
BMK (litres)	5098
EAPA (litres)	86
AIBN (kilograms)	89
Tartaric acid (kilograms)	4537

Table. Precursors associated with heroin production

Substance	Quantity seized
Acetic anhydride (litres)	5731

Table. Precursors associated with production of fentanyl and fentanyl derivatives

Substance	Quantity seized
NPP	0

Table. Precursors associated with cathinones production

Substance	Quantity seized
2-Bromo-4-chloropropiophenone (kilograms)	20
2-Bromo-4-methoxypropiophenone (kilograms)	291
2-Bromo-4-methylpropiophenone (kilograms)	139
4-Methylpropiophenone (kilograms)	105

Table. Chemicals associated with cocaine processing

Substance	Quantity seized
Potassium permanganate (kilograms)	1098
Ethyl acetate (litres)	26366

Source data can be found in the online version.

2. Cannabis – the current situation in Europe

Cannabis remains by far the most commonly consumed illicit drug in Europe. On this page, you can find the latest analysis of the drug situation for cannabis in Europe, including prevalence of use, treatment demand, seizures, price and purity, harms and more.

This page is part of the **European Drug Report 2023**, the EMCDDA's annual overview of the drug situation in Europe.

Last update: *16 June 2023*

Understanding the public health implications of the high availability of cannabis products

Cannabis remains by far the most commonly consumed illicit drug in Europe. National surveys of cannabis use would suggest that overall, around 8 % of European adults (22.6 million aged 15 to 64) are estimated to have used cannabis in the last year. However, both the level of use and trends in use reported in recent national data appear heterogeneous (see the Prevalence of cannabis use in Europe dashboard, below).

Around 1.3 % of adults in the European Union (3.7 million people) are estimated to be daily or almost daily users of cannabis, and this is the group most likely to experience problems associated with this drug. There remains, however, a need to understand better the kinds of problems experienced by cannabis users, as well as the referral pathways and treatment options available for those with cannabis-related problems. Cannabis is reported to be responsible for almost a third of all drug treatment admissions in Europe. This finding is difficult to interpret, in part because of the wide variety of interventions provided to cannabis users, some of which may be directive referrals from the criminal justice system. A recent EMCDDA review found an increase in the availability of psychosocial treatments, such as cognitive behavioural therapies, to those experiencing problems with their cannabis use. These interventions may sometimes be delivered through telemedicine or digital applications

Among those entering specialist drug treatment for the first time in their lives, the proportion who reported cannabis as their main problem drug remained below pre-COVID-19 pandemic levels in the majority of EU Member States in 2021 (see the Users entering treatment for cannabis, infographic, below). Overall, the number of people reported as entering treatment for cannabis problems remained relatively stable until 2019, before declining during the pandemic and has not returned to pre-pandemic levels. However, due to data quality and availability issues and the overall impact of the pandemic on service delivery, these trends need to be interpreted with caution.

In 2021, the quantities of cannabis resin and herbal cannabis seized reached their highest level in a decade, indicating the high availability of this drug (see the Cannabis market infographic, below). Spain accounts for 66 % of the number of cannabis seizures in the European Union and 74 % of all EU seizures of cannabis plants reported by weight. This reflects Spain's importance, both as a transit country for cannabis trafficking and as a production area, although significant cannabis production takes place across the European Union. The larger quantities of cannabis resin seized in Europe, as compared to herbal cannabis, are thought to reflect the greater vulnerability of cannabis resin to interdiction

measures in cross-border trafficking, rather than availability or use, as herbal cannabis appears to be the most commonly available form of the drug in most countries.

There is an increasing diversity of cannabis products available in Europe. This is true both for the illicit drug market and for consumer markets, where products are appearing that contain low levels of THC but also other substances derived from the cannabis plant such as CBD. On the illicit drug market, the availability of high-potency extracts and edibles is a particular concern and has been linked to acute toxicity presentations in hospital emergency departments. In addition, there are concerns that some products sold on the illicit market as natural cannabis may be adulterated with potent synthetic cannabinoids. Recently, the semi-synthetic cannabinoid hexahydrocannabinol (HHC) has become commercially marketed in some EU Member States and sold as a 'legal' alternative to cannabis, adding to the regulatory challenges in this area.

Key data and trends

Prevalence and patterns of cannabis use

- Last year cannabis use among the EU population aged 15 to 34 is estimated at 15.1 % (15.3 million), with males being typically twice as likely to report use as females. Among 15- to 24-year-olds, an estimated 18.2 % (8.6 million) used cannabis in the last year and 9.6 % (4.5 million) used the drug in the last month. It is estimated that around 1.3 % (3.7 million) of adults (aged 15 to 64) are daily or almost daily cannabis users (that is, using the drug on 20 days or more in the last month). Among 15- to 34-year-olds, an estimated 2.1 % (2.1 million) are daily or almost daily cannabis users. Around three quarters of these are male and the majority (57 %) are under 35.
- Trends in cannabis use at national level appear mixed. Of the countries that have produced surveys since 2020 and reported confidence intervals, 3 reported higher estimates, 3 were stable and 6 reported a decrease compared with the previous comparable survey.
- The 2021 European Web Survey on Drugs found that herbal cannabis was used by 95 % of respondents who used cannabis in the last 12 months, compared with 32 % for resin, 25 % for edibles and 17 % for extracts.

Dashboard. Prevalence of cannabis use in Europe

This data explorer enables you to view our data on the prevalence of cannabis use by recall period and age range. You can access data by country by clicking on the map or selecting a country from the dropdown menu.

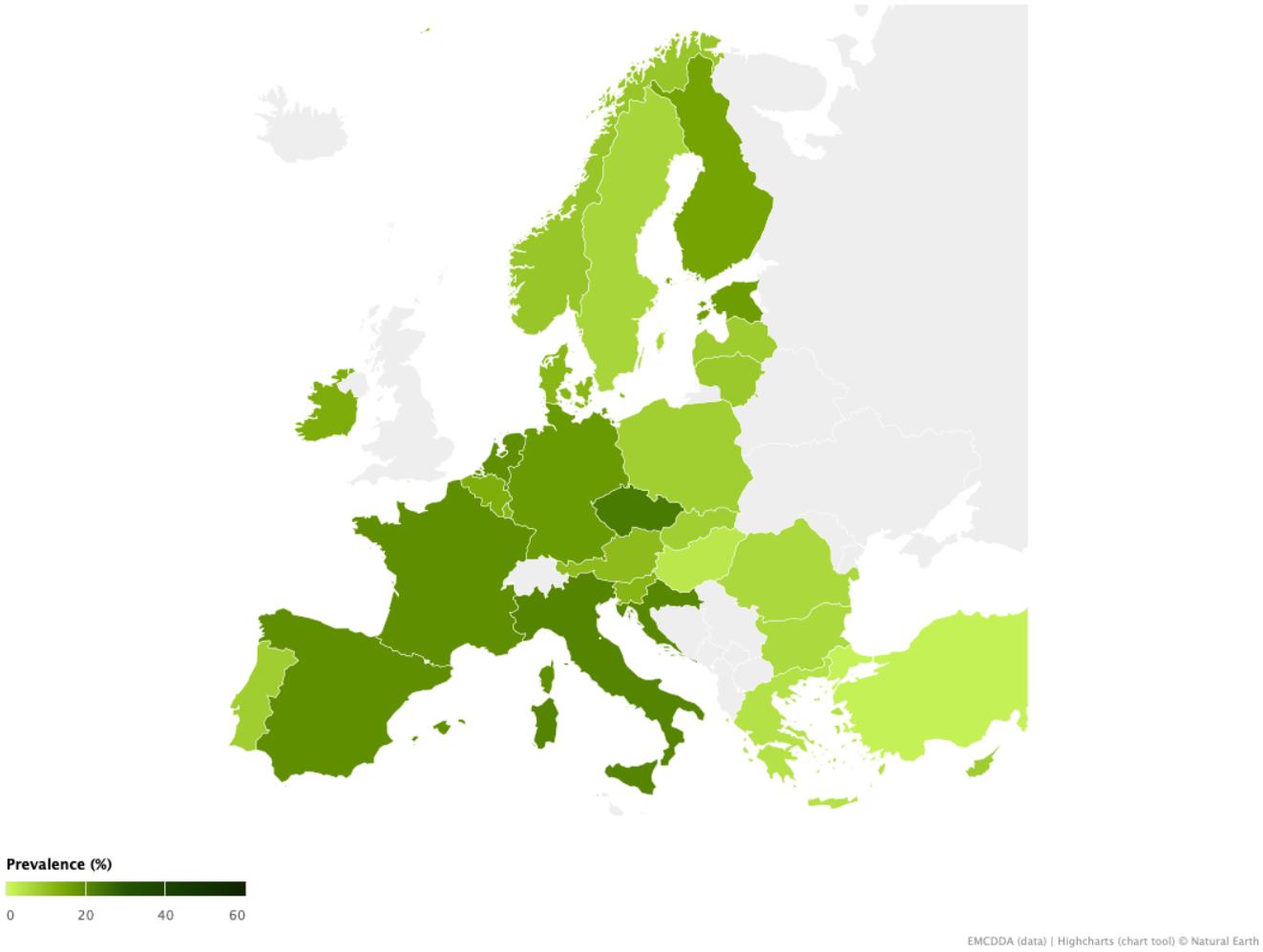
Recall period

Last month | Last year | Lifetime

Age

Young adults (15-34) | Adults (15-64)

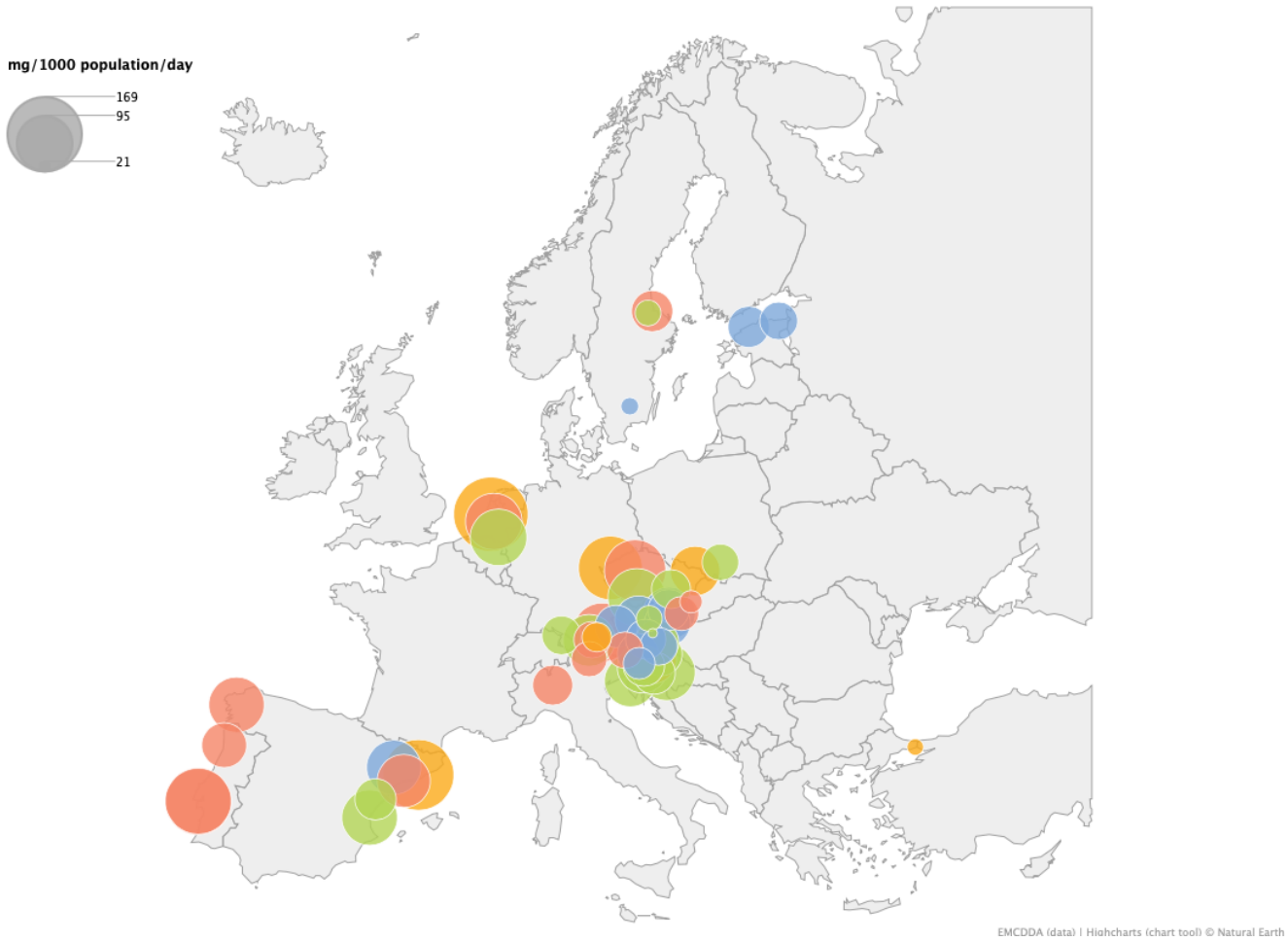
Country



Prevalence data presented here are based on general population surveys submitted to the EMCDDA by national focal points. For the latest data and detailed methodological information please see the Statistical Bulletin 2023: Prevalence of drug use. Graphics showing the most recent data for a country are based on studies carried out between 2013 and 2022. Age ranges are 16–34 for Denmark, Estonia, Sweden and Norway; 18–34 for Germany, Greece, France and Hungary.

- In 2022, of the 38 cities with comparable data, 15 reported an annual increase in the cannabis metabolite THC-COOH in wastewater samples, while 17 reported a decrease.

Figure. Cannabis residues in wastewater in selected European cities: most recent data



Red = increase | Green = decrease | Yellow = stable, with respect to previous value | Blue = no previous data

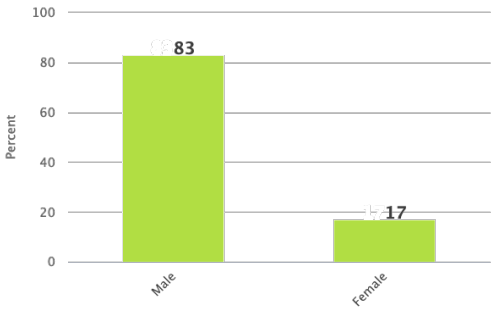
Mean daily amounts of THC-COOH in milligrams per 1000 population. Sampling was carried out over a week in March and April 2022. Taking into account statistical errors, values that differ less than 10% from the previous value are considered stable in this figure. Source: Sewage Analysis Core Group Europe (SCORE)

Treatment entry for cannabis use

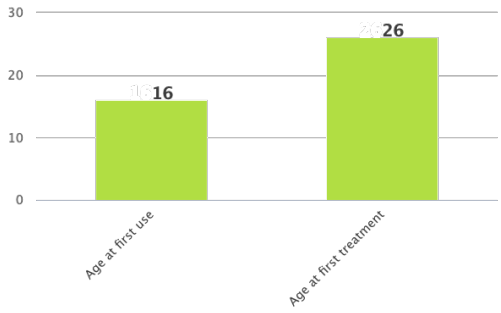
- In Europe an estimated 97 000 clients entered specialised drug treatment for problems related to cannabis use (35 % of all treatment demands) in 2021, with about 55 000 entering for the first time. Cannabis was the main problem drug most frequently cited by new treatment clients, accounting for 45 % of all first-time treatment entrants in Europe.

Infographic. Users entering treatment for cannabis in Europe

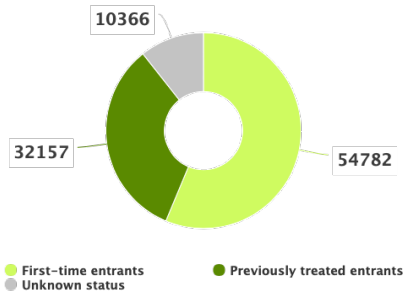
Gender breakdown: all treatment entrants



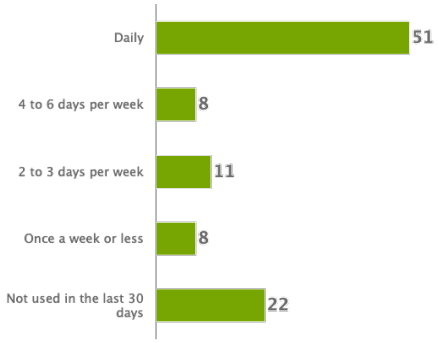
Mean age: all treatment entrants



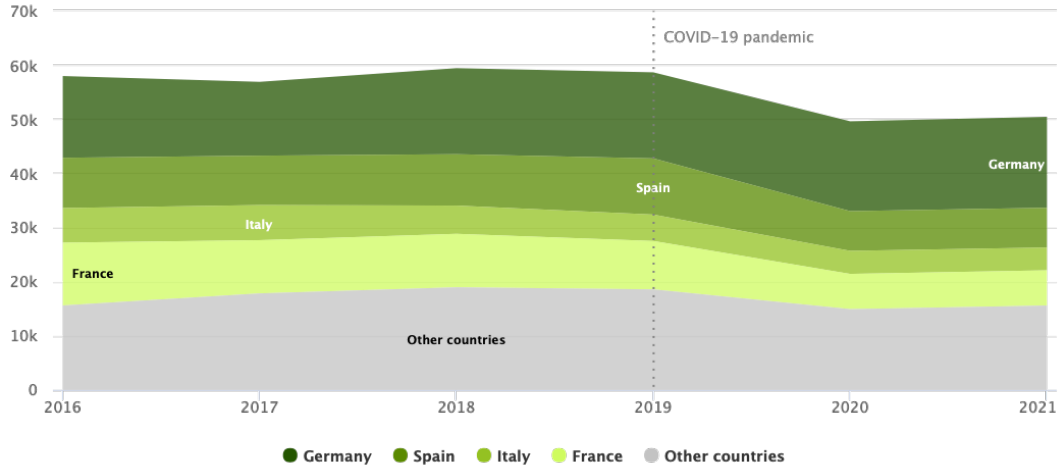
Client status — number of clients



Frequency of use in the last month (%): all treatment entrantsMean use: 4.3 days per week



Trends in first-time entrants



Data are for all treatment entrants with cannabis as the primary drug – 2021 or the most recent year available.

Trends in first-time entrants are based on 25 countries. Only countries with data for at least 5 of the 6 years are included in the trends analysis. Missing values are interpolated from adjacent years. Because of disruptions to services due to COVID-19, data for 2020 and 2021 should be interpreted with caution. Missing data were imputed with values from the previous year for Spain and France (2021) and Germany (2019).

Cannabis market data

- In 2021, EU Member States reported 202 000 seizures of cannabis resin amounting to 816 tonnes (588 tonnes in 2020) and 240 000 seizures of herbal cannabis amounting to 256 tonnes (157 tonnes in 2020). In addition, Türkiye reported 9 800 seizures of cannabis resin amounting to 33 tonnes and 52 500 seizures of herbal cannabis amounting to 31 tonnes.
- Approximately 566 000 cannabis use or possession offences were reported in the European Union in 2021 (555 000 in 2020), alongside 100 000 supply offences (99 000 in 2020).
- In 2021, the average THC content of cannabis resin in the European Union was 20 %, more than twice that of herbal cannabis, at 9.5 %. However, samples of both forms of the drug can vary considerably.

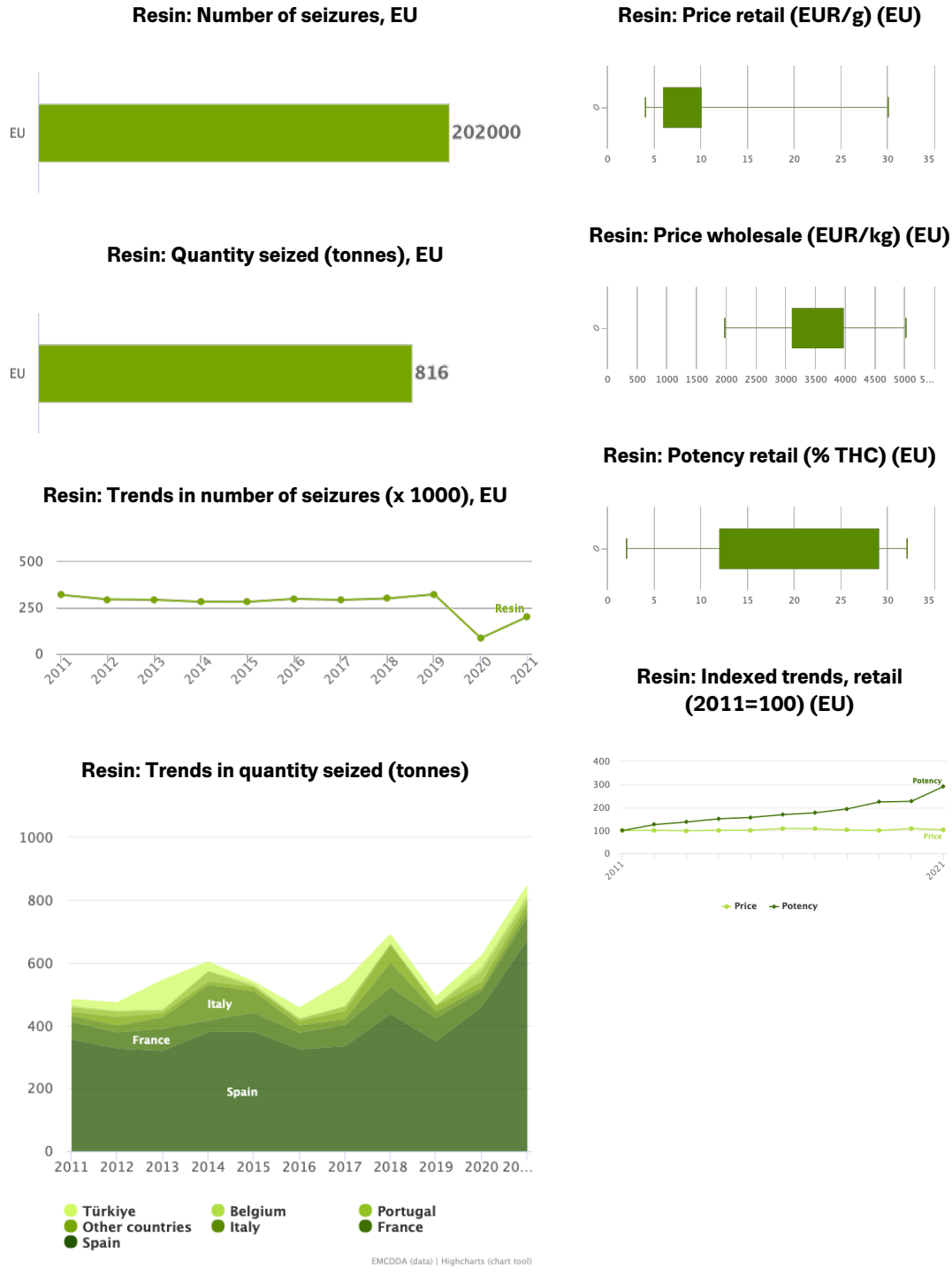
Infographic. Cannabis market in Europe

Geographical coverage (selected graphs)

EU | EU+2

Cannabis type

Resin | Herbal



EU+2 refers to EU Member States, Norway and Türkiye.

Price and potency: mean national values – minimum, maximum and interquartile range. Countries vary by indicator.

- Drug checking services in 6 European cities reported increases in the first half of 2022 in the cannabis products received for testing. This may reflect an increase in the diversity of products available on the market as well as greater consumer uncertainty about product content.

Hospital presentations

- Cannabis was the second most frequently reported substance by the Euro-DEN Plus hospital network in 2021. It was involved in 25 % of acute drug toxicity presentations (23 % in 2020), usually in the presence of other substances.

4. Cocaine – the current situation in Europe

Cocaine is, after cannabis, the second most commonly used illicit drug in Europe, although prevalence levels and patterns of use differ considerably between countries. On this page, you can find the latest analysis of the drug situation for cocaine in Europe, including prevalence of use, treatment demand, seizures, price and purity, harms and more.

Last update: *16 June 2023*

Historically high cocaine seizures highlight threats to health

Cocaine is, after cannabis, the second most commonly used illicit drug in Europe, although prevalence levels and patterns of use differ considerably between countries (see the Prevalence of cocaine use in Europe dashboard, below). Cocaine is usually available in two forms in Europe. The most common is cocaine powder (the salt form) and less commonly available is crack cocaine, a freebase form of the drug that can be smoked.

Cocaine is produced from the coca plant, grown in South America. It enters Europe through various channels, but the trafficking of large volumes of cocaine through Europe's seaports in intermodal commercial shipping containers is considered a significant factor in the high availability of this drug observed today. Cocaine trafficking by this route is also associated with rising in levels of drug-related crime, including the corruption of staff along supply chains, intimidation and violence. More generally, there are concerns that in some EU countries competition within the cocaine market, both at the wholesale and retail level, is now an important driver of drug-related crime including gang-related violence and homicides.

A record 303 tonnes of cocaine was seized by EU Member States in 2021. Belgium, the Netherlands and Spain continue to be the countries reporting the highest volumes of seizures, reflecting the importance of these countries as entry points for cocaine trafficking to Europe. In 2022, the quantity of cocaine seized in Antwerp, Europe's second-largest seaport, rose to 110 tonnes from 91 tonnes in 2021, with volumes seized increasing annually since 2016.

As interdiction measures have been scaled up at major known entry points for this drug, it appears that cocaine trafficking groups are also now increasingly targeting smaller ports in other EU countries and countries bordering the European Union, which may be more vulnerable to drug trafficking activities. This may help explain the fact that despite the large seizures, cocaine purity at the retail level remains high by historical standards and its price is stable. Additionally, there is now a well-established secondary cocaine production industry in Europe, with 34 cocaine laboratories dismantled in 2021, an increase on the previous year. These include large-scale secondary extraction and cocaine hydrochloride manufacturing sites and an additional 14 cutting and packaging locations. The existence of these laboratories is indicative of innovation in trafficking practices where cocaine may be incorporated with other materials creating significant challenges for its detection in commercial shipments.

The historically high seizures of cocaine are an indicator of its widespread availability and raise concerns that this could potentially contribute to increasing levels of consumption and associated harms. Cocaine

is the second most frequently reported drug, both by first-time treatment entrants and in the available data on acute drug toxicity presentations to sentinel hospital emergency departments. European drug checking services, although not nationally representative, reported that cocaine was the most common substance they screened in 2021. The available data also suggest that the drug was involved in about a fifth of overdose deaths in 2021. While not representative of the general population, the detection of cocaine residues in wastewater analysis increased in 37 out of 65 cities with data for both 2022 and 2021. Increased availability also appears to be associated with some signs of a possible diffusion of cocaine use into more marginalised groups, with cocaine injection and the use of crack cocaine reported in some countries. An estimated 7 500 clients received treatment for crack cocaine use in 2021, and this figure appears to be increasing. Stimulants, such as cocaine, are associated with a higher frequency of injection and have been involved in localised HIV outbreaks among people who inject drugs in some parts of Europe over the last decade.

Treating people with different patterns of cocaine use is challenging, whether they are clients that are more socially integrated and involved in casual or episodic use of powder cocaine or more marginalised groups injecting the drug or smoking crack cocaine. Although our understanding of what constitutes effective treatment for stimulant problems is growing, it remains relatively limited. The current evidence available is indicative of the use of psychosocial interventions, including cognitive behavioural therapy and contingency management. Currently, there is insufficient evidence to strongly support any pharmacological treatment, although some potentially useful new pharmacotherapies are in development. Treating cocaine problems among more marginalised groups is often particularly challenging, as clients may also be experiencing problems with a range of other drugs, including opioids or alcohol. For injecting cocaine and smoking crack, existing harm reduction responses, to a large extent those originally developed for opioid problems, still require both further development and scaling-up.

Key data and trends

Prevalence and patterns of cocaine use

- In the European Union, surveys indicate that almost 2.3 million 15- to 34-year-olds (2.3 % of this age group) used cocaine in the last year. Of the 11 European countries that have conducted surveys since 2020 and provided confidence intervals, 5 reported higher estimates than their previous comparable survey, 5 reported a stable trend and 1 a lower estimate.

Dashboard. Prevalence of cocaine use in Europe

This data explorer enables you to view our data on the prevalence of cocaine use by recall period and age range. You can access data by country by clicking on the map or selecting a country from the dropdown menu.

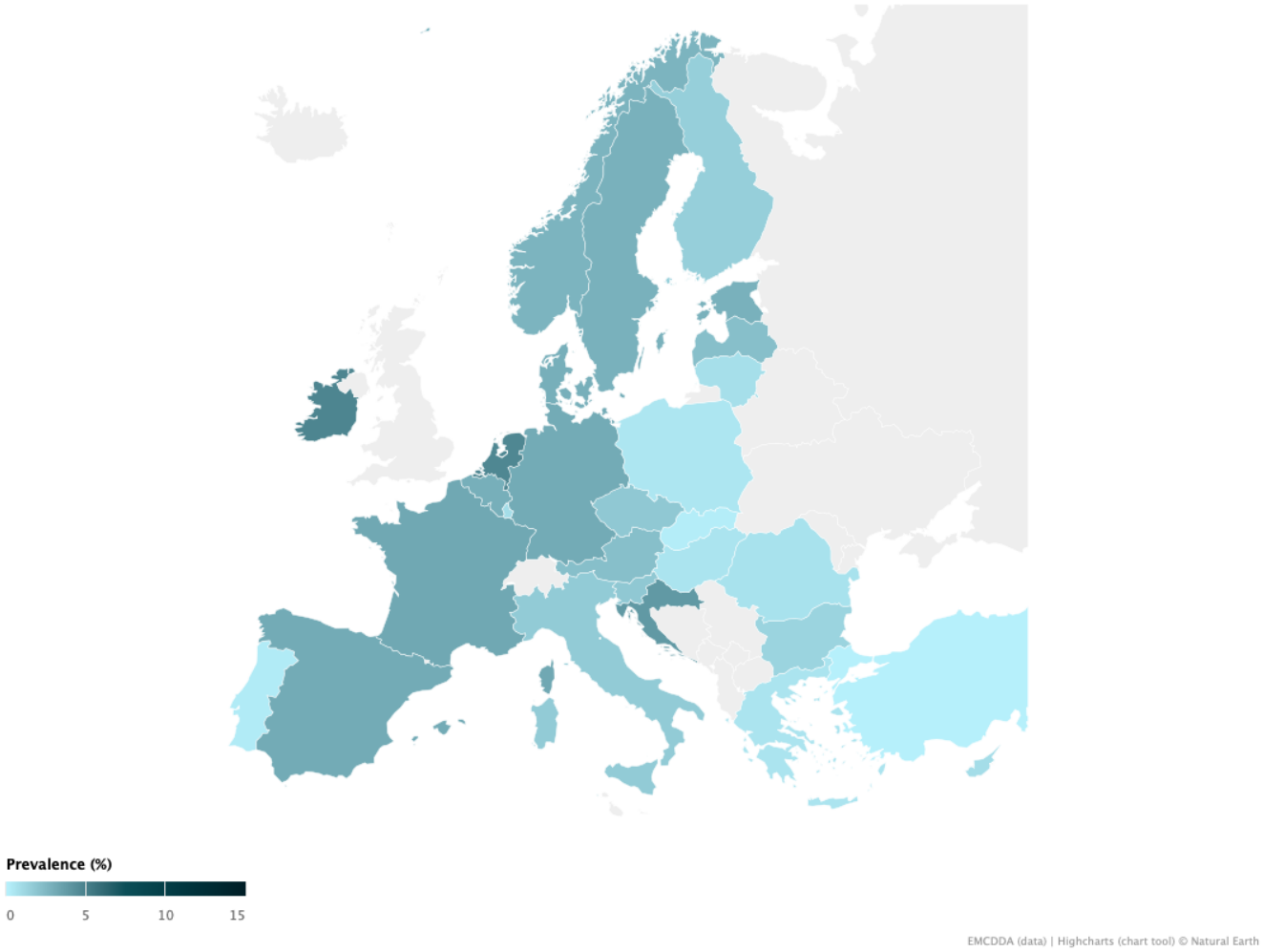
Recall period

Last month | Last year | Lifetime

Age

Young adults (15-34) | Adults (15-64)

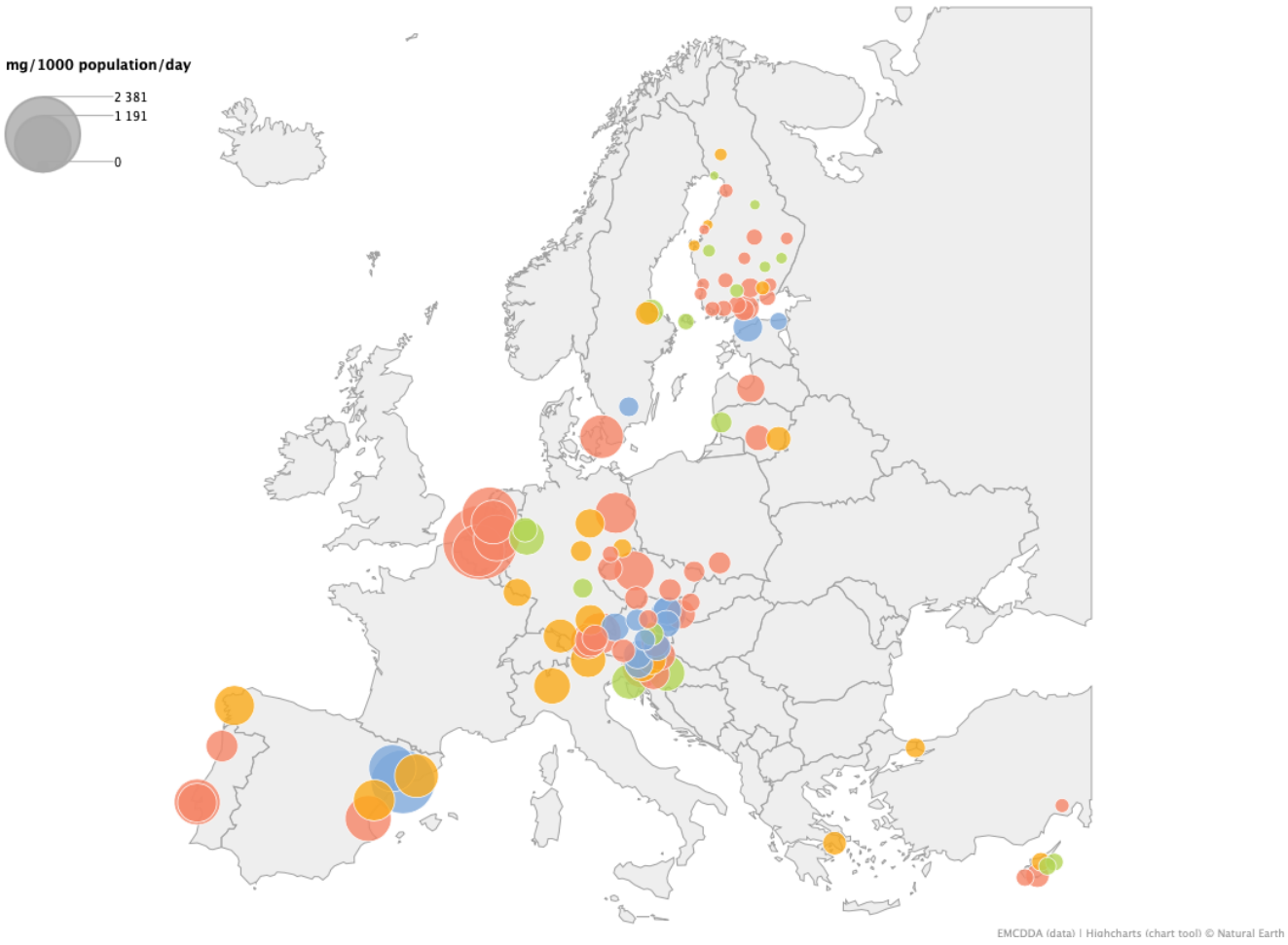
Country



Prevalence data presented here are based on general population surveys submitted to the EMCDDA by national focal points. For the latest data and detailed methodological information please see the Statistical Bulletin 2023: Prevalence of drug use. Graphics showing the most recent data for a country are based on studies carried out between 2013 and 2022. Age ranges are 16–34 for Denmark, Estonia, Sweden and Norway; 18–34 for Germany, Greece, France and Hungary.

- In 2022, cocaine residues in municipal wastewater increased in 37 out of 65 cities with data compared with 2021, while 18 cities reported no change and 10 cities reported a decrease.

Figure. Cocaine residues in wastewater in selected European cities, 2022



Red = increase | Green = decrease | Yellow = stable, with respect to previous value | Blue = no previous data

Mean daily amounts of benzoylecgonine in milligrams per 1000 population. Sampling was carried out over a week in March and April 2022. Taking into account statistical errors, values that differ less than 10% from the previous value are considered stable in this figure. Source: Sewage Analysis Core Group Europe (SCORE).

- Analysis of 1 849 used syringes by the ESCAPE network of 12 cities in 11 EU Member States between 2021 and 2022 found that, overall, a third of syringes contained residues of two or more drug categories, indicating frequent polydrug use or re-use of injecting paraphernalia. The most frequent combination was a mixture of a stimulant and an opioid. Cocaine was detected in over 50 % of syringes analysed in Athens, Cologne, Dublin and Thessaloniki, with a mixture of cocaine and heroin being the most frequent combination found.

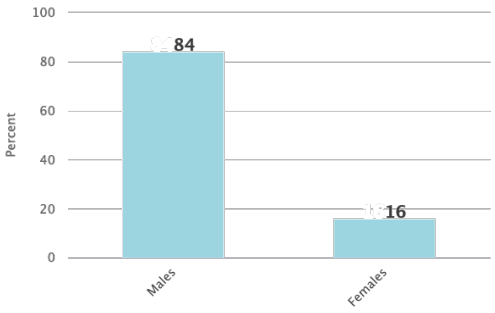
Treatment entry for cocaine use

- Cocaine was the second most common problem drug among people entering specialised drug treatment for the first time in their lives, cited by an estimated 25 000 clients or 21 % of all first-time entrants (see the Users entering treatment for cocaine infographic, below).

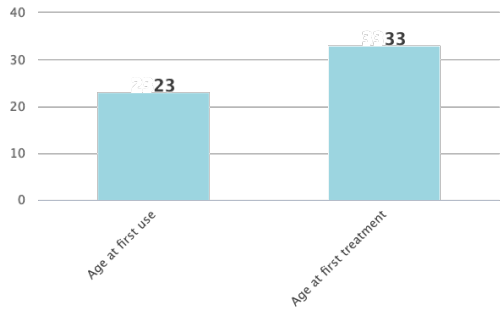
- The latest European data reveal a time lag of 10 years between first cocaine use, on average at the age of 23, and first treatment for cocaine-related problems, on average at the age of 33.

Infographic. Users entering treatment for cocaine in Europe

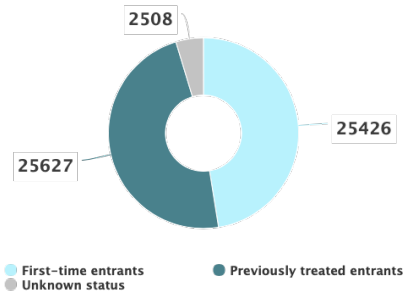
Gender breakdown: all treatment entrants



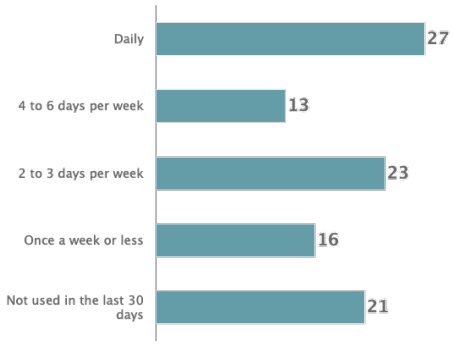
Mean age: all treatment entrants



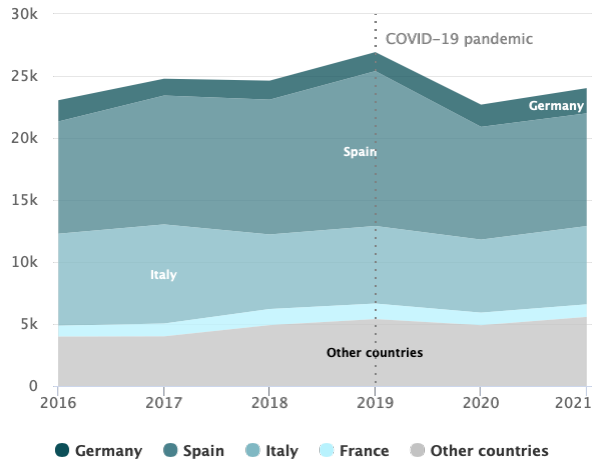
Client status — number of clients



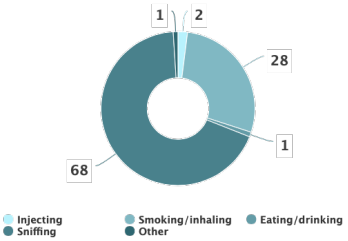
Frequency of use in the last month (%): all treatment entrantsMean use 3.3 days per week



Trends in first-time treatment entrants



Route of administration (%): all treatment entrants



Data are for all treatment entrants with cocaine as the primary drug – 2021 or the most recent year available.

Trends in first-time entrants are based on 25 countries. Only countries with data for at least 5 of the 6 years are included in the trends analysis. Missing values are interpolated from adjacent years. Because of disruptions to services due to COVID-19, data for 2020 and 2021 should be interpreted with caution. Missing data were imputed with values from the previous year for Spain and France (2021) and Germany (2019).

Harms related to cocaine use

- Cocaine was the most common substance reported by Euro-DEN Plus sentinel hospitals in 2021, mentioned in 27 % of acute drug toxicity presentations. Presentations involving cocaine increased by 11 % between 2020 and 2021, with notable increases in both Antwerp (from 167 cases in 2020 to 245 cases in 2021) and Dublin (from 78 in 2020 to 137 cases in 2021). Where recorded, most presentations were associated with co-ingestion of alcohol.
- Among those using the drug, the combined use of cocaine and alcohol is common. The presence of the two substances in the body leads to the formation of cocaethylene in the liver. This increases the potential for adverse health effects, including agitation, psychosis, tachycardia (rapid heartbeat), hypertension (high blood pressure), arrhythmia (abnormal heart rhythm), chest pain due to acute coronary syndrome and stroke. Chronic cocaine use has been associated with an increased risk of coronary artery disease, cardiomyopathy (deterioration in heart muscle function) and stroke.
- Beyond the risks associated with acute toxicity, cocaine is a highly addictive stimulant that can lead to tolerance and dependence. Use of the drug is also associated with an increased risk of death. A recent review of mortality among people with regular or problematic cocaine use found that the risk of death by suicide, accidental injury, homicide and AIDS-related mortality were all elevated compared with age and sex peers in the general population.
- Among 20 European countries providing data for both years, cocaine, mostly in the presence of opioids, was involved in 420 (16.5 %) overdose deaths in 2021 (378 or 13.5 % in 2020). The currently available number of deaths with cocaine involved in 2021 is an underestimate. In Germany, provisional analysis of the data for 2021 suggests that at least one in five drug-induced deaths may involve cocaine, which would add around 370 fatalities to the provisional number for 2021. There are major limitations in the German data, and this number should be interpreted with caution. Recent data are also missing for some countries, including Spain (where 461 cases were reported in 2020) and France (130 cases reported in 2020). This limits the insights on recent developments at a European level.

Crack cocaine

- Just six EU countries accounted for more than 90 % of the estimated 7 500 crack-related treatment entries in 2021, of which 2 600 were first-time entrants. A caveat here is that the term ‘crack' may not be used consistently by all countries.
- Data from drug consumption rooms in 2022 in Lisbon and Porto, Portugal, indicated that crack cocaine, either alone or with heroin, accounted for a significant proportion of the drug consumption episodes facilitated. In both services, half of all crack cocaine consumptions involved smoking and the other half involved injecting crack, alone or with heroin. In Paris, only a small proportion of the facilitated episodes in drug consumption rooms, which only allow injecting and not smoking,

involved crack cocaine alone or with another drug, mostly morphine or methadone. No crack cocaine use was reported by drug consumption rooms in Barcelona, Athens or Bergen in 2022.

- A 2021 analysis of municipal wastewater in 13 European cities, by the EU-funded EUSEME project, found crack residues in all cities on all sampling days, with the highest loads reported in Amsterdam and Antwerp.

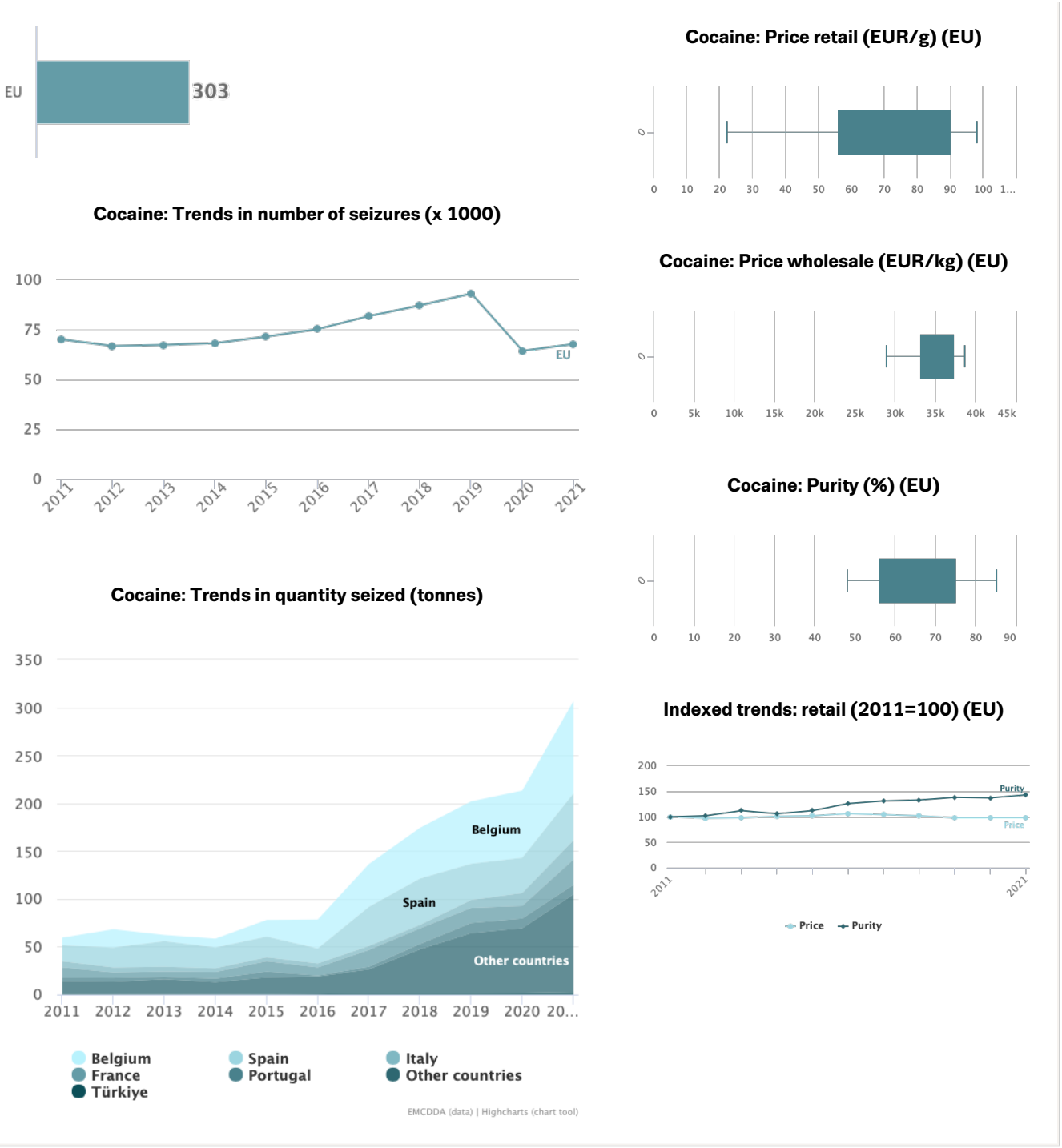
Cocaine market data

- In 2021, EU Member States reported 68 000 seizures of cocaine amounting to a historically high 303 tonnes (up from 211 tonnes in 2020). Belgium (96 tonnes), the Netherlands (72 tonnes) and Spain (49 tonnes) accounted for almost 75 % of the total quantity seized (see the Cocaine market infographic, below).
- The average purity of cocaine at the retail level ranged from 48 % to 85 % across Europe in 2021, with half of the countries reporting an average purity between 56 % and 75 %. The purity of cocaine has been on an upward trend over the past decade, and in 2021 reached a level 43 % higher than the index year of 2011 (see the Cocaine market infographic, below).
- Spain reported dismantling 16 cocaine laboratories, Belgium reported 11 sites related to cocaine processing and the Netherlands dismantled 7 cocaine secondary extraction laboratories (some of which were large-scale sites). An additional 14 cutting or packaging sites were discovered in the Netherlands. Large seizures of the precursor chemical potassium permanganate were reported by the Netherlands (637 kilograms) and Belgium (387 kilograms).
- In 2021, cocaine was cited in 65 800 use or possession offences, about 9 % of all such offences for which the drug is known, continuing the upward trend observed over the previous 5 years. After cannabis, cocaine was the second most frequently cited drug in offences related to use or possession.

Infographic. Cocaine market in Europe

Geographical coverage (selected graphs)

EU EU+2



EU+2 refers to EU Member States, Norway and Türkiye.

Price and purity: mean national values – minimum, maximum and interquartile range. Countries vary by indicator.

- Cocaine was the drug most frequently submitted for testing to drug checking services in 15 cities in five EU countries in the first half of 2021 (23 %) and the first half of 2022 (22 %).

Source data can be found in the online version.

5. Synthetic stimulants – the current situation in Europe

Amphetamine, methamphetamine and, more recently, synthetic cathinones are all synthetic central nervous system stimulants available on the drug market in Europe. On this page, you can find the latest analysis of the drug situation for synthetic stimulants in Europe, including prevalence of use, treatment demand, seizures, price and purity, harms and more

Last update: *16 June 2023*

Diversity increasing in the availability and use of stimulants in Europe

Amphetamine, methamphetamine and, more recently, synthetic cathinones are all synthetic central nervous system stimulants available on the drug market in Europe. Historically, amphetamine use has always been the most common, with the availability of methamphetamine and synthetic cathinones being more limited in most countries. There are, however, increasing signals that synthetic stimulants are now contributing more significantly to Europe's overall stimulant problem. This could have important implications. Synthetic drug production trends can be extremely dynamic, and consumers may view different stimulants as functionally equivalent and be amenable to trying new products based on their availability in the market. There are concerns about increased threats to health and social problems that may be associated with the more widespread availability and use of these substances. At the same time, current information tools are generally not sufficiently developed to track trends in use or related problems associated with changing patterns of synthetic stimulant use. Improving our ability to monitor and respond more rapidly to developments in this area is therefore likely to be a growing priority for the future.

Methamphetamine and synthetic cathinones are chemically similar to amphetamine, but are not necessarily equivalent in respect to the risk they pose to public health. The more widespread use of cathinones, for example, is a relatively new development, and we currently lack a robust evidence base to understand the potential health risks of this phenomenon or what might constitute appropriate interventions. Methamphetamine is available in high-purity forms that are smokable and there are particular health concerns associated with the use of this drug by this mode of administration. All of these substances may also be available in similar-looking powders or pills, meaning consumers may be unaware of what particular stimulant or mixture of substances they may be consuming, and these drugs can also be found in tablets marketed as MDMA. This means that forensic and toxicological analysis is particularly important for understanding both consumption trends and adverse health outcomes.

A more general concern is that all of the stimulants discussed here are also, to some extent, associated with behaviours that can pose high risks to health and mortality, which include overdoses, acute and chronic mental health problems and infectious diseases. Problematic and intensive patterns of stimulant use, such as the combination of high-risk drug taking and risky sexual behaviours, known as ‘chemsex', have also been documented in some populations. There are also particular concerns about the injecting of stimulants, which has been associated with a higher risk of HIV transmission. This could

be explained by more frequent use, sharing of injecting material and risky sexual behaviours among people who inject stimulants.

In the last decade, six large European cities, across five countries, have reported localised HIV outbreaks associated with stimulant injecting, mainly among marginalised people who inject drugs involved in open drug scenes. Syringe residue analysis conducted by the ESCAPE network between 2021 and 2022 confirm the presence of stimulants, such as amphetamine and synthetic cathinones, in many injecting drug scenes. Reports from the Euro-DEN Plus sentinel hospital emergency network in 2022 highlight the role that synthetic stimulants can play in acute drug toxicity presentations to emergency departments.

While methamphetamine is less commonly used and is less visible in available data sources, there are growing signals that the production of the drug is increasing in Europe and that the drug is diffusing to more countries. Historically, the use of this drug has been most commonly observed in Czechia and Slovakia and, more recently, some neighbouring countries. While not representative of the general population, data from wastewater analysis indicate that two thirds of the 59 European cities with data for 2021 and 2022 saw an increase in the methamphetamine residues detected.

Available data on the production and trafficking of these stimulants reveal the changing dynamics of the illicit stimulant trade. While the number of dismantled amphetamine production laboratories in Europe remained constant at about 100 between 2020 and 2021, the quantity of the drug seized in Europe fell by two thirds in 2021. It has been suggested that this fall in seizures may be indicative of a decline in production, possibly resulting from producers switching to other stimulants, such as methamphetamine, that can be highly profitable when trafficked to non-EU markets. In the most recent data, a decline was also observed in the quantity of methamphetamine seized in Europe, alongside a relatively stable number of drug production sites being detected, which included medium- and large-scale sites operating at a capacity that suggests production for export markets. Overall, however, data availability issues as well as the likely impact of the pandemic on both market developments and reporting mean that caution is needed in interpreting the information available, and more work is needed to track production trends and analyse their implications for both public health and security.

The information available does suggest, however, that synthetic cathinones are increasingly trafficked to Europe from India in large shipments. At the same time, they are also produced in Europe, notably in Poland, which accounted for 14 of the 15 laboratories dismantled in 2021. Given the volumes of precursor chemicals seized and the interception of unregulated alternative chemicals, it appears likely that large-scale production for both the European and other markets may be taking place.

In summary, as the use of illicit stimulants can lead to a range of health problems, these substances continue to represent a challenge for monitoring efforts, policymakers and service providers in Europe. More frequent injecting associated with stimulant use and the potentially much more severe health complications from injecting and smoking methamphetamine mean that any increase in consumption, especially among vulnerable groups, could represent a growing challenge for harm reduction and emergency health services.

Key data and trends

Prevalence and patterns of synthetic stimulants use

- Surveys, which group amphetamine and methamphetamine together, conducted by 25 EU countries between 2016 and 2022 suggest that 1.3 million young adults (15 to 34) used amphetamines during the last year (1.3 % of this age group). Of the 11 European countries that have conducted surveys since 2020 and provided confidence intervals, 1 reported higher estimates than their previous comparable survey, 9 reported a stable trend and 1 a lower estimate (see the Prevalence of amphetamines use in Europe dashboard, below).
- Estimates of high-risk methamphetamine use vary between countries, ranging from 0.37 per 1 000 population (corresponding to 225 high-risk users) in Cyprus to 5.22 per 1 000 (34 700 high-risk users) in Czechia, with 2.9 per 1 000 (10 624 high-risk users) in Slovakia.
- In the 2021 European Web Survey on Drugs, a non-representative survey of people who use drugs, 4 % of respondents reported having used synthetic cathinones in the last 12 months.

Dashboard. Prevalence of amphetamines use in Europe

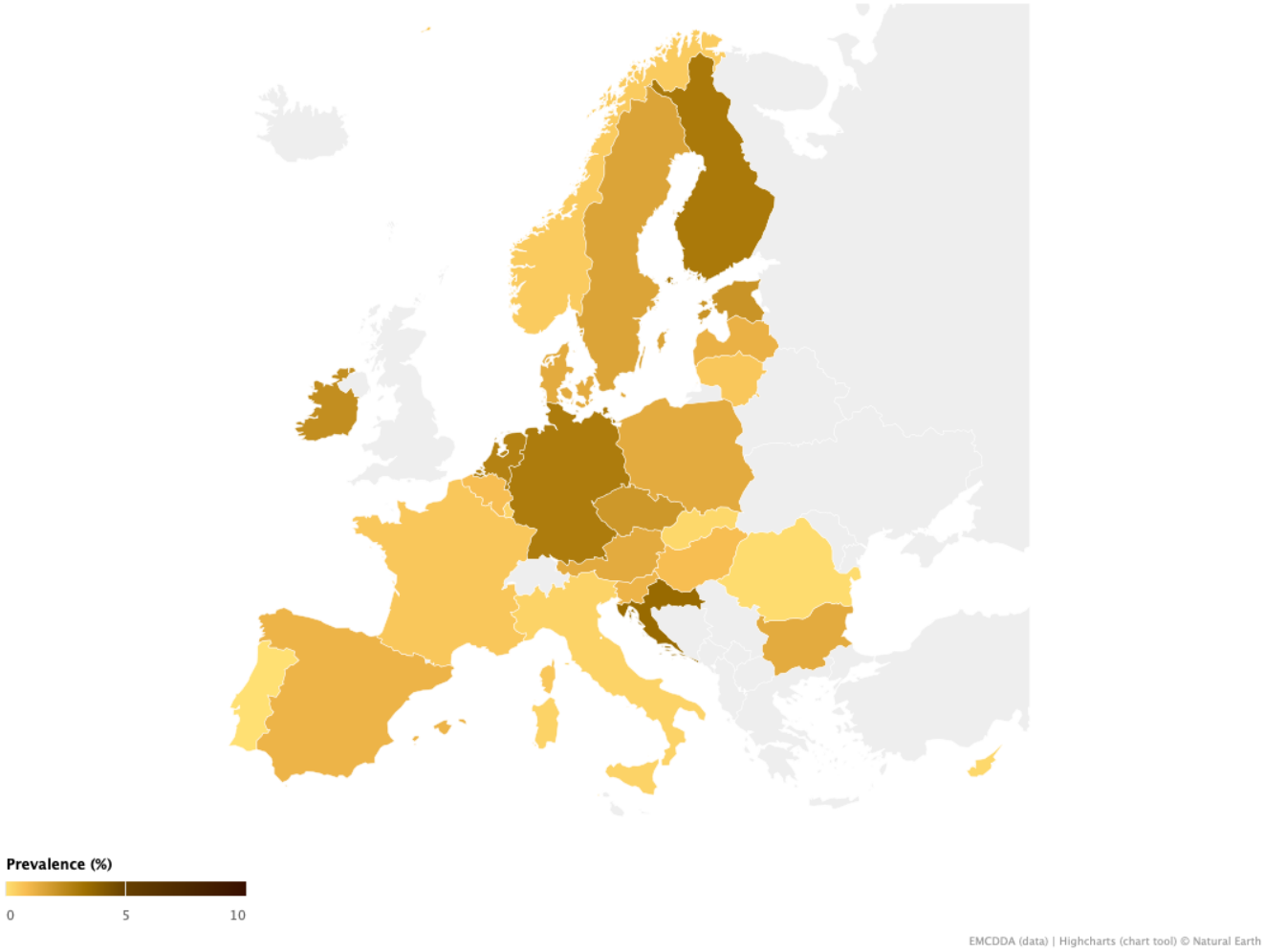
Recall period

Last month | Last year | Lifetime

Age

Young adults (15-34) | Adults (15-64)

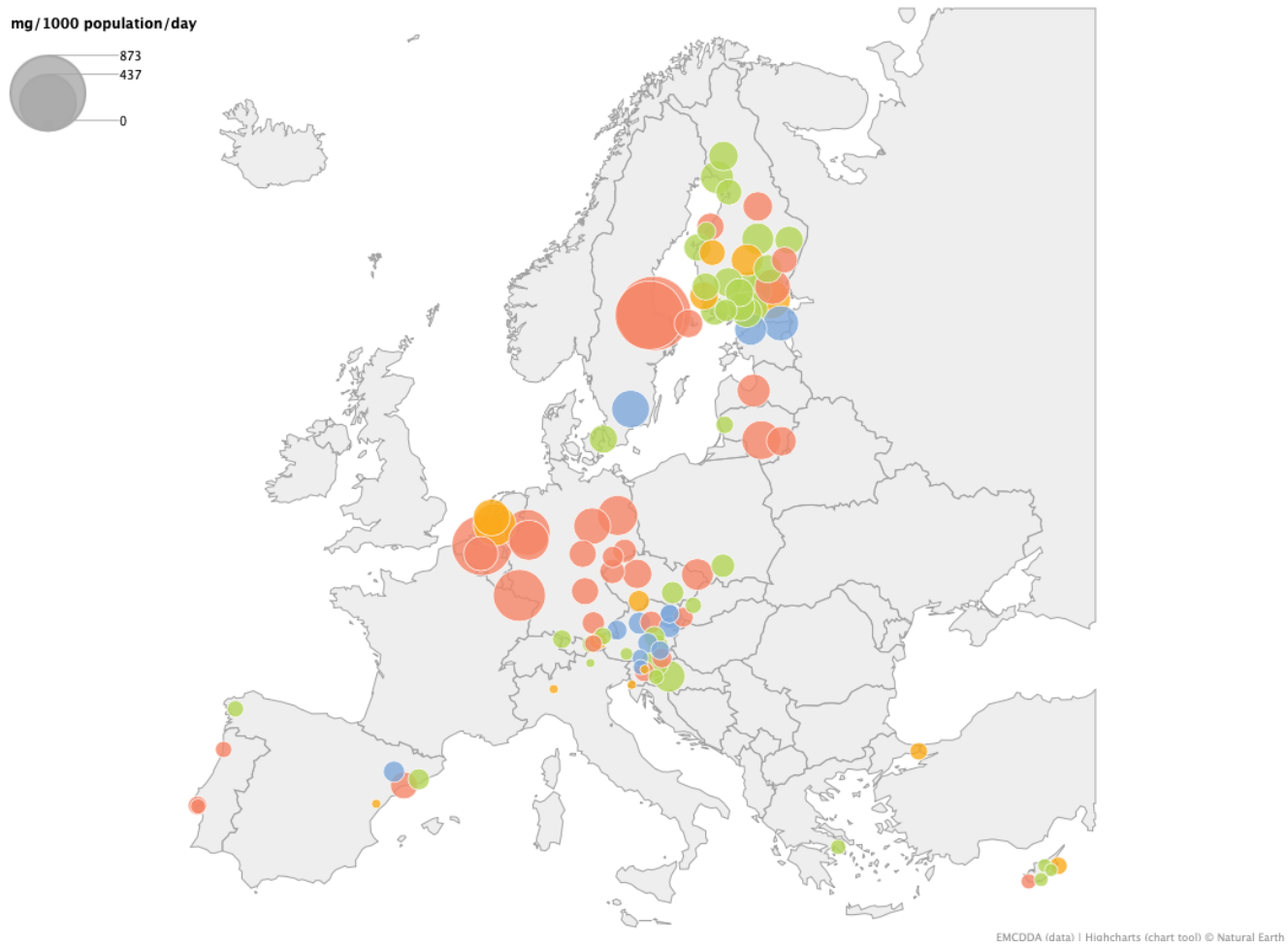
Country



Prevalence data presented here are based on general population surveys submitted to the EMCDDA by national focal points. For the latest data and detailed methodological information please see the Statistical Bulletin 2023: Prevalence of drug use. Graphics showing the most recent data for a country are based on studies carried out between 2013 and 2022. Age ranges are 16–34 for Denmark, Estonia and Norway; 17–34 for Sweden; 18–34 for Germany, Greece, France and Hungary.

- Of the 54 cities with data on amphetamine residues in municipal wastewater for 2021 and 2022, 20 reported an increase, 9 a stable situation and 25 a decrease.
- Of the 59 cities that have data on methamphetamine residues in municipal wastewater for 2021 and 2022, 39 reported an increase, 6 a stable situation and 14 a decrease.

Figure. Amphetamine and methamphetamine residues in wastewater in selected European cities: changes between 2021 and 2022



Red = increase | Green = decrease | Yellow = stable, with respect to previous value | Blue = no previous

data

Mean daily amounts of amphetamine and methamphetamine in milligrams per 1000 population. Sampling was carried out over a week in March and April 2022. Taking into account statistical errors, values that differ less than 10 % from the previous value are considered stable in this figure. Source: Sewage Analysis Core Group Europe (SCORE).

Treatment entry for use of synthetic stimulants

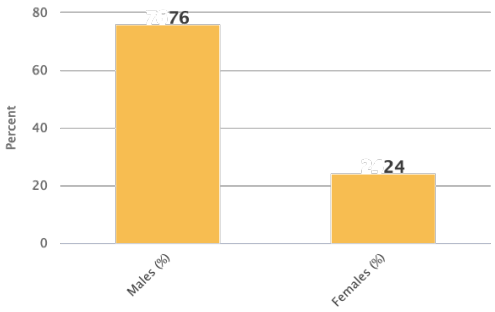
- More than 10 000 clients are estimated to have entered specialised drug treatment in Europe in 2021 reporting amphetamine as their primary drug, half of them (5 000) being first-time clients (see the Amphetamine and methamphetamine users entering treatment in Europe infographic, below).
- In 2021 or the most recent year available, amphetamine or methamphetamine clients accounted for at least 15 % of first-time treatment entrants in Bulgaria, Czechia, Estonia, Latvia, Poland, Slovakia, Finland and Türkiye.
- Treatment entrants citing methamphetamine as their main problem drug are concentrated in Czechia, Germany, Slovakia and Türkiye, which together accounted for 92 % of the estimated 10 800 methamphetamine clients entering treatment in 2021, 5 200 of whom were first-time clients. Increased methamphetamine production in Europe and increased trafficking of the drug from Afghanistan may have contributed to increased use and treatment entries in these countries. In addition, drug consumption facilities in Athens and Barcelona observed an increase in the number of clients reporting methamphetamine smoking in the second half of 2022.

Infographic. Amphetamine and methamphetamine users entering treatment in Europe

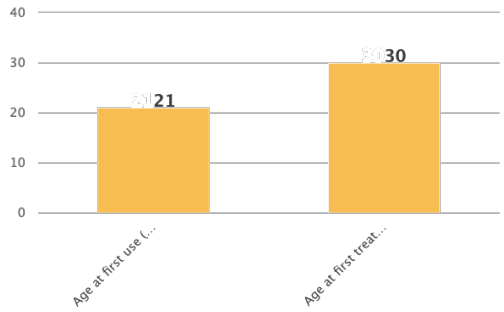
Substance

Amphetamine | Methamphetamine

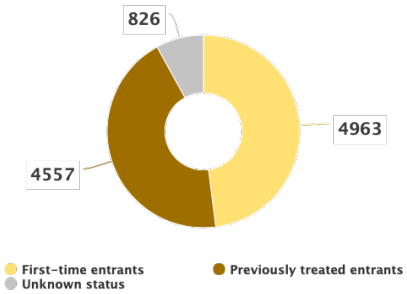
Gender breakdown: all treatment entrants



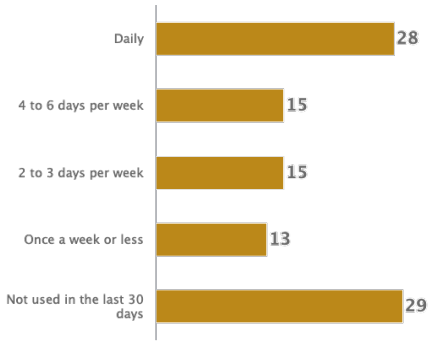
Mean age: all treatment entrants

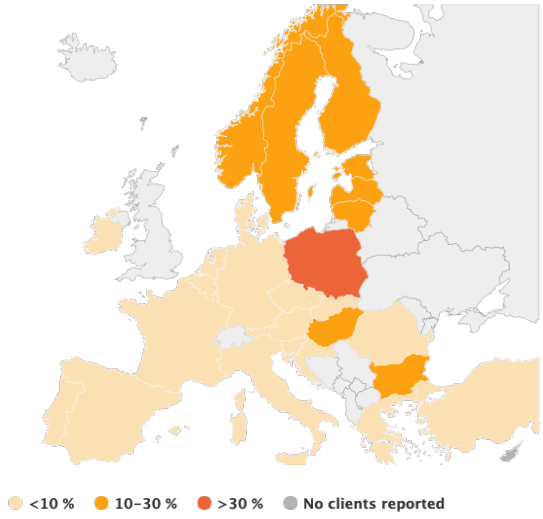


Client status — number of clients

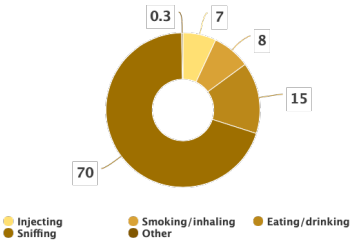


Frequency of use in the last month (%): all treatment entrantsMean use 3.3 days per week





Route of administration: all treatment entrants (%)



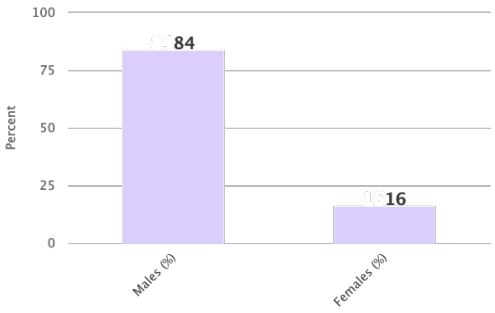
Apart from the map, data are for all treatment entrants with amphetamine or methamphetamine as the primary drug – 2021 or the most recent year available.

Data in the map are for 2021 or the most recent year available: Czechia, Spain, France, 2020; Netherlands, 2015. For amphetamine, data for Sweden and Norway relate to clients citing stimulants other than cocaine as primary drug.

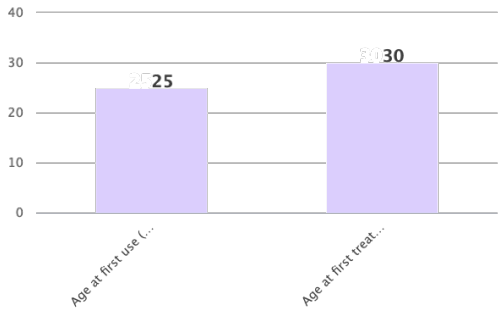
- Available data from countries that report treatment entrants for synthetic cathinones show an increase from 437 clients in 2016 to 686 clients in 2021, 83 % of whom are accounted for by France (220 clients), Poland (245 clients) and Spain (104 clients). The share of synthetic cathinones entrants among all treatment entrants with stimulants other than cocaine as their primary drug increased to 3 % in 2021 from 1.7 % in 2016.

Infographic. Synthetic cathinone users entering treatment in Europe

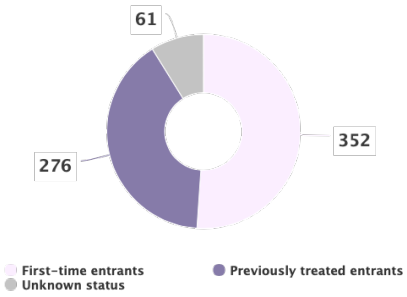
Gender breakdown: all treatment entrants



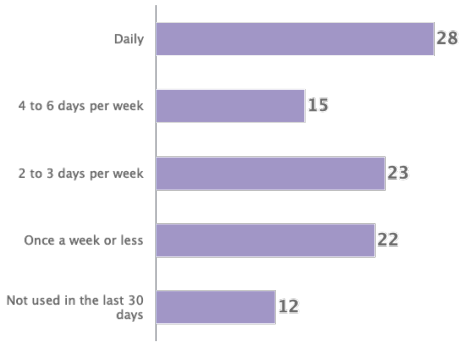
Mean age: all treatment entrants

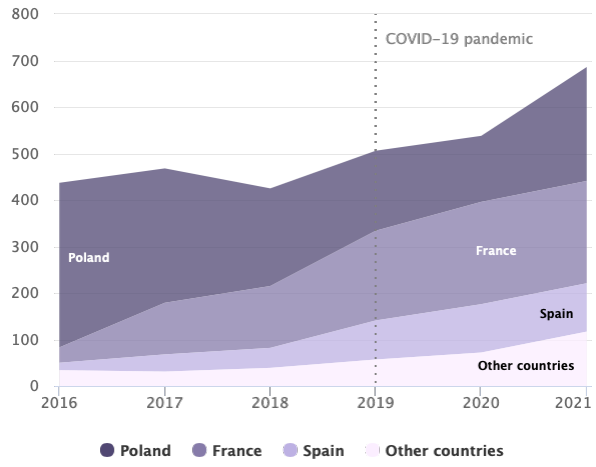


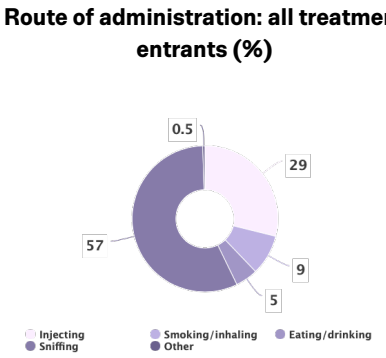
Client status — number of clients



Frequency of use in the last month (%): all treatment entrantsMean use 3.3 days per week







Data on entrants into treatment are for 2021 or the most recent year available. Trends in treatment entrants are based on 22 countries. Only countries with data for at least 5 of the 6 years are included in the trends graph. Missing data were imputed with values from the previous year for Spain and France (2021) and Germany (2019). Because of disruptions to services due to COVID-19, data for 2020 and 2021 should be interpreted with caution.

Injecting use of synthetic stimulants

- Injecting is reported as a common route of administration by those entering treatment with amphetamine as their primary drug in a number of countries, including Estonia (86 %), Finland (78 %), Norway (73 %), Sweden (57 %) and Latvia (54 %).
- About 7 % of amphetamine clients entering drug treatment in Europe in 2021, or the most recent year available, reported injecting as the main route of administration, while 70 % reported sniffing, 8 % reported smoking and 15 % reported oral consumption of the drug. Three countries, Belgium, Germany and Poland, accounted for 62 % of the treatment entrants.
- Analysis of 1 849 used syringes by the ESCAPE network of 12 cities in 11 EU Member States between 2021 and 2022 found that overall, a third of syringes contained residues of two or more drug categories. The most frequent combination was a stimulant and an opioid. Synthetic cathinones were found in used syringes collected in Paris (89 %), Budapest (34 %), Helsinki (23 %) and Tallinn (19 %). The synthetic cathinones 3-MMC and 3-CMC were detected in Paris, Dublin (3-MMC only) and Prague (3-CMC only).

Harms related to use of synthetic stimulants

- In 2021, amphetamine was the fifth most common substance reported by 22 Euro-DEN Plus hospitals located in 16 EU countries and Norway. It was present in 11 % (596) of acute drug toxicity presentations.
- Methamphetamine was the twelfth most common substance reported by 22 Euro-DEN Plus hospitals in 2021, present in 2.5 % (142) of acute drug toxicity presentations (2 % in 2020).

- In 2021, the cathinone 3-MMC was involved in 68 acute drug toxicity presentations in 5 Euro-DEN Plus hospitals, with increases in Paris (17 to 33 cases) and in Amsterdam (6 to 18 cases).
- In 2021, 18 countries reported 687 drug-induced deaths caused by amphetamines – post-mortem findings group amphetamine and methamphetamine together.
- In the 7 EU countries reporting data for both years, drug-induced deaths involving synthetic cathinones increased from 14 cases in 2020 to 26 cases in 2021. France reported an additional 11 synthetic cathinone-related deaths in 2020.

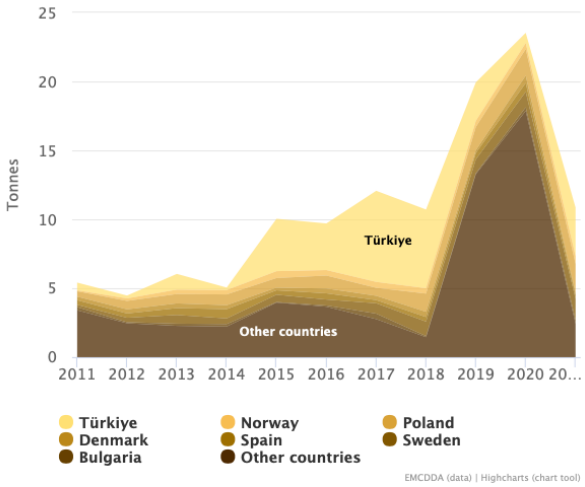
Synthetic stimulants market data

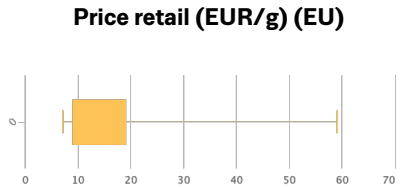
- In 2021, EU Member States reported 22 000 seizures of amphetamine, amounting to 7 tonnes (22.3 tonnes in 2020) (see the Amphetamine market in Europe infographic, below). Türkiye seized 3.5 tonnes (0.7 tonnes in 2020), including 13.8 million tablets described as 'captagon' (2.9 million in 2020). The average purity of amphetamine at retail level has increased markedly over the past decade (41 %), while the price has remained relatively stable.

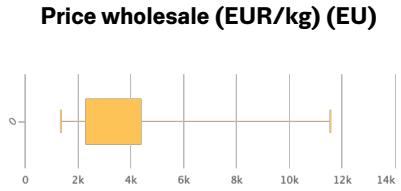
Infographic. Amphetamine market in Europe

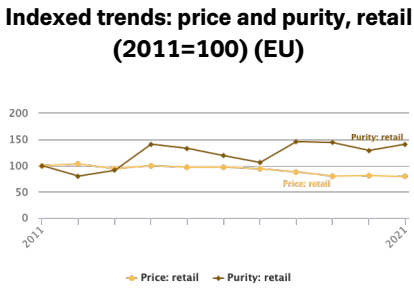
Geographical coverage (selected graphs)

EU EU+2









EU+2 refers to EU Member States, Norway and Türkiye.

Price and purity: mean national values – minimum, maximum and interquartile range. Countries vary by indicator.

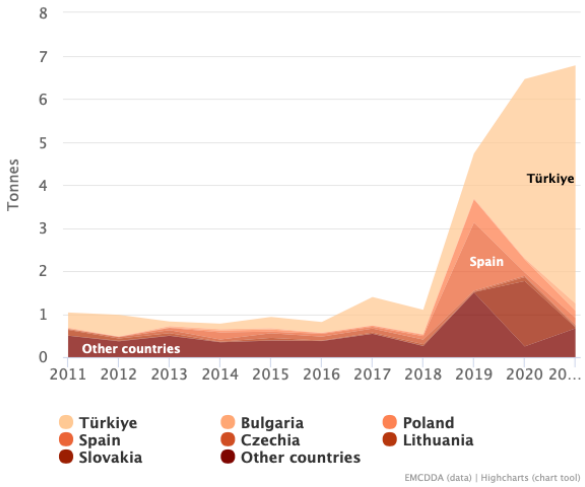
- EU Member States reported 7 000 seizures of methamphetamine amounting to 1.2 tonnes in 2021 (2.3 tonnes in 2020) (see the Methamphetamine market in Europe infographic, below) Türkiye reported 58 000 seizures of methamphetamine in 2021, amounting to 5.5 tonnes (4.2 tonnes in 2020). This increase may indicate that methamphetamine is being trafficked along established heroin trafficking routes to Europe from Afghanistan via Türkiye. The average purity of methamphetamine has increased over the past decade, mostly since 2019 when large-scale European crystal methamphetamine production appeared to become more common, while the price has remained relatively stable, declining slightly in recent years.

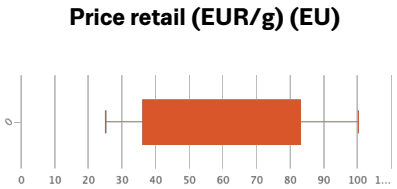
Infographic. Methamphetamine market in Europe

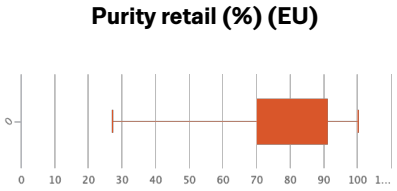
Geographical coverage (selected graphs)

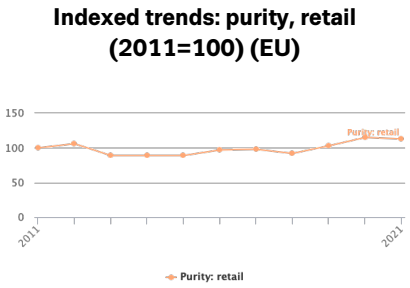
EU EU+2

Methamphetamine









EU+2 refers to EU Member States, Norway and Türkiye.

Price and purity: mean national values – minimum, maximum and interquartile range. Countries vary by indicator.

- About 50 % of the total quantity of new psychoactive substances reported as seized by EU Member States in 2021 in all forms, or 4 tonnes, were synthetic cathinones. Mostly 3-CMC (34 %), 3-MMC (8 %), 4-CMC (6 %) and *N*-ethylhexedrone (2 %).
- In 2021, 105 amphetamine laboratories were reported as dismantled (102 in 2020) by 8 EU Member States: Germany (35), the Netherlands (32), Poland (25), Belgium, Bulgaria and Spain (4), and Sweden (1). In Germany and Poland, the sites included conversion laboratories, where amphetamine oil is processed into powder (28 and 15 sites respectively).
- Twelve EU Member States reported the dismantling of 261 methamphetamine laboratories, including multiple medium- and large-scale facilities in Belgium (9) and the Netherlands (15). In Czechia, 188 mostly small- to medium-scale methamphetamine laboratories were detected in 2021 (182 in 2020). Seizures of the precursors ephedrine and pseudoephedrine amounting to 723 kilograms (both powders and tablets) were reported by 15 EU Member States in 2021 (955 kilograms by 12 EU Member States in 2020).
- In 2021, 15 synthetic cathinone production sites, some of which are large-scale, were dismantled in the European Union (18 in 2020), 14 in Poland and 1 in the Netherlands. At the site of the MDMA laboratory found in France in 2021, 3-MMC was also being processed. Seizures of synthetic cathinone precursors amounted to 555 kilograms in 2021, of which more than half was seized in Poland (311 kilograms).

- In 2019, Dutch police seized 350 kilograms of the uncontrolled 3-MMC chemical analogue *N*-acetyl-3-MMC, of Indian origin, likely intended for post-import conversion to the controlled drug 3-MMC.
- While not representative of national drug markets, over 60 % of amphetamine samples screened by European drug checking services in 2021 contained an adulterant. Among the adulterated samples, caffeine was present in up to 50 %, while various other adulterants were found in approximately 5 % of the samples.

Source data can be found in the online version

6. MDMA – the current situation in Europe

MDMA is a synthetic drug chemically related to the amphetamines, but with somewhat different effects. In Europe, MDMA use has generally been associated with episodic patterns of consumption in the context of nightlife and entertainment settings. On this page, you can find the latest analysis of the drug situation for MDMA in Europe, including prevalence of use, seizures, price and purity and more.

This page is part of the **European Drug Report 2023**, the EMCDDA's annual overview of the drug situation in Europe.

Last update: *16 June 2023*

User awareness of MDMA product strength remains a concern

MDMA is a synthetic drug chemically related to the amphetamines, but with somewhat different effects. In Europe, MDMA use has generally been associated with episodic patterns of consumption in the context of nightlife and entertainment settings. Reported use of the drug appeared to decline temporarily during periods of social distancing during the early phases of the COVID-19 pandemic. The currently available data would, however, suggest an overall relatively stable level of consumption but with national variations in the recent trends observed and the caveat that overall supply side indicators are suggestive of a slight recent decline in availability. About half of the European cities reporting wastewater analysis found an increase in MDMA residues between 2021 and 2022, although in most other cities some decline was noted.

Overall, available indicators suggest that MDMA production continues within Europe, both for domestic consumption and for export to non-EU markets. The information available is strongly suggestive that most MDMA production continues to be largely concentrated in or around the Netherlands. There are some signs of a reduction in the volume being manufactured in the most recent data. An important caveat here is that this information mostly covers the first years of the pandemic and needs to be interpreted with caution. The number of MDMA laboratories dismantled in the European Union decreased in 2021 compared with 2020, while seizures of precursor chemicals for manufacturing MDMA increased in 2021. In 2021, the quantity of MDMA tablets seized in the European Union declined

by a quarter and the quantity of MDMA powder seized declined slightly. In addition, while overall the average MDMA content of tablets and purity of powders remained stable in 2021, a recent decrease in the MDMA content of ecstasy tablets was noted in some important source countries, most notably the Netherlands.

With a typical MDMA content of 150 to 170 milligrams, the overall strength of tablets available on the retail marketplace still remains high by historical standards. It is difficult to interpret the more recent data with any certainty, but a possible decline in production volumes and some reductions noted in MDMA tablet content may indicate that producers have experienced greater problems sourcing precursor chemicals or that some producers may have switched to producing other substances, either because of market demand or because they are more profitable. It may also reflect a perceived consumer demand for lower-strength products.

The use of MDMA is rarely cited as a reason for entering drug treatment in Europe but acute poisonings and deaths are sometimes associated with the consumption of this substance. The use of MDMA therefore continues to represent an important issue for prevention and harm reduction messaging and interventions.

The availability of higher strength products potentially increases the risk of adverse health outcomes associated with the consumption of this substance. Interestingly, a decline in MDMA-related presentations by a quarter was observed in sentinel hospital emergency departments with data for 2020 and 2021. This data set, however, is difficult to interpret in respect to overall trends, as it is not nationally representative, has limited coverage and may reflect either changes in consumption or reporting during the pandemic.

While it is again difficult to generalise due to limitations in national and European coverage, the available information from drug checking services suggests that MDMA products are generally less subject to adulteration than other illicit drugs they screened in 2021. This does occur however, as illustrated by the inclusion of synthetic cathinones in MDMA tablets observed on some occasions. These sorts of mixtures may also increase the risk to consumers of experiencing unexpected adverse effects and potential harm.

Key data and trends

Prevalence of MDMA use

- Surveys conducted by 26 EU countries between 2015 and 2022 suggest that 1.8 million young adults (15 to 34) used MDMA in the last year (1.8 % of this age group), with 2.0 % (0.9 million) of those aged 15 to 24 years estimated to have used MDMA in the last year.
- No overall trend emerges from the data on MDMA use. Of the 11 European countries that undertook surveys since 2020 and provided confidence intervals, 1 reported higher estimates than their previous comparable survey, 9 reported stable estimates and 1 reported a decrease.

Dashboard. Prevalence of MDMA ('ecstasy') use in Europe

This data explorer enables you to view our data on the prevalence of MDMA use by recall period and age range. You can access data by country by clicking on the map or selecting a country from the dropdown menu.

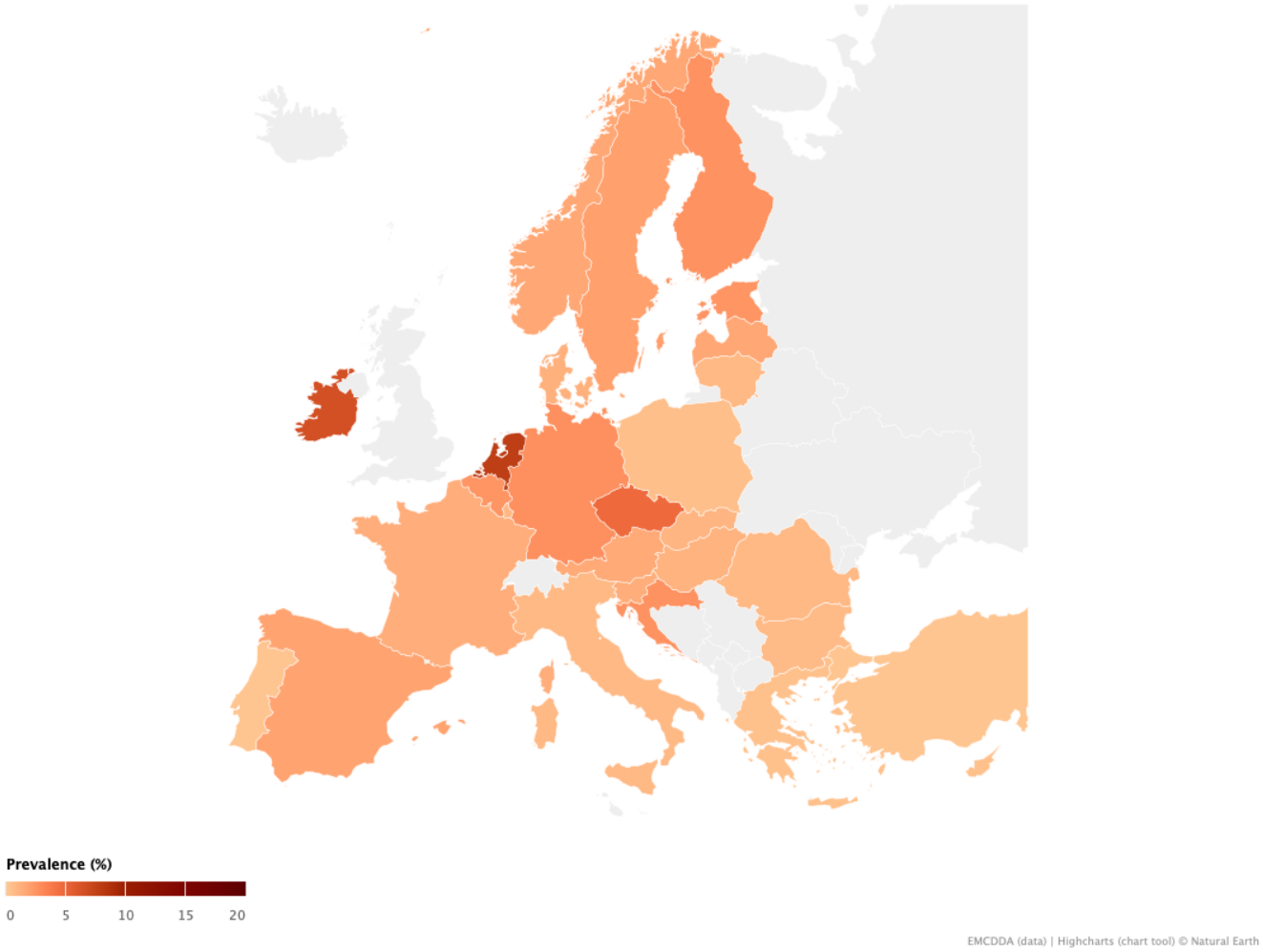
Recall period

Last month | Last year | Lifetime

Age

Young adults (15-34) | Adults (15-64)

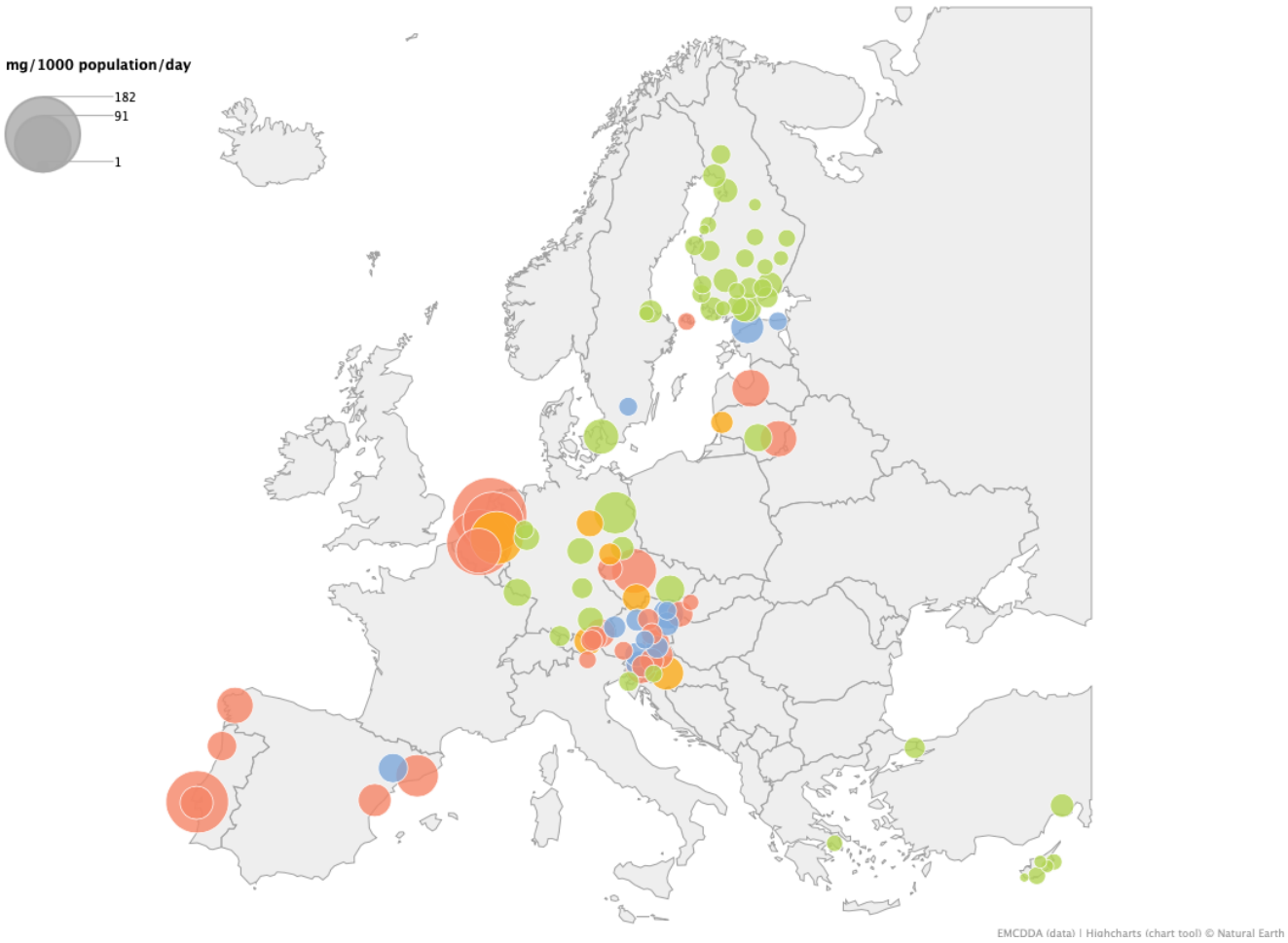
Country



Prevalence data presented here are based on general population surveys submitted to the EMCDDA by national focal points. For the latest data and detailed methodological information please see the Statistical Bulletin 2023: Prevalence of drug use. Graphics showing the most recent data for a country are based on studies carried out between 2013 and 2022. Age ranges are 16–34 for Denmark, Estonia and Norway; 17–34 for Sweden; 18–34 for Germany, Greece, France and Hungary.

- Of the 61 cities that have data on MDMA residues in municipal wastewater for 2021 and 2022, 28 reported an increase, 7 a stable situation and 26 a decrease. All of the 8 cities with data for both years had higher MDMA mass loads in 2022 than in 2011.

Figure. MDMA residues detected in wastewater in selected European cities: most recent data



Red = increase | Green = decrease | Yellow = stable, with respect to previous value | Blue = no previous data

Mean daily amounts of MDMA in milligrams per 1000 population. Sampling was carried out over a week in March and April 2022. Taking into account statistical errors, values that differ less than 10% from the previous value are considered stable in this figure. Source: Sewage Analysis Core Group Europe (SCORE).

Hospital presentations related to MDMA

- MDMA was the seventh most common drug reported by Euro-DEN Plus hospitals in 2021, present in 5 % of acute drug toxicity presentations. Presentations involving MDMA decreased to 276 in 2021 (363 in 2020). Alcohol was co-used in most reported cases. The drugs most commonly found in association with MDMA were cocaine and cannabis, and in some centres also GHB/GBL, amphetamine and synthetic cathinones.

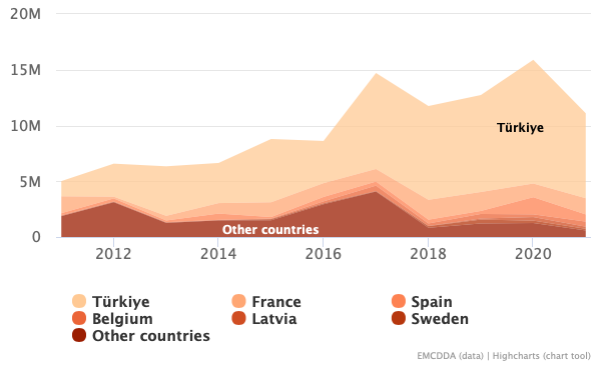
MDMA market data

- In 2021, EU countries reported 10 000 seizures of MDMA (13 000 in 2020). Seizures of MDMA powder in the European Union amounted to 1.6 tonnes (1.6 tonnes in 2020) and seizures of MDMA tablets reached 3.5 million (4.7 million in 2020). Türkiye seized 7.6 million MDMA tablets in 2021 (11.1 million in 2020) (see the MDMA market infographic, below).
- The Netherlands reported 12 MDMA laboratories in 2021 (21 in 2020), with Belgium reporting 2 and France 1. MDMA tableting sites were reported by Poland (2) and Spain (1). Seizures of MDMA precursors increased to 2.5 tonnes in 2021 compared with 2 tonnes in 2020.
- The average MDMA content in tablets and the purity of powders remained stable in 2021, with MDMA tablets seized in Europe containing on average between 161 and 173 milligrams of MDMA, and the average purity of seized MDMA powders ranging from 42 % to 100 %. The Netherlands, however, reported a lower average MDMA content of ecstasy tablets (148 mg per tablet).

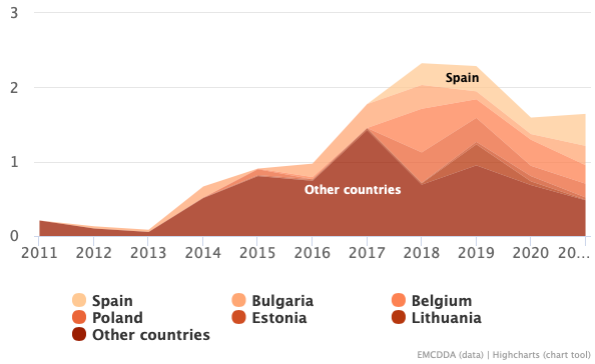
Infographic. MDMA market in Europe

Geographical coverage (selected graphs)

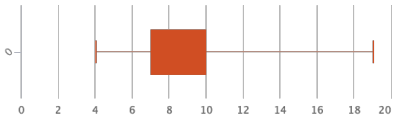
EU EU+2



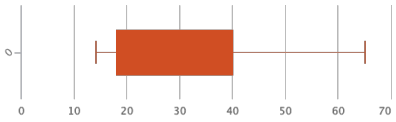
Trends in the quantity of MDMA seized Powder/crystal (tonnes)



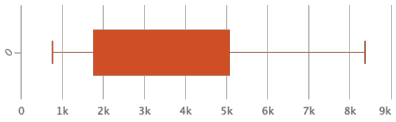
Price retail (EUR/tablet) (EU)



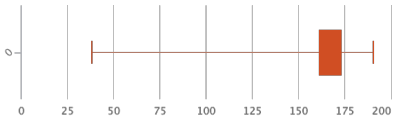
Price retail (EUR/g powder) (EU)



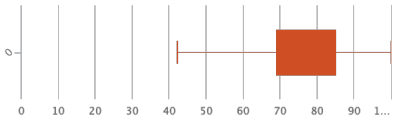
Price wholesale (EUR/1000 tablets) (EU)



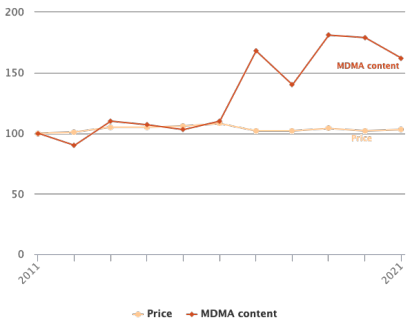
MDMA content retail (mg/tablet) (EU)



Purity powder retail (% MDMA) (EU)



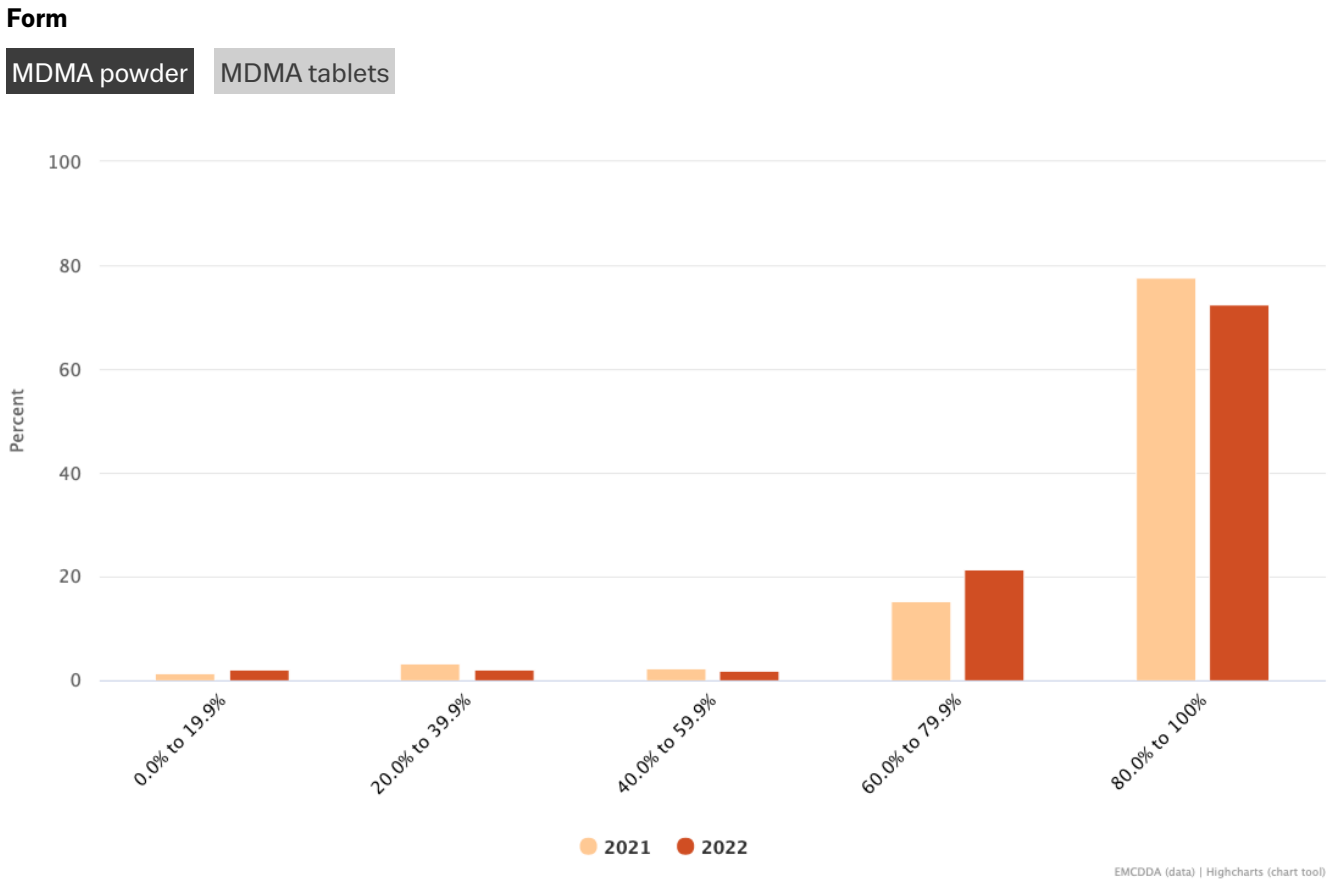
Indexed trends: price and MDMA content, retail (2011=100)



EU+2 refers to EU Member States, Norway and Türkiye.

- During the first half of 2022, the average amount of MDMA per tablet tested by drug checking services in 9 cities in 5 EU Member States was 152 milligrams (166 milligrams in the same period of 2021). The average purity of MDMA powder reported was 78 % (80 % in first half of 2021).

Figure. MDMA purity or content of samples submitted to drug checking services in 2021 and 2022 (percent)



Source data can be found in the online version

Heroin remains Europe's most commonly used illicit opioid and is also the drug responsible for a large share of the health burden attributed to illicit drug consumption. Europe's opioid problem, however, has evolved over the last decade in ways that have important implications for how we respond to problems in this area. On this page, you can find the latest analysis of the drug situation for heroin and other opioids in Europe, including prevalence of use, treatment demand, seizures, price and purity, harms and more.

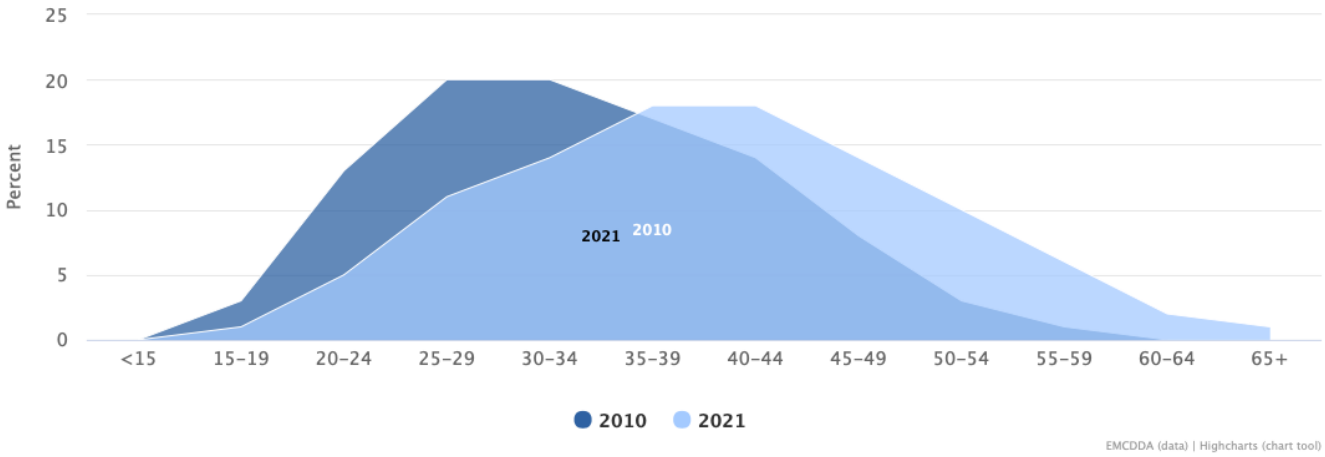
Last update: *16 June 2023*

Heroin and other opioids continue to challenge harm reduction and treatment

Heroin remains Europe's most commonly used illicit opioid and is also the drug responsible for a large share of the health burden attributed to illicit drug consumption. Europe's opioid problem, however, has evolved over the last decade in ways that have important implications for how we respond to problems in this area.

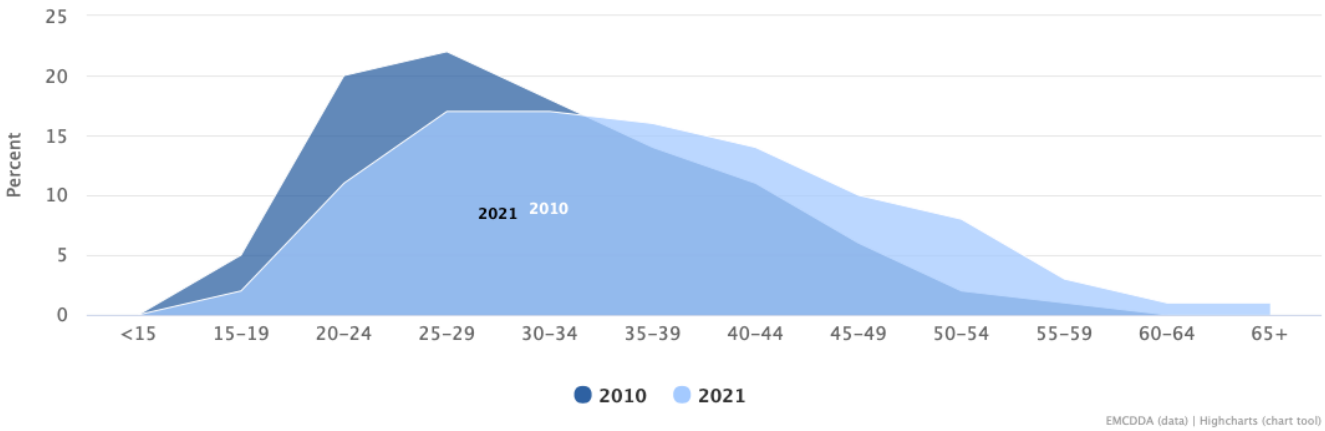
Data on entry to drug treatment, as well as data from other indicators, support the conclusion that Europe's cohort of heroin users is ageing, with little current evidence to suggest that the rate of recruitment into this behaviour is growing. Between 2010 and 2021, the mean age of all clients entering specialist drug treatment for heroin use and for those doing so for the first time increased, as did the proportion of older clients (see the figures Age distribution of all clients entering treatment with heroin as their primary drug, 2010 and 2021 and Age distribution of never previously treated clients entering treatment with heroin as their primary drug, 2010 and 2021, below). These changes in the characteristics of those seeking help raise important policy and service-level challenges. Services are faced with the need to respond to clients who present with a more complex and more chronic set of mental and physical health, employment and social care needs. As well as directly responding to drug-related problems, services are also increasingly faced with the need to provide care for older opioid users who may require additional support to prevent or treat age-related illness and disability. This signals the need to reorient existing models of care and services to these challenges and for increased emphasis on establishing effective multi-agency partnerships and referral pathways with general health and social support services.

Figure. Age distribution of all clients entering treatment with heroin as their primary drug, 2010 and 2021



Based on data from 19 EU countries and Türkiye.

Figure. Age distribution of never previously treated clients entering treatment with heroin as their primary drug, 2010 and 2021



Based on data from 20 EU countries and Türkiye.

While heroin continues to be involved in the majority of opioid-related deaths overall, the number of countries in which this is the case has decreased; at the same time, other opioids have become more prominent. Acute drug toxicity presentations to sentinel hospital emergency departments show that, in 2021, in some cities, other opioids – often those used for opioid agonist treatment – have overtaken heroin as a driver of presentations. In addition, in presentations to treatment services, a move away from injecting (see the Injecting drug use section) among both first-time and previously treated heroin clients has also been observed over the last decade, possibly reflecting the effect of safer-use messaging and harm reduction and prevention efforts (see the figure Trends in the main route of administration of

clients entering treatment with heroin as primary drug, by treatment status). Only 19 % of new clients entering treatment for heroin-related problems now report injection as their main route of administration. This is important, as this mode of administration is particularly associated with a range of negative health outcomes.

Although demand side data are not indicative of any observable increase in heroin prevalence, supply side indicators of availability have returned to or even surpassed the pre-pandemic levels. Following a drop in heroin seizures in 2020, the quantity seized by EU Member States more than doubled in 2021, while seizures in Türkiye increased to record levels (see the Heroin market infographic, below). These increases are associated with large amounts of this drug trafficked in individual shipments, reflecting a more general trend in drug trafficking practices. Despite the greater quantities seized in 2021, there is little evidence to suggest that this has significantly reduced availability, as only marginal changes are observable in indexed trends on retail level prices or purity, and the drug remains relatively affordable by historical standards.

While heroin or, to a lesser extent, medications used for opioid agonist treatment remains the focus for discussion on opioid-related problems in Europe, there are concerns that synthetic opioids may represent a growing threat for the future. New synthetic opioids (see the New psychoactive substances section) currently play a relatively small role in the drug market in Europe overall, although they are a significant problem in some countries. There is, for example, information to suggest an increase during 2022 in availability and harms, including drug-related deaths, associated with synthetic opioids in some northern and Baltic countries. Up to now, most concern in this area has been focused on the availability and use of fentanyl derivatives, such as carfentanil. However, more recently, the appearance of highly potent benzimidazole (nitazene) opioids, including protonitazene, metonitazene and isotonitazene, has been noted, as well as the detection of opioid mixtures containing new benzodiazepines and tranquilisers, albeit on small scale. These substances are discussed in more detail in the new psychoactive substance section of this report.

Key data and trends

Prevalence of opioid use

- Overall, the available indicators suggest that heroin use remained stable in 2021 compared with previous years. It is estimated that 0.33 % of the EU population, around 1 million people, used opioids in 2021.

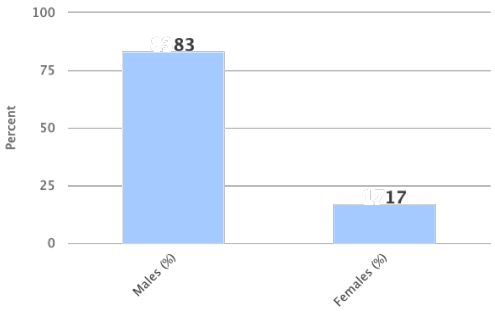
Treatment entry for use of heroin and other opioids

- Opioid use was reported as the main reason for entering specialised drug treatment by 71 000 clients in 2021, representing 25 % of all those entering drug treatment in Europe. Heroin was the primary drug for 10 000 (74 %) of the 16 000 first-time entrants who reported a specific opioid as their main problem drug. Another 2 100 first-time opioid clients did not specify their primary drug.
- Because of disruptions to services due to the pandemic, 2020 and 2021 treatment entry data must be interpreted with caution. Nevertheless, the data suggest that the decline in the number of people entering treatment for heroin use continued. The latest European data reveal a time lag of 13 years between first heroin use, on average at the age of 23, and first treatment for heroin-related problems, on average at the age of 36.

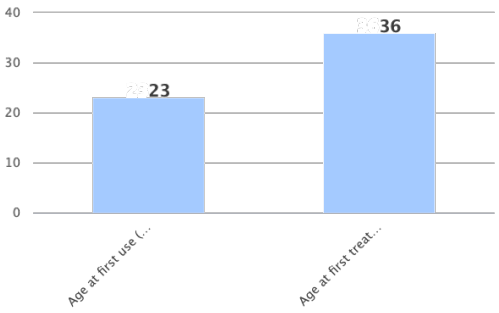
- National data from 23 EU Member States show an estimated 419 000 clients received opioid agonist treatment in 2021 (417 000 in 2020).

Infographic. Users entering treatment for heroin in Europe

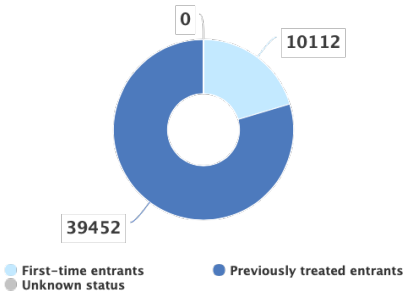
Gender breakdown: all treatment entrants



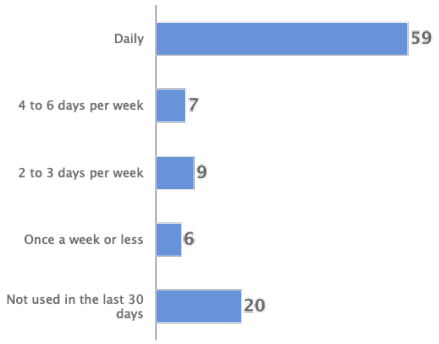
Mean age: all treatment entrants



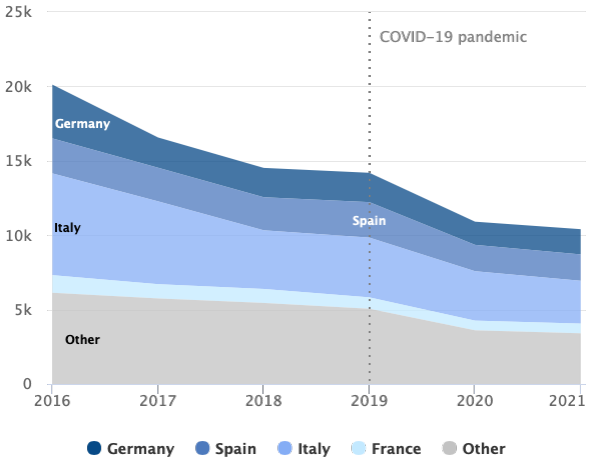
Client status — number of clients



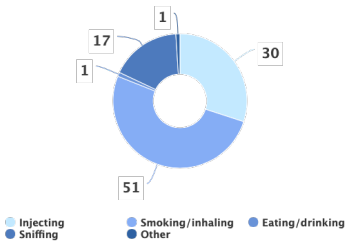
Frequency of use in the last month (%): all treatment entrantsMean use: 4.7 days per week



Trends in first-time treatment entrants



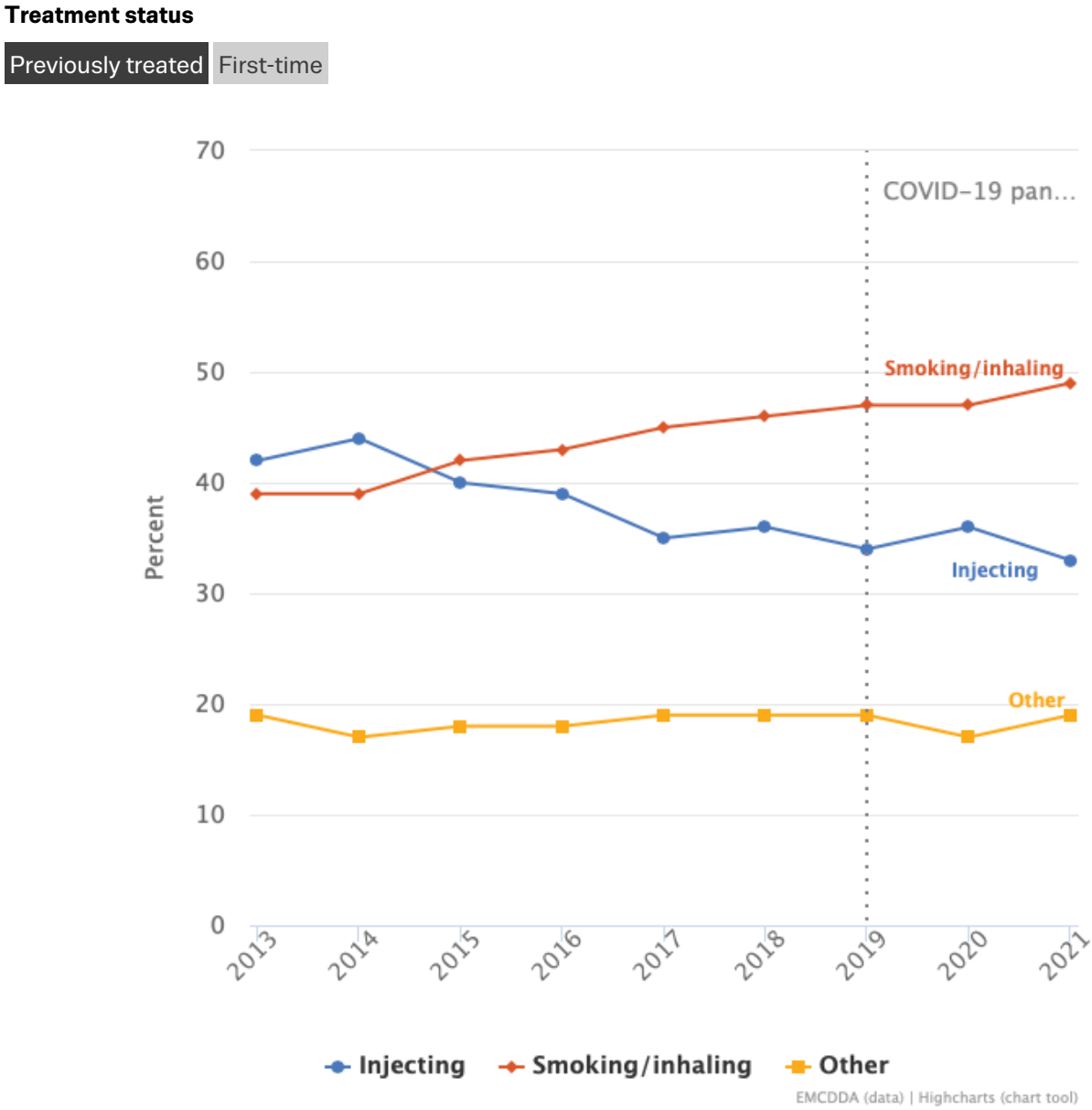
Route of administration (%): all treatment entrants



Data are for all treatment entrants with heroin as the primary drug – 2021 or the most recent year available.

Trends in first-time entrants are based on 25 countries. Data for Germany are for entrants with 'opioids' as primary drug. Only countries with data for at least 5 of the 6 years are included in the trends analysis. Missing values are interpolated from adjacent years. Because of disruptions to services due to COVID-19, data for 2020 and 2021 should be interpreted with caution. Missing data were imputed with values from the previous year for Spain and France (2021) and Germany (2019).

Figure. Trends in the main route of administration of clients entering treatment with heroin as primary drug, by treatment status



'Other routes' includes eating/drinking, sniffing and unspecified routes. Due to COVID-19 restrictions within specialised drug treatment services, 2020 and 2021 data should be interpreted with caution. Trends are based the 19 EU Member States providing data over the period; only those with data for at least 8 of the 9 years are included. Missing values are interpolated from adjacent years.

Harms related to opioid use

- Heroin remained the third most commonly reported drug in acute drug toxicity presentations in Euro-DEN Plus hospitals in 2021, accounting for 15 % of all reported cases. Opioids were found in 19 of the 23 European hospitals participating in 2021 (see the figures Proportion of the acute drug toxicity presentations with heroin involved in 2021, Euro-DEN Plus and Trends in presentations with heroin involved, selected hospitals). Of these, half of the hospitals reported that 6 % or more of their presentations involved heroin (i.e. the median value of heroin presence was 6 %, across the 19 hospitals in 2021). Heroin was reported in a fifth to a quarter of the drug-related presentations at centres in Drogheda and Dublin (Ireland), Ljubljana (Slovenia) and Msida (Malta) and one of the two centres in Oslo (Norway). Most presentations with heroin involved were among middle-aged men: in 12 of the 20 centres in 2021, no cases were aged less than 25 years. In half of the centres, women represented 11 % or less of the presentations with heroin involved. Depending on the centres, the other drugs most commonly reported in these presentations included benzodiazepines, cocaine and amphetamine.
- Opioids were found in an estimated 74 % of fatal overdoses reported in the European Union. It should be noted that multiple drugs are commonly found in toxicology reports from suspected drug-induced deaths.

Figure. Proportion of acute drug toxicity presentations with heroin involved in 2021, Euro-DEN Plus

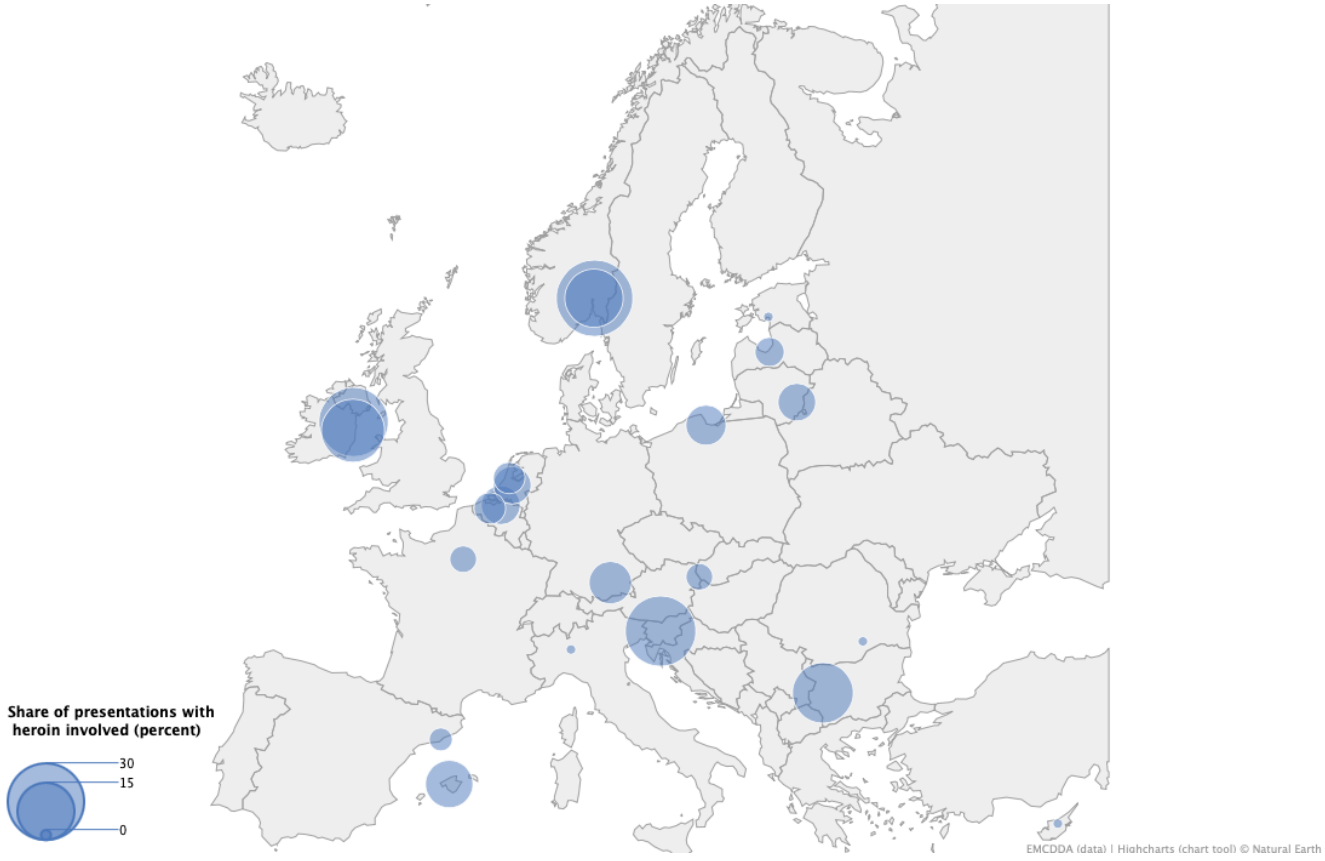
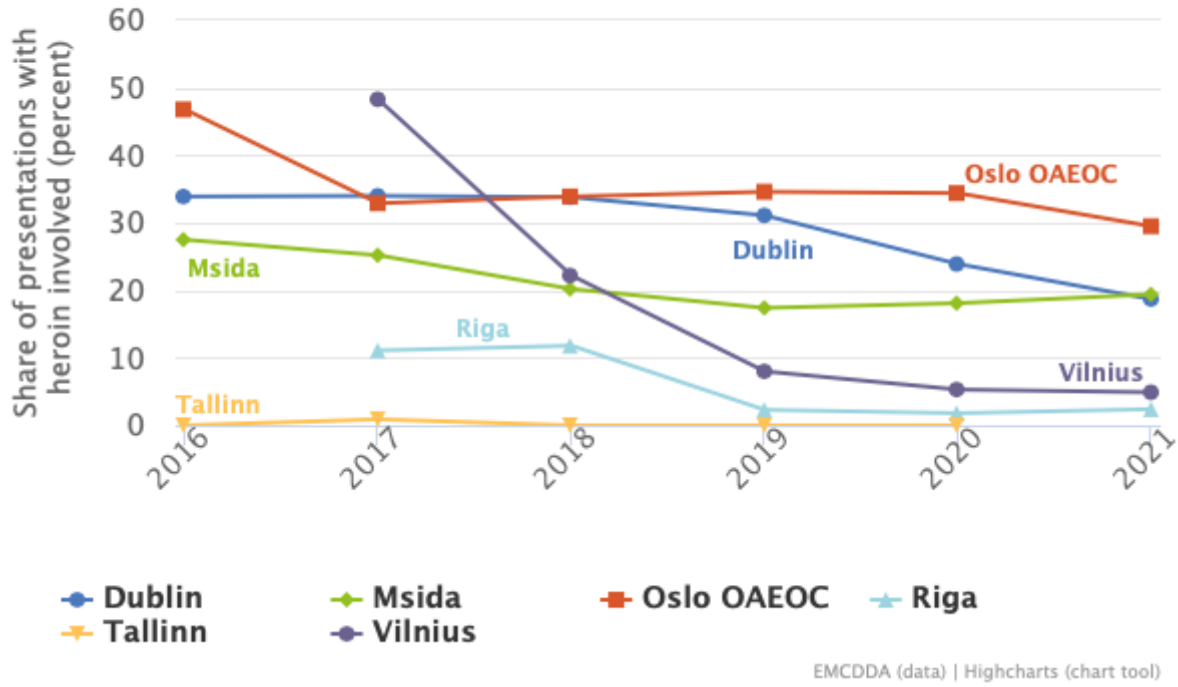


Figure. Trends in presentations with heroin involved, selected hospitals



Source: European Drug Emergencies Network (Euro-DEN Plus).

Heroin and other opioids market data

- EU Member States reported 19 000 heroin seizures amounting to 9.5 tonnes in 2021 (4.4 tonnes in 2020). Belgium (1.5 tonnes), Romania (1.4 tonnes), France (1.3 tonnes), Bulgaria (1.2 tonnes) and Italy (0.6 tonnes) reported large quantities. Türkiye seized over 22.2 tonnes of heroin in 2021 (13.4 tonnes in 2020).
- The average purity of heroin at the retail level ranged from 13 % to 47 % in 2021, with half of the countries reporting an average purity between 16 % and 24 %. Indexed trends indicate the average purity of heroin rose by 38 % between 2011 and 2021, while its price dropped by 16 %. Slight increases in average price and falls in purity are observable in the most recent data (see the Heroin market infographic, below).
- Available data show that almost 11 100 seizures of opioids other than heroin were reported in 2021, amounting to over 1.3 tonnes, almost 33 litres (mostly methadone) and 2.5 million tablets (including, tramadol, buprenorphine, oxycodone, morphine, methadone and codeine) (see the table Other opioids: number of seizures and quantities seized, 2021). In the same year, 5.5 kilograms and 5 500 tablets of fentanyl derivatives were seized in Europe.
- Approximately 23 500 offences for heroin use or possession were reported in 2021.

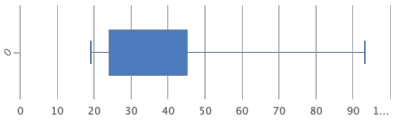
Infographic. Heroin market in Europe

Geographical coverage (selected graphs)

EU EU+2

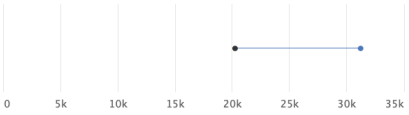
Heroin: Number of seizures, EU

Heroin: Price retail (EUR/g) (EU)

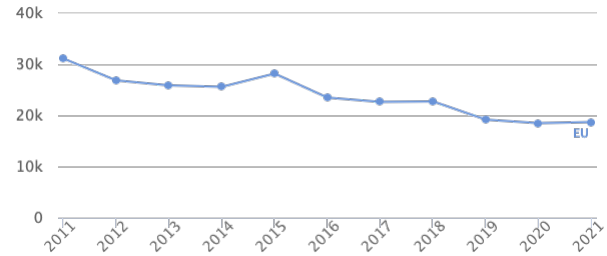


Heroin: Quantity seized (tonnes), EU

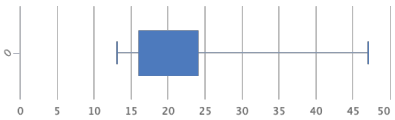
Heroin: Price wholesale (EUR/kg) (EU)



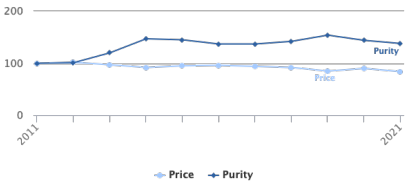
Heroin: Trends in number of seizures (x 1000)



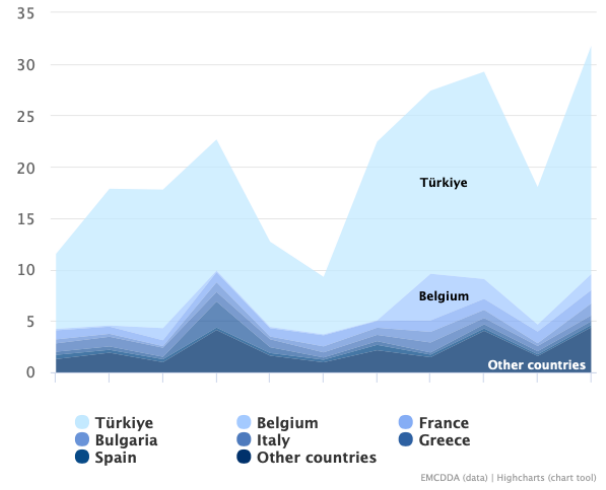
Heroin: Purity (%) (EU)



Indexed trends: retail (2011=100) (EU)



Heroin: Trends in quantity seized (tonnes)



EU+2 refers to EU Member States, Norway and Türkiye.

Price and purity of 'brown' heroin: national mean values – minimum, maximum and interquartile range. Countries covered vary by indicator.

Table. Other opioids: number of seizures and quantities seized, 2021

Substance	Countries	Number of seizures	Weight (kg)	Tablets	Litres	Patches
Tramadol	10	4559	0.31	2273807	1.65	
Buprenorphine	15	2854	4.98	127449	<0.1	
Methadone	17	939	251.73	46588	29.91	
Morphine	12	744	6.11	12823	0.28	
Oxycodone	9	824	0.13	66721		
Opium	14	555	1053.22		<0.1	
Codeine/dihydrocodeine	11	429	4.9	11613	0.74	
Fentanyl derivatives	12	187	5.49	5444	<0.1	217
Total		**11091**	**1326.8**	**2544445**	**32.65**	**217**

Source data

Source data can be found in the online version

8. New psychoactive substances – the current situation in Europe

The market for new psychoactive substances is characterised by the large number of substances that have appeared in this area and that new compounds continue to be detected each year. On this page, you can find an overview of the drug situation for new psychoactive substances in Europe, supported by seizure data and information from the EU Early Warning System on substances detected for the first time in Europe. New substances mentioned include synthetic cannabinoids, hexahydrocannabinol, synthetic cathinones, new synthetic opioids, benzimidazole opioids.

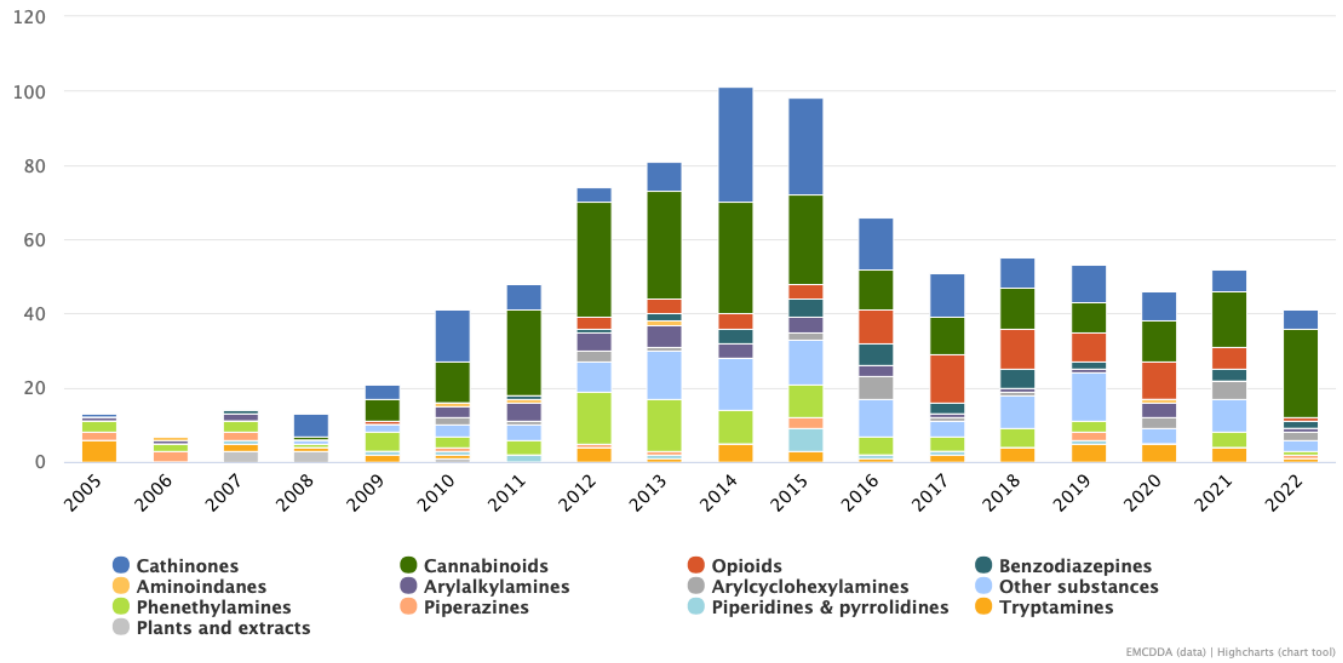
Last update: *16 June 2023*

Health concerns over highly potent substances, continued market adaptation and increasing seizures

The market for new psychoactive substances is characterised by the large number of substances that have appeared in this area and that new compounds continue to be detected each year. The term 'new psychoactive substances' covers a broad range of substance types that are not controlled by international drug control agreements, although some of them may be subject to national regulatory measures. In 2021, a record 8.5 tonnes of new psychoactive substances was seized by EU Member States (see the figure Seizures of new psychoactive substances in the European Union: number of seizures and quantity seized, 2005–2021). Drug producers continue to create new substances to avoid legal controls. The risks to health of these novel compounds are usually unknown, potentially exposing consumers to the risk of serious or even fatal poisonings or other health problems. Legislative controls in Europe and non-EU source countries appear to have contributed to a reduction in the number of new derivatives of some drugs, such as fentanyl. Other substances, however, designed to evade generic definitions in legislation, continue to emerge, with China and India remaining important source countries for these substances or the precursors that are required to produce them.

The 24 new cannabinoids detected accounted for over half of the new substances first reported to the EU Early Warning System in 2022 (see the figure Number of new psychoactive substances reported for the first time to the EU Early Warning System, by category, 2005–2022). The diversity seen in this area may reflect attempts by illicit drug producers to circumvent China's 2021 class-wide ban on synthetic cannabinoids.

Figure. Number of new psychoactive substances reported for the first time to the EU Early Warning System, by category, 2005–2022



There is a growing concern that consumers of cannabis may be at risk of inadvertent exposure to synthetic cannabinoids. In 2021, there was an overall increase in reports of herbal material where THC or other natural cannabinoids were found alongside synthetic cannabinoids, with at least 13 European countries, mostly Germany and Sweden, reporting such cases. It is possible that such adulterated products are more widely available but go undetected. Adulterated cannabis appears similar in appearance to natural cannabis and can be mis-sold as cannabis to unsuspecting consumers. Synthetic cannabinoids are highly potent substances, and adulterated products carry poisoning risks. An additional concern is that cannabis edibles (foods, often in the form of 'sweets' that are typically infused with cannabis extract) have become more apparent on the illicit European market since 2021. In addition to the risks that these products pose because of their THC content and the possibility that they may be mistaken for legitimate commercial products, especially by children, there are concerns that some of these products may contain synthetic cannabinoids.

New regulatory challenges and concerns have emerged about the potential for interaction between the commercialisation of cannabis derivatives and the recreational drug market. In 2022, the appearance of new semi-synthetic cannabinoids reflected these concerns. Hexahydrocannabinol (HHC) was identified in May 2022 and had been reported by 20 EU Member States by March 2023. Three other semi-synthetic cannabinoids, HHC acetate, hexahydrocannabiphorol and tetrahydrocannabidiol, have also been identified on the European drug market. It appears likely that these substances are being produced from cannabidiol extracted from low-THC cannabis. Marketed online and in shops as 'legal' replacements for cannabis, they include hemp sprayed or mixed with HHC, which looks and smells like natural cannabis, as well as vapes and edibles. The effects of HHC in humans have not been studied, but anecdotal consumer reports suggest they may be subjectively similar to those of cannabis. However, some of the products are available in forms that may deliver high doses, raising concerns about the possible implications for public health of the availability of these substances.

Synthetic cathinones and new synthetic opioids are relatively well-established in some European drug markets. They are sold as replacements for stimulants such as amphetamine or opioids such as heroin, respectively. In 2022, large quantities of cathinones such as 3-MMC and 3-CMC continued to be seized. Although seizure numbers remain small, the very large quantities of cathinones found in some individual seizures, mostly trafficked from India, suggest that these substances have the potential to play a bigger role in Europe's stimulant market. These concerns are further heightened by information suggesting that cathinones are increasingly being produced in Europe, with greater sophistication. Developments in this area include the detection of chemically masked non-controlled forms (*N*-acetyl-3-MMC) being trafficked into Europe for local conversion into the controlled cathinone 3-MMC. While information from indicators such as drug checking services suggests that MDMA products are less subject to adulteration than other illicit drugs they screened in 2021, the adulteration of MDMA products with synthetic cathinones may also increase the risk of unknown effects and potential harms. In 2022, signals of a possible increase in synthetic cathinones mis-sold as MDMA or used to adulterate MDMA were reported to the EU Early Warning System. While the overall scale of this issue is unknown, it has been reported by drug checking services in at least three EU Member States, including Spain, the Netherlands and Austria. The affected products included ecstasy tablets, crystals and powders, typically containing 4-CMC (clephedrone), 3-MMC, 4-MMC (mephedrone) and dipentylone.

Although only one new synthetic opioid was formally notified in 2022, recent signals, mostly from Baltic countries, suggest increased availability and harms (including drug-induced deaths) linked to these substances, particularly the fentanyl derivative carfentanil and the highly potent group of benzimidazole opioids, which includes drugs such as isotonitazene, protonitazene and metonitazene. The benzimidazole opioids emerged following control measures, introduced both in producer countries and

elsewhere, to reduce the availability of fentanyl derivatives, including carfentanil. Synthetic opioids are often highly potent, meaning a small amount can be sufficient to produce a large number of typical street doses and can pose an increased risk of life-threatening poisoning. Synthetic opioids have been linked to drug-induced deaths, with recent reports from Estonia and Lithuania indicating that these drugs now account for a significant share of overdose deaths in these countries. New preliminary data from 2023 suggest that mortality linked to benzimidazole opioids is being increasingly detected in Latvia and this represents a worrying development. In 2022, the Estonian police reported seizing mixtures containing the new synthetic opioid metonitazene and bromazolam, a new benzodiazepine, and mixtures containing the new opioids protonitazene and metonitazene and the animal sedative and analgesic xylazine. These mixtures, respectively known as 'benzo-dope' and 'tranq-dope' have been linked to increases in overdose deaths in Canada and the United States. There is a need to consider and further investigate what harm reduction and prevention measures are effective in reducing mortality risks associated with the use of synthetic opioids. For example, it has been suggested that approaches to providing the opioid antagonist naloxone need to be adapted to respond more effectively to the health risks posed by synthetic opioids.

Key data and trends

New psychoactive substances reported

- At the end of 2022, the EMCDDA was monitoring around 930 new psychoactive substances, 41 of which were first reported in Europe in 2022.
- Approximately 400 new psychoactive substances were detected in seizures in 2021 (see the figure Number of new psychoactive substances reported each year following their first detection in the European Union, by category, 2005–2021).
- In 2022, the EU Early Warning System received reports of 24 new cannabinoids, bringing the total number being monitored to 245.
- Since 2009, a total of 74 new opioids have been identified on the European drug market, with one new substance notified in 2022 (6 in 2021, 10 in 2020) (see the figure Number of opioids reported for the first time to the EU Early Warning System, 2009–2022).

Figure. Number of new psychoactive substances reported each year following their first detection in the European Union, by category, 2005–2021

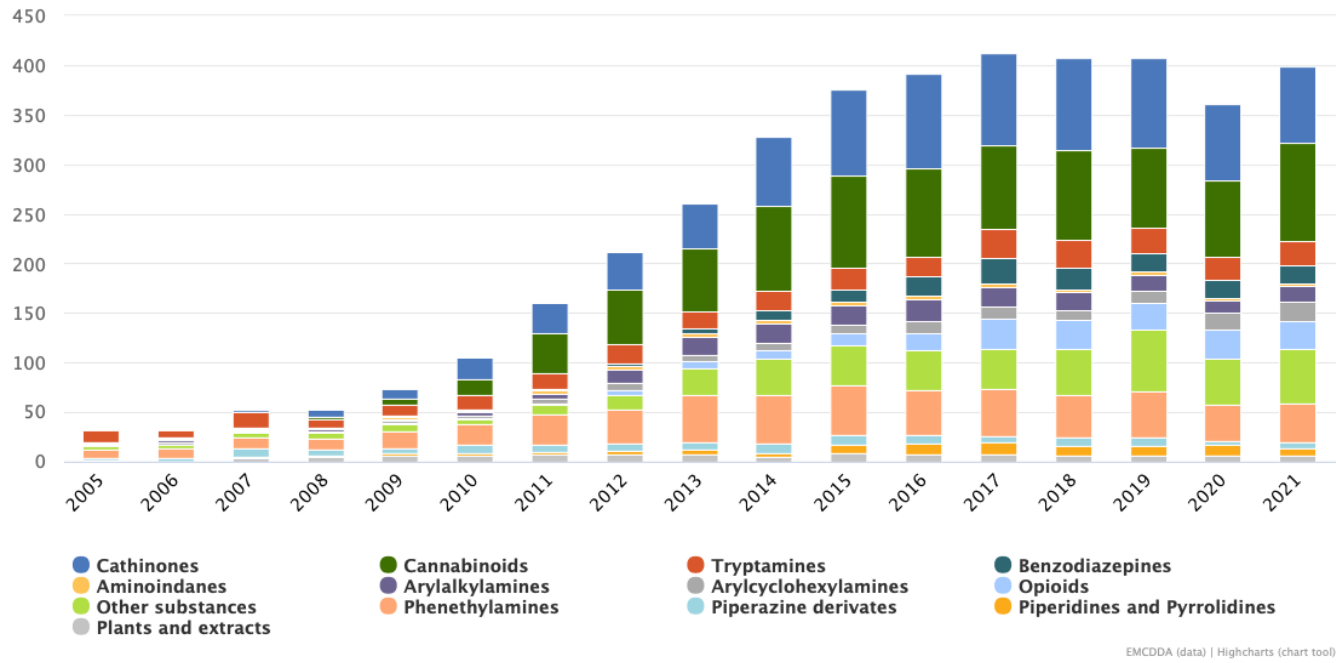
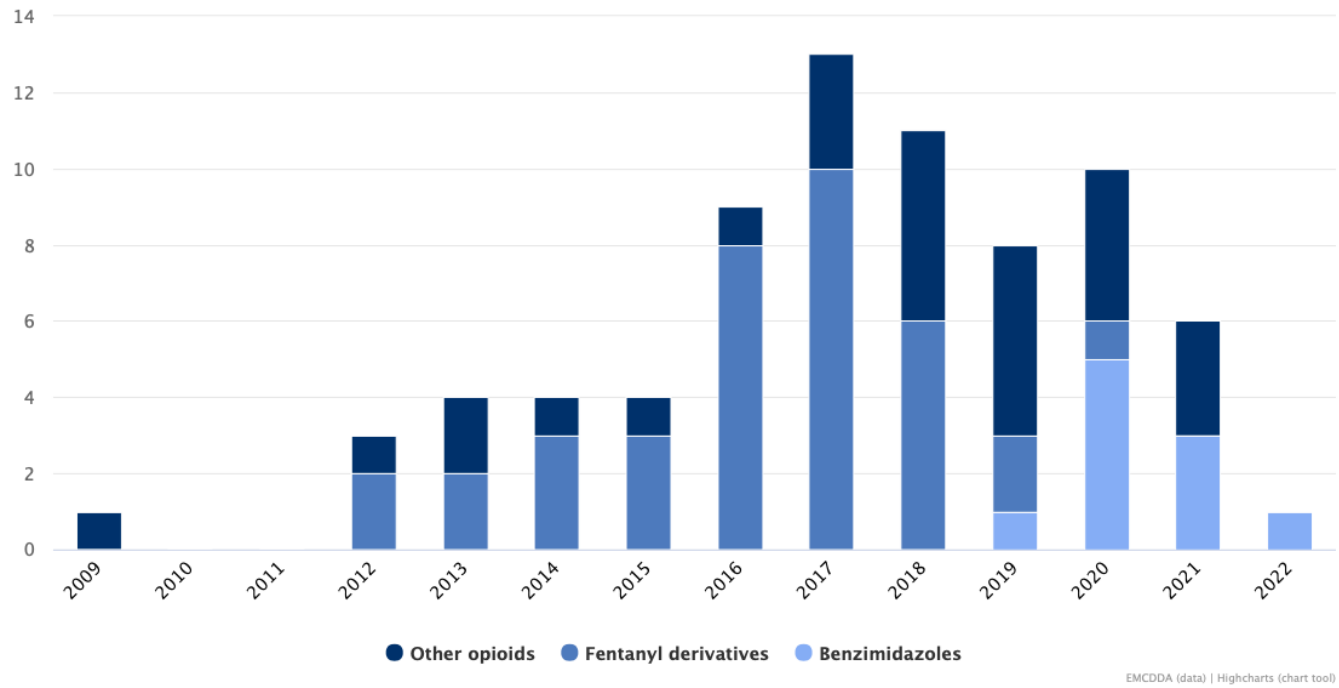


Figure. Number of opioids reported for the first time to the EU Early Warning System, 2009–2022



Seizures of new psychoactive substances

- In 2021, seizures of low-THC herbal cannabis material containing synthetic cannabinoids amounted to 242 kilograms (37 kilograms in 2020; 200 grams in 2019). The samples were variously reported as 'hemp' or 'cannabis' or containing THC, CBD or CBG. In addition, seizures of 12 kilograms of cannabis resin were reported as 'CBD hash'.
- In 2021, EU Member States accounted for almost 29 400 of the 59 620 seizures of new psychoactive substances reported in the European Union, Norway and Türkiye, amounting to 8.5 of the 10.8 tonnes seized. The increase was driven by a small number of large seizures of cathinones (3-CMC, 3-MMC,4-CMC), as well as ketamine and GBL (see the figure Seizures of new psychoactive substances in the European Union: number of seizures and quantity seized, 2005–2021). In addition, 23 634 litres of liquids containing new psychoactive substances were seized, mainly GBL (21 455 litres) and 4-CMC (1 228 litres).
- In 2021, just 5 substances accounted for over 80 % of the quantity of new psychoactive substances seized in EU countries: 3 cathinones (3-CMC, 3-MMC and 4-CMC, amounting to 4.0 tonnes), ketamine (0.9 tonnes) and GBL (2.0 tonnes) (see the figure Seizures of new psychoactive substances in the European Union: quantity seized, by substance, 2021).
- In 2021, 740 seizures of new opioids were reported to the EU Early Warning System, with 45 % containing carfentanil and 22 % containing isotonitazene. A total of 8.2 kilograms of material was seized, with 59 % (4.9 kilograms) containing carfentanil and 23 % (1.9 kilograms) containing isotonitazene. Most of the seizures occurred in northern Europe, with Estonia, Latvia, Lithuania and Poland reporting 97 % of the seizures and 86 % (7.1 kilograms) of the quantity seized.

Figure. Seizures of new psychoactive substances in the European Union: number of seizures, 2005–2021

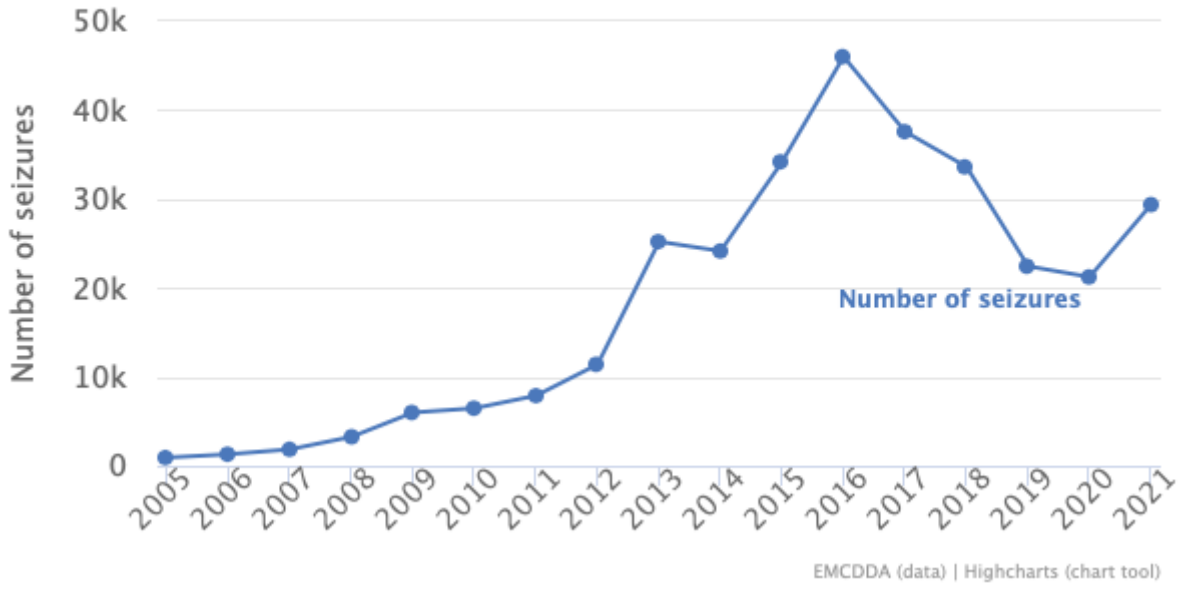


Figure. Seizures of new psychoactive substances in the European Union: quantity seized, 2005–2021

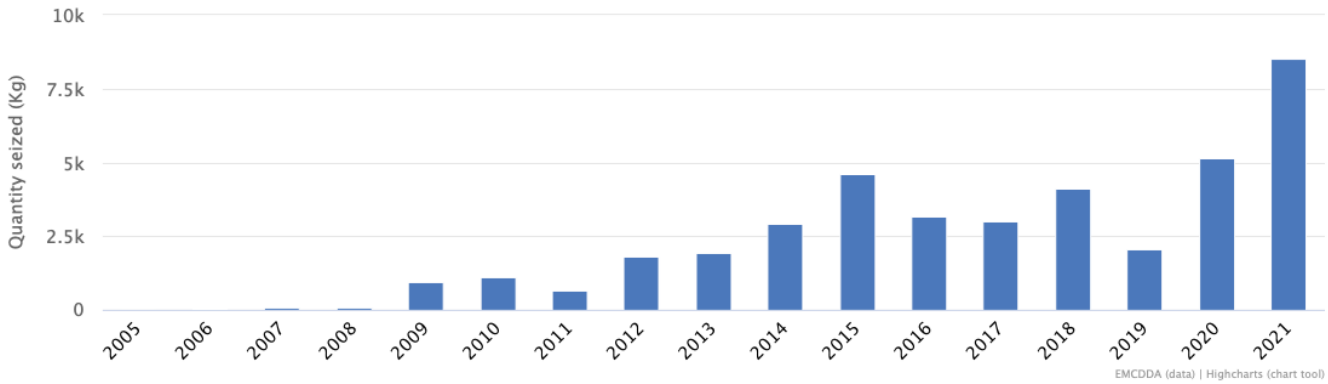
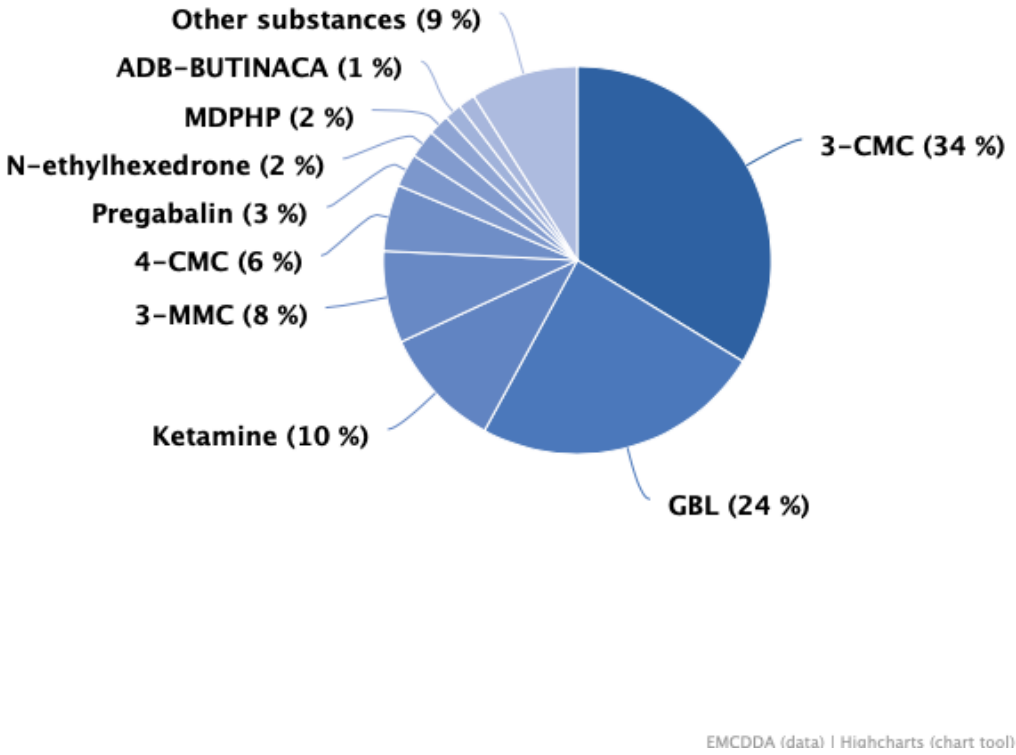


Figure. Seizures of new psychoactive substances in the European Union: quantity seized, by substance, 2021



Based on all physical forms expressed in kilograms.

Prevalence of new psychoactive substances use

- National estimates of last year use of new psychoactive substances (excluding ketamine and GHB) among young adults (aged 15 to 34) range from 0.1 % in Latvia to 5.1 % in Romania. Among 15- to 16-year-old schoolchildren, the most recent European survey (see ESPAD 2019), from 2019, estimated that lifetime use of new psychoactive substances ranged from 0.9 % to 6.6 %, with lifetime use ranging from 1.1 % to 5.2 % for synthetic cannabinoids and 0.2 % to 2.5 % for synthetic cathinones.

Hospital presentations related to new psychoactive substances

- In 2021, 3-MMC was reported in 68 acute drug toxicity presentations in 5 Euro-DEN Plus hospitals.

Source data can be found in the online version

9. Other drugs – the current situation in Europe

Alongside the more well-known substances available on illicit drugs markets, a number of other substances with hallucinogenic, anaesthetic, dissociative or depressant properties are used in Europe: these include LSD, hallucinogenic mushrooms, ketamine, GHB and nitrous oxide. On this page, you can find the latest analysis of the situation regarding these substances in Europe, including seizures, prevalence and patterns of use, treatment entry, harms and more.

Last update: *16 June 2023*

Concerns of growth in use and possible harms prompt a need for improved monitoring of more-novel and less well-known substances

Alongside the more well-known substances available on illicit drugs markets, a number of other substances with hallucinogenic, anaesthetic, dissociative or depressant properties are used in Europe: these include LSD (lysergic acid diethylamide), hallucinogenic mushrooms, ketamine, GHB (gamma-hydroxybutyrate) and nitrous oxide. The data available suggest that, overall, the prevalence of use of hallucinogenic and dissociative drugs remains generally low in Europe. However, an important caveat here is that these substances are not well monitored by existing surveillance systems, meaning that it is hard to comment with confidence on either the prevalence of use or on recent trends. The information available does suggest, however, that in some countries, subgroups, or settings, the use of these sorts of substances has become more common.

The quantity of ketamine seized and reported to the EU Early Warning System on new psychoactive substances has varied over time, but has remained at relatively high levels in recent years, suggesting that this drug is likely to be consistently available in some national drug markets and may have become an established drug of choice in some settings. Ketamine is commonly snorted, but can also be injected, and has been linked to various dose-dependent acute and chronic harms, including neurological and cardiovascular toxicity, mental health problems, such as depression, and urological complications, such as bladder damage from intensive use or the presence of adulterants. Ketamine may also be added to other drug mixtures, including MDMA powders and tablets, although 2021 data from drug checking services show that these are generally less adulterated than other illicit drugs. It can also be found in mixtures sold as ‘pink cocaine' or ‘tucibi', which are more likely to contain ketamine and other synthetic drugs, such as amphetamines or MDMA, but less likely to contain the synthetic drug 2C-B. As noted elsewhere in the 2023 *European Drug Report*, people using mixtures of drugs may be unaware of the substances they are consuming, and drug interaction effects can expose them to elevated health risks. While the numbers of clients entering treatment for problems related to ketamine use remain low

overall, some EU Member States have seen increases and there is a strong case for improving the monitoring of both the use of this drug and the extent to which it is associated with negative health outcomes.

Nitrous oxide, commonly known as laughing gas, has been linked to various health problems, including poisonings, burns and lung injuries and, in some cases of prolonged exposure, neurotoxicity from vitamin B12 deficiency. There is, however, a debate on the extent to which this substance is associated with negative health risks, especially in episodic users, although given its apparent growing popularity among young people this is clearly an important area for further research and monitoring. In some European cities, discarded nitrous oxide gas canisters have become a relatively common sight, and the disposal of the smaller stainless steel canisters has been identified as a drug-litter issue in some countries. A recent EMCDDA review identified a number of EU Member States, including Denmark, Ireland, France, Lithuania, the Netherlands and Portugal, that have seen signs of an increase in the availability and recreational or episodic use of nitrous oxide. This drug appears to have become more accessible and cheaper, with the increased availability of larger gas canisters aimed at recreational use. However, high-volume cylinders may also increase the risk of lung damage, due to the higher pressure of their contents and, in general, inhaling directly from gas bottles is reported to be associated with a greater risk of harm. Nitrous oxide has various commercial users, for example, it is used by the catering industry. Regulatory approaches to the sale and use of this substance vary between countries, with the gas legally available for sale in some countries.

Figure. Seizure of over 59 000 nitrous oxide canisters worth over EUR 1.9 million in Ireland by Revenue in December 2021

Non-controlled and new benzodiazepines also continued to be available in some European countries but, again, current monitoring approaches make it difficult to comment on the scale of their use, although signals exist that these substances may have important consequences for health, especially when consumed in combination with other drugs. They are often very cheap and may be used by young people in combination with alcohol, sometimes resulting in potentially serious health reactions or aberrant behaviour. These substances have also been linked to overdose deaths among people who use opioids, and reports in 2021 show that the proportion of overdose deaths involving benzodiazepines increased in several countries. However, a lack of toxicological information currently means the role that benzodiazepines play in opioid-related deaths is not sufficiently understood. Mixtures containing new benzodiazepines and sedatives, respectively known as ‘benzo-dope' and ‘tranq-dope', have been linked to increases in overdose deaths in Canada and the United States. In 2022, the Estonian police reported seizing mixtures containing the new synthetic opioid metonitazene and bromazolam, a new benzodiazepine, and mixtures containing the new opioids protonitazene and metonitazene and the animal sedative and analgesic xylazine.

Both clinical and public interest has been growing in the therapeutic use of some novel substances, particularly psychedelic substances, but also dissociative drugs such as ketamine. A growing number of clinical studies are exploring the potential of a range of psychedelic substances to treat different mental health conditions. Generalising in this area is difficult, and much of the research remains in its infancy, but some research in this area appears promising. These developments have also received considerable media attention. An associated concern here is that this may encourage greater experimental use of these substances without medical support, potentially putting some vulnerable individuals at risk of suffering adverse consequences. At the same time, there are signs of unregulated programmes being operated in the European Union and elsewhere, in which the use of psychedelic substances is included as part of a wellness, therapeutic or spiritually oriented intervention.

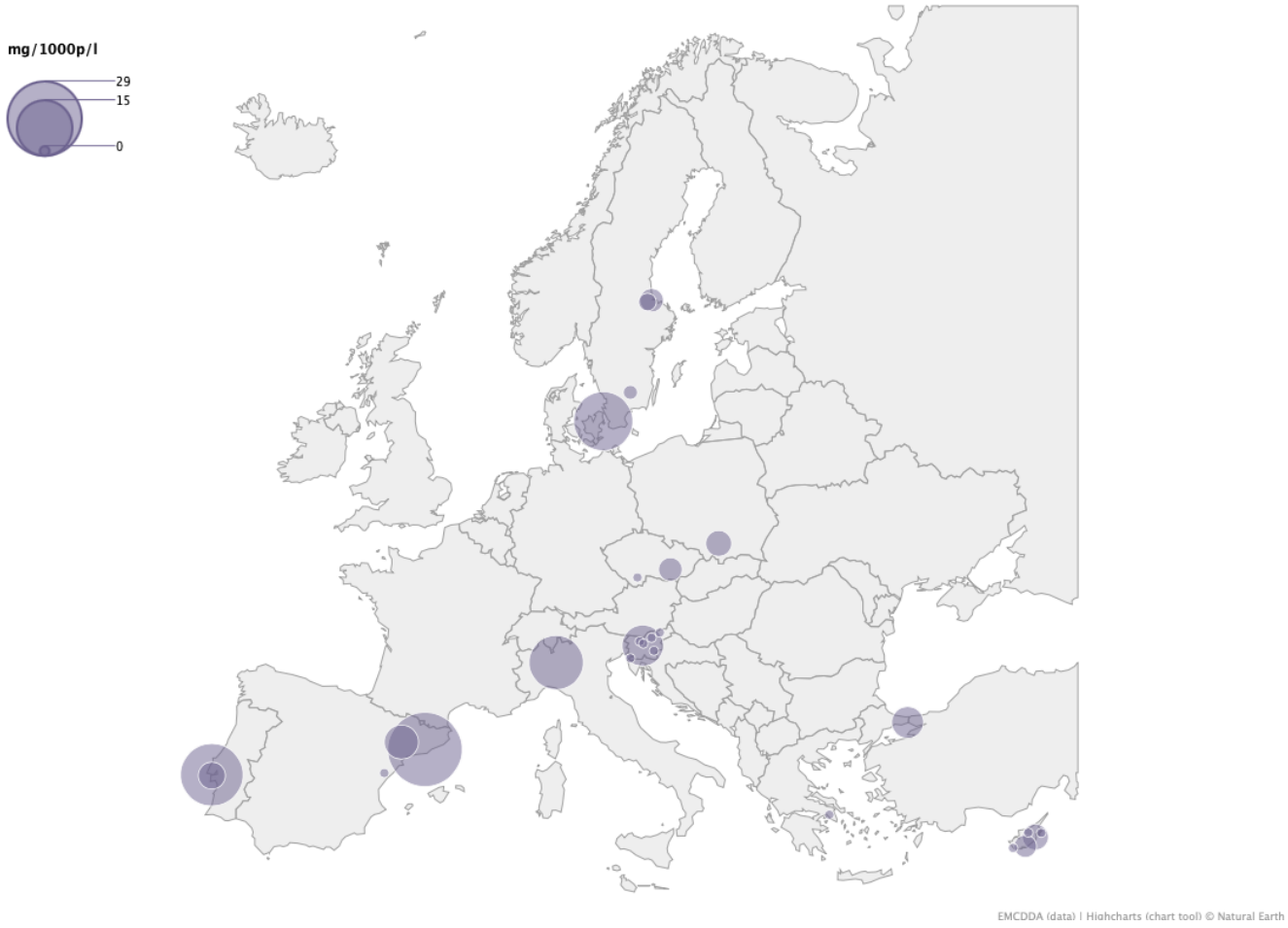
Together, these developments have placed a renewed emphasis on the need to obtain a better understanding of the availability of both non-controlled and less common substances, as well as their impact on public health, in Europe. In particular, there are concerns about chronic harms from some of these substances, such as ketamine, and risks associated with more intensive patterns of use in certain niche settings and contexts, including the use of GHB in the chemsex scene. The presence of combinations of new synthetic opioids and new benzodiazepines further complicates overdose prevention efforts, potentially raising the need for reviewing the delivery methods of overdose-fatality prevention measures such as naloxone. There is an urgent need to improve our monitoring of the use and harms associated with these substances and to develop forensic and toxicological information sources in this area. Drug checking services will also continue to be an important sentinel data source. This information is needed to support the development and evaluation of effective harm reduction and other interventions appropriate to the settings and contexts in which these drugs are being consumed and the risks they may pose.

Key data and trends

Prevalence and patterns of use of other drugs

- Among young adults (aged 15 to 34), recent national surveys show last year prevalence estimates for both LSD and hallucinogenic mushrooms equal to or less than 1 %. Exceptions for hallucinogenic mushrooms include Czechia (2.7 % in 2021), Finland (2.0 % in 2018), the Netherlands (1.9 % in 2021), Estonia (1.6 % in 2018, 16–34), Denmark (1.5 % in 2021), Spain (1.1 % in 2022) and Germany (1.1 % in 2021). Exceptions for LSD include Ireland (2.4 % in 2019), Finland (2.0 % in 2018), Estonia (1.7 % in 2018, 16–34), Latvia (1.4 % in 2020), Norway (1.3 % in 2021) and the Netherlands (1.2 % in 2021).
- Among respondents to the European Web Survey on Drugs, 20 % of those who had used drugs within the last 12 months had used LSD, while 13 % had used ketamine.
- Recent estimates of last year prevalence of ketamine use among young adults (15–34) range from 0.4 % in Denmark (2021, 16–34) to 0.8 % in Romania (2019). The Netherlands reported that ketamine use has increased among young people in nightlife settings.
- In 2022, generally very low levels of ketamine residues in municipal wastewater were reported by 15 cities, with the highest mass loads being detected in cities in Denmark, Spain, Italy and Portugal (see the figure Ketamine residues in wastewater in selected European cities, 2022, below).

Figure. Ketamine residues in wastewater in selected European cities, 2022



Mean daily amounts of ketamine in milligrams per 1000 population. Sampling was carried out over a week in March and April 2022. Source: Sewage Analysis Core Group Europe (SCORE).

Treatment entry for ketamine use

- Increases were observed in the number of clients entering treatment for problems related to ketamine use in Belgium, Spain, France and Italy in 2021, with the overall number rising from 93 in 2015 to 414 clients in 2021 in these countries.

Harms related to use of other drugs

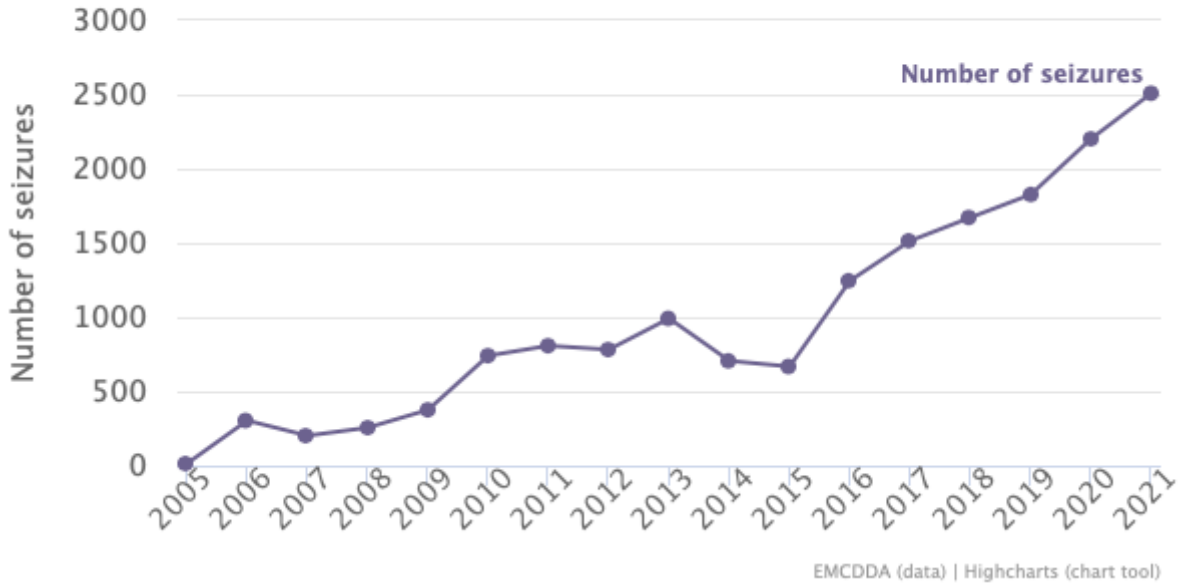
- GHB was the fourth most common drug reported by Euro-DEN Plus hospitals in 2021. GHB was present in 11 % of acute drug toxicity presentations and 27 % of critical care admissions, reflecting overdose risks. LSD was present in 1.5 % of acute drug toxicity presentations, while ketamine was present in 2.0 %.

- Drug toxicity data suggest recent increases in the use of nitrous oxide. Increases in presentations involving nitrous oxide were reported by Euro-DEN Plus hospitals in Amsterdam (30 in 2020, from 15 in 2019) and Antwerp (64 in 2019/2021, from 6 in 2017/2018), while in 2021, French poison centres reported 358 notifications involving the drug (120 in 2020, 37 in 2019) and Dutch poison centres reported 144 (128 in 2019).
- In 2021, the proportion of overdose deaths involving benzodiazepines increased in several countries and was present in more than half of the cases in Denmark, Austria, Portugal and Finland (see figure *Proportion of drug-induced deaths with benzodiazepines involved in selected countries, 2019–2021* in Drug-induced deaths in Europe).

Market data for other drugs

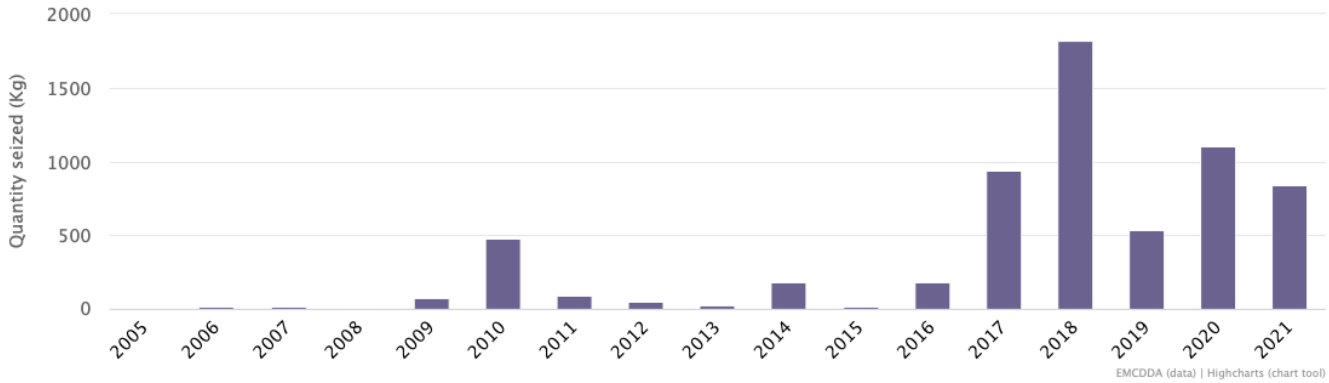
- Seizures of hallucinogenic and dissociative drugs are not consistently monitored across Europe. Different EMCDDA monitoring systems provide the limited information available, which is incomplete, divergent and difficult to generalise.
- In 2021, 1 800 seizures of LSD (lysergic acid diethylamide), amounting to 67 600 units, 2 kilograms and 2 litres were reported in Europe. Eighteen countries reported 900 seizures of hallucinogenic mushrooms, amounting to 38 kilograms. Fourteen EU countries reported 200 seizures of DMT (dimethyltryptamine), amounting to 1.1 tonnes, mainly in the Netherlands (971 kilograms) and Italy (75 kilograms).
- In 2021, 22 EU countries, Norway and Türkiye reported seizures of ketamine to the EMCDDA amounting to more than 1.1 tonnes. Seizures of ketamine have remained at these relatively high levels (typically over 1 tonne) for several years, since their peak in 2018 when more than 1.7 tonnes was seized in Europe (see the figure Seizures of ketamine powder in the European Union, below).
- In 2021, the Netherlands reported the dismantling of one ketamine laboratory. Given ketamine's common use in veterinary medicine as an anaesthetic, the theft and diversion of the drug from legitimate purposes remains a problematic issue.
- An increasing number of samples of mixtures containing ketamine, MDMA and cocaine have been reported to the EU Early Warning System on new psychoactive substances since about 2018, mostly by Spain. Some of these appear to be sold as ‘pink cocaine' or ‘tucibi', with people consuming it potentially unaware they may be consuming ketamine.
- Ten EU countries reported 270 seizures of the psychedelic drug 2C-B, amounting to 29 000 tablets or units and 0.12 kilograms. Open-source monitoring indicates that it is sometimes added to mixtures sold as pink cocaine in Europe and elsewhere, alongside MDMA powder and ketamine, which may or may not contain cocaine.
- Seventeen European countries reported 2 000 seizures of GHB (gamma-hydroxybutyrate) or its precursor GBL (gamma-butyrolactone), amounting to 100 kilograms and 850 litres. GBL has many industrial purposes, making the data challenging to interpret.

Figure. Seizures of ketamine powder in the European Union: total number, 2005–2021



Based on reports to the EU Early Warning System on new psychoactive substances.

Figure. Seizures of ketamine powder in the European Union: total quantity, 2005–2021



Based on reports to the EU Early Warning System on new psychoactive substances.
Source data can be found in the online version

10. Injecting drug use in Europe – the current situation

Despite a continued decline in injecting drug use over the past decade in Europe, this behaviour is still responsible for a disproportionate level of health harms. On this page, you can

find the latest analysis of injecting drug use in Europe, including key data on prevalence at national level and among clients entering specialised treatment, as well as insights from studies on syringe residue analysis and more.

Last update: *16 June 2023*

Significant health harms from diversity of substances being injected

Despite a continued decline in injecting drug use over the past decade in Europe, this behaviour is still responsible for a disproportionate level of both acute and chronic health harms associated with the consumption of illicit drugs. Half a million Europeans are estimated to have injected an illicit drug in the last year, a figure that underlines both the scale of the challenges that still exist in this area and that reducing the harm associated with injecting drug use still remains an important priority for protecting public health.

People who inject drugs are at greater risk of contracting blood-borne infections or dying from a drug overdose. Injecting can also exacerbate other pre-existing health problems or be a cause of abscesses, septicaemia and nerve damage. Historically, heroin has been the main drug associated with injecting in Europe, but this has been changing in recent years. Increasingly today, other drugs, including amphetamines, cocaine, synthetic cathinones, opioid agonist medications and other medicines, are also injected, either alone or in combination. While it is known that there is considerable variation in injecting practices between countries, recent studies of syringe residues also reveal that there can also be considerable variation in the drugs injected between different sites within a country. Multiple substances are commonly detected in syringe residues, often including both stimulant and opioid drugs. Recognising the increasing complexity of injecting practices in Europe and the importance of polydrug consumption in this context is therefore likely to have important implications for both understanding the harms associated with this mode of administration and for interventions designed to reduce them.

Injecting stimulant drugs such as cocaine and synthetic cathinones tends to be more associated with high-frequency injecting patterns of use, and has been associated with local HIV outbreaks in recent years in Europe. Methamphetamine injecting carries similar risks. This is a concern, as there are a number of signals that stimulant injecting is becoming a more common behaviour among people who inject drugs.

There are multiple long-term risks linked to injecting dissolved medicine tablets and capsules, and also crack cocaine, including vascular damage and infective endocarditis and other bacterial infections. An additional concern is raised by the availability of highly potent opioids, such as fentanyl and its derivatives, which can cause rapid onset of life-threatening respiratory depression leading to fatal overdoses, and these risks are likely to be elevated when these substances are injected. Polydrug use can increase the risk of a drug overdose.

In addition to the provision of drug treatment, harm reduction interventions, such as the provision of sterile injecting equipment, remain among the most common public health measures targeting the risks associated with injecting drugs. Although, by international standards, such interventions are relatively well developed in Europe, it is also clear that some EU Member States face challenges in providing sufficient coverage and access to harm reduction and drug treatment interventions for people who inject drugs. Moreover, historically the need to reduce the risk of acquiring blood-borne infectious diseases has

been a primary focus of many interventions in this area. This concern remains important but there is now greater recognition of the need to also do more to reduce overdose deaths and other negative health problems associated with injecting. Interventions targeting these outcomes are generally less well developed and this remains therefore an important area for investment and service development.

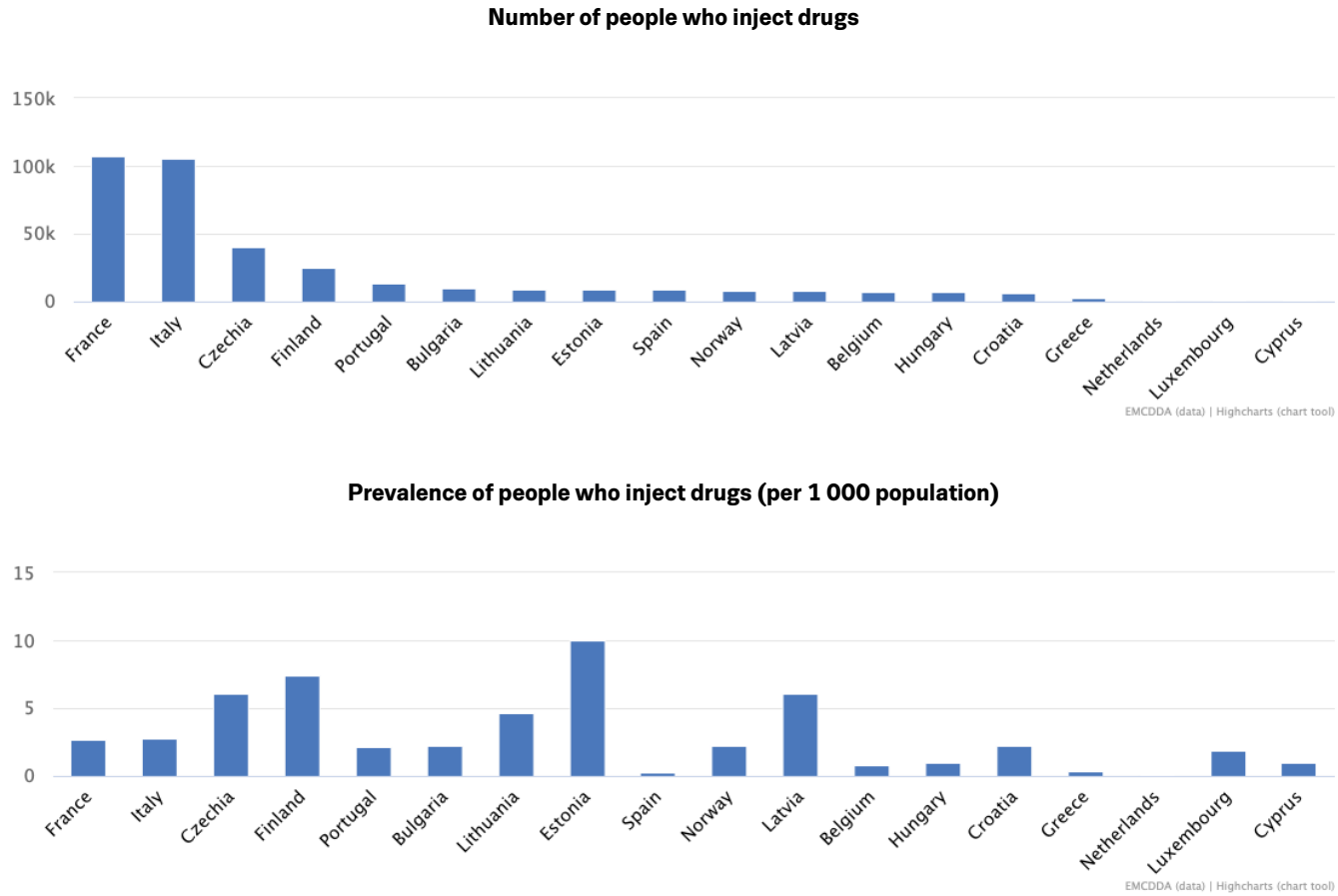
Changing patterns of drug injecting, an increasing diversity of substances and the adequacy of the type and level of existing responses remain key issues for both frontline responders and policymakers in the European Union. As the subgroups of people who inject drugs change, now encompassing primarily opioid and stimulant-based open drug scenes involving marginalised people who inject drugs, as well the use of substances like methamphetamine and cathinones in some settings and subgroups, responding effectively to the risk posed by drug injecting has become a more urgent and complex challenge.

Key data and trends

Prevalence of injecting drug use

- Only 18 countries have estimates of the prevalence of injecting drug use since 2015, where they range from under 1 per 1 000 population aged 15 to 64 in the Netherlands, to over 7 per 1 000 in Estonia. Opioids are reported as the main injected drugs in the majority (19) of the 23 countries for which data are available for clients entering treatment in 2021.
- Adjusting population estimates of high-risk opioid and stimulant users for the proportion of drug treatment entrants reporting injecting provides a prevalence estimate of injecting drug use of 1.8 per 1 000 population aged 15 to 64 years. This suggests there were an estimated 534 000 people who inject drugs in the European Union and Norway in 2021 (see the figure *Estimated number and prevalence of people who inject drugs, by country, 2015 to 2021* below).

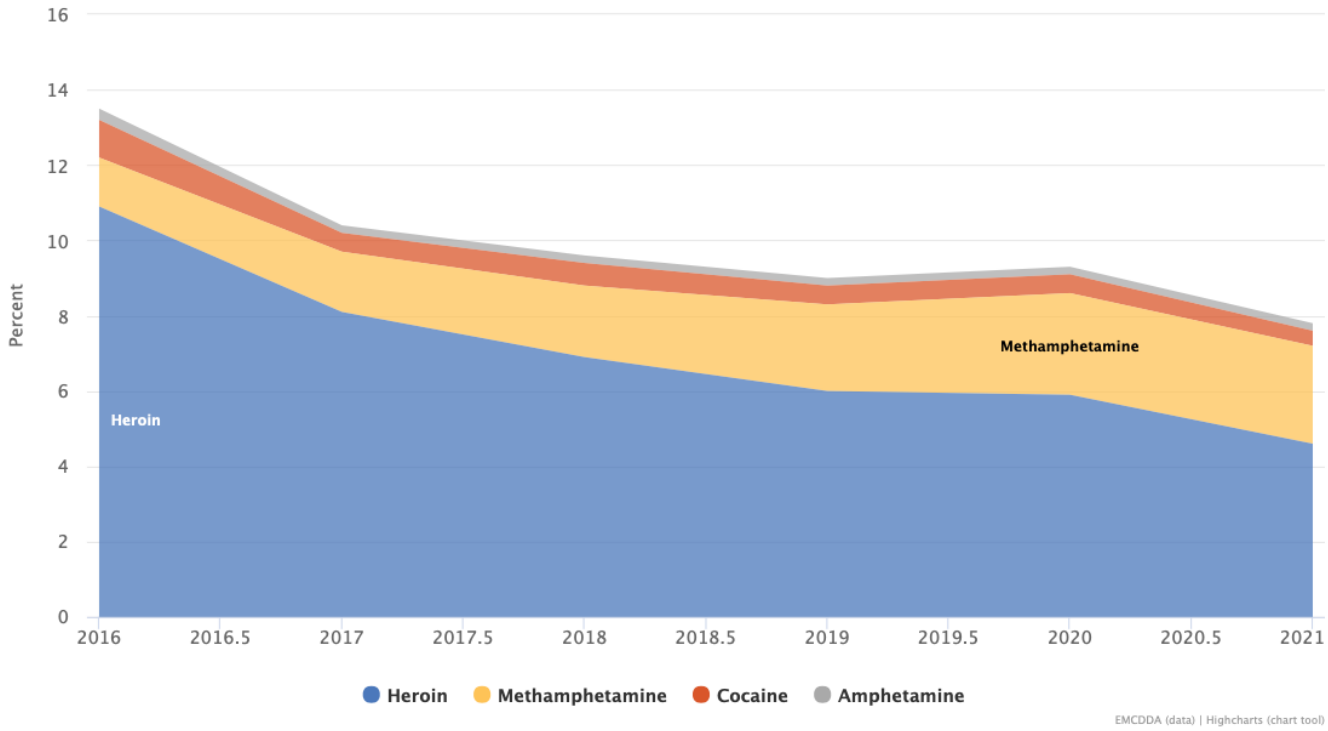
Figure. Estimated number and prevalence of people who inject drugs, by country, 2015 to 2021



Injecting drug use among clients entering specialised treatment

- Among first-time clients entering specialised drug treatment in 2021, or most recent year available, with heroin as their primary drug, 19 % (down from 38 % in 2013) reported injecting as their main route of administration. In this group, levels of injecting vary between countries, from less than 10 % in Denmark, Spain, France and Portugal to 60 % or more in Czechia, Estonia, Latvia, Lithuania, Romania and Slovakia.
- Available data indicate that injecting is reported as the main route of administration by less than 1 % of first-time cocaine clients, 3 % of first-time amphetamine clients and 22 % of first-time methamphetamine clients. It should be noted that Czechia and Slovakia account for more than 90 % of methamphetamine first-time entrants who reported injecting as their main route of administration.
- Considering the four main injected drugs together, injecting as the main route of administration among first-time entrants to treatment in Europe has declined from 14 % in 2016 to 8 % in 2021.

Figure. Trends in injecting among first-time treatment entrants with heroin, cocaine, amphetamine or methamphetamine as primary drug: proportion reporting injecting as main route of administration



Trends in injecting among first-time treatment entrants are based on 23 countries. Only countries with data for at least 5 of the 6 years are included with the exception of Czechia, where 2 years were interpolated (2016, 2021). Missing values were interpolated from adjacent years.

Syringe residue analysis

- Analysis of 1 845 used syringes by the ESCAPE network of 12 cities in 11 EU Member States between 2021 and 2022 detected 54 psychoactive substances. These data are not nationally representative and therefore should be understood as indicative of a diversity at local-level in drug use dynamics, rather than reflecting the overall national situations.
- Heroin was still the most commonly detected drug in 5 out of the 12 participating cities, but stimulants, mostly cocaine, were found in syringes in all cities. They were found in a high proportion (over 50 %) of syringes sampled in Athens (cocaine), Cologne (cocaine), Dublin (cocaine), Thessaloniki (cocaine), Prague (methamphetamine), Oslo (amphetamine), Tallinn (amphetamine) and Paris (synthetic cathinones) (see the table *Percentage of used syringes tested positive by drug category, by city, 2021/2022*).

Table. Percentage of used syringes tested positive by drug category, by city, 2021/2022

City	Year	Number of syringes	Heroin	Methamphetamine	Cocaine	Cathinones	Amphetamine	Buprenor
Athens	2022	138	89.1	0.7	78.3			0.7
Budapest	2022	132	40.9		24.2	34.1	7.6	
Cologne	2022	237	80.6	0.4	57.8	0.4	1.3	0.4
Dublin	2022	99	73.7		71.7	1.0	2.0	
Helsinki	2022	150		10.7		23.3	24.7	41.3
Oslo	2022	158	57.0	7.0	2.5		52.5	0.6
Prague	2022	153	20.3	54.9	0.7	0.7		38.6
Riga	2022	194		18.6	5.7		47.4	4.1
Tallinn	2022	149		28.2	3.4	18.8	77.9	8.1
Thessaloniki	2022	174	51.2		69.5			32.8
Vilnius	2022	141					7.1	
Paris	2021	120	5.0	6.7	10.8	89.2	1.7	5.0

* Fentanyl = fentanyl and derivatives.

Shaded cells indicate most common drug categories by city: = first | = second | = third

- Injection of diverted opioid agonist medications, such as buprenorphine (>30 % of syringes in Helsinki, Prague and Thessaloniki) and methadone (>30 % of syringes in Dublin, Vilnius and Riga), was common in some cities. Benzodiazepines were also detected (more than 5 % of syringes in Helsinki, Dublin and Tallinn), to a lesser extent. Carfentanil was commonly found in syringes from Vilnius (92 %) and Riga (29 %). Another potent synthetic opioid, isotonitazene, was detected in 10 % and 26 % of syringes from Tallinn and Riga, respectively. Xylazine, a potent veterinary tranquilliser, was detected in 25 out of 194 syringes (13 %) from Riga, where it was found in the presence of isotonitazene or metonitazene in all 25 syringes and together with carfentanil in 3 syringes.

- Overall, a third of syringes contained residues of two or more drug categories, indicating frequent polydrug use or re-use of injecting paraphernalia. The most frequent combination was a mixture of a stimulant and an opioid.

Source data can be found in the online version

11. Drug-related infectious diseases – the current situation in Europe

People who inject drugs are at risk of contracting infections through the sharing of drug use paraphernalia. On this page, you can find the latest analysis of drug-related infectious diseases in Europe, including key data on infections with HIV and hepatitis B and C viruses.

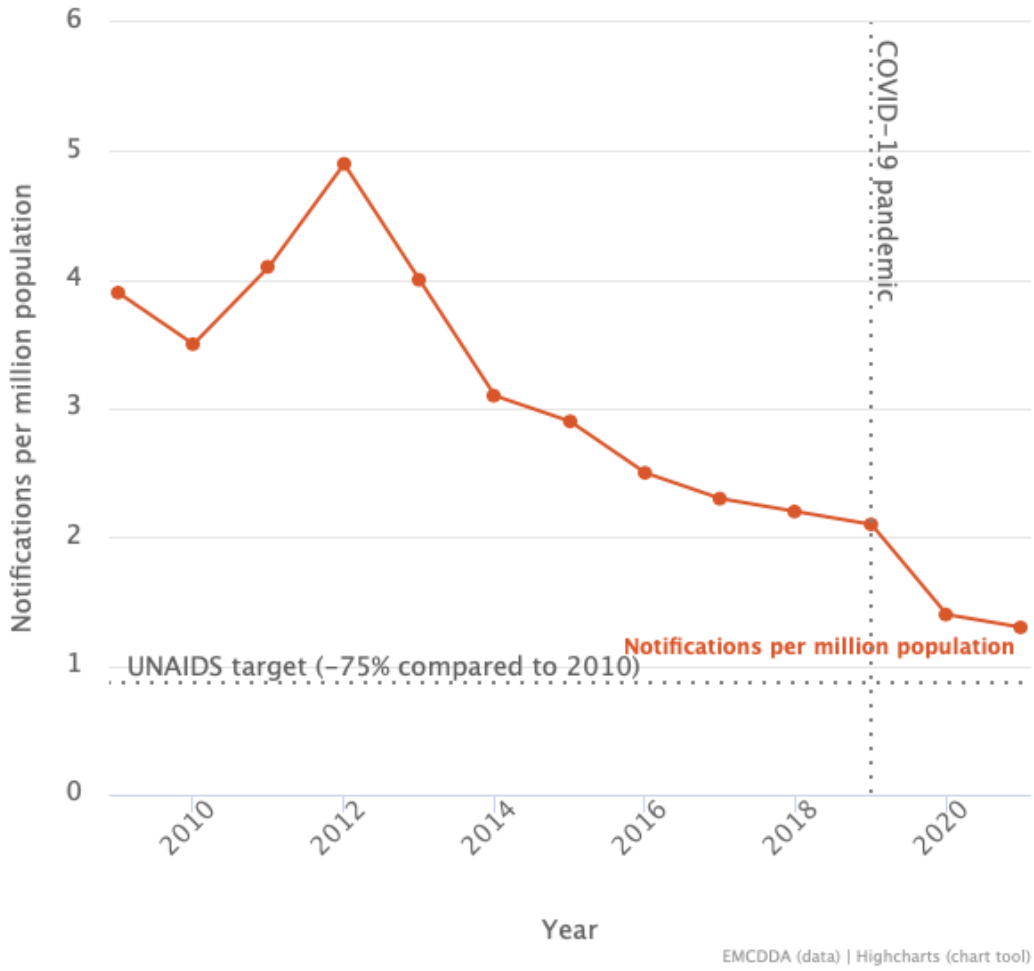
Last update: *16 June 2023*

Reducing the burden of infectious diseases and outbreak prevention requires enhanced services

People who inject drugs are at risk of contracting infections such as viral hepatitis B and C (HBV and HCV, respectively) and the human immunodeficiency virus (HIV) through the sharing of drug use paraphernalia. These infections can cause chronic diseases that may result in severe health-related harms, including death. While long-term trends in new HIV infections associated with drug injection have been falling in Europe, the risk of HIV transmission among people who inject drugs remains higher than for the general population, and transmission rates attributable to injecting are also still elevated in some countries.

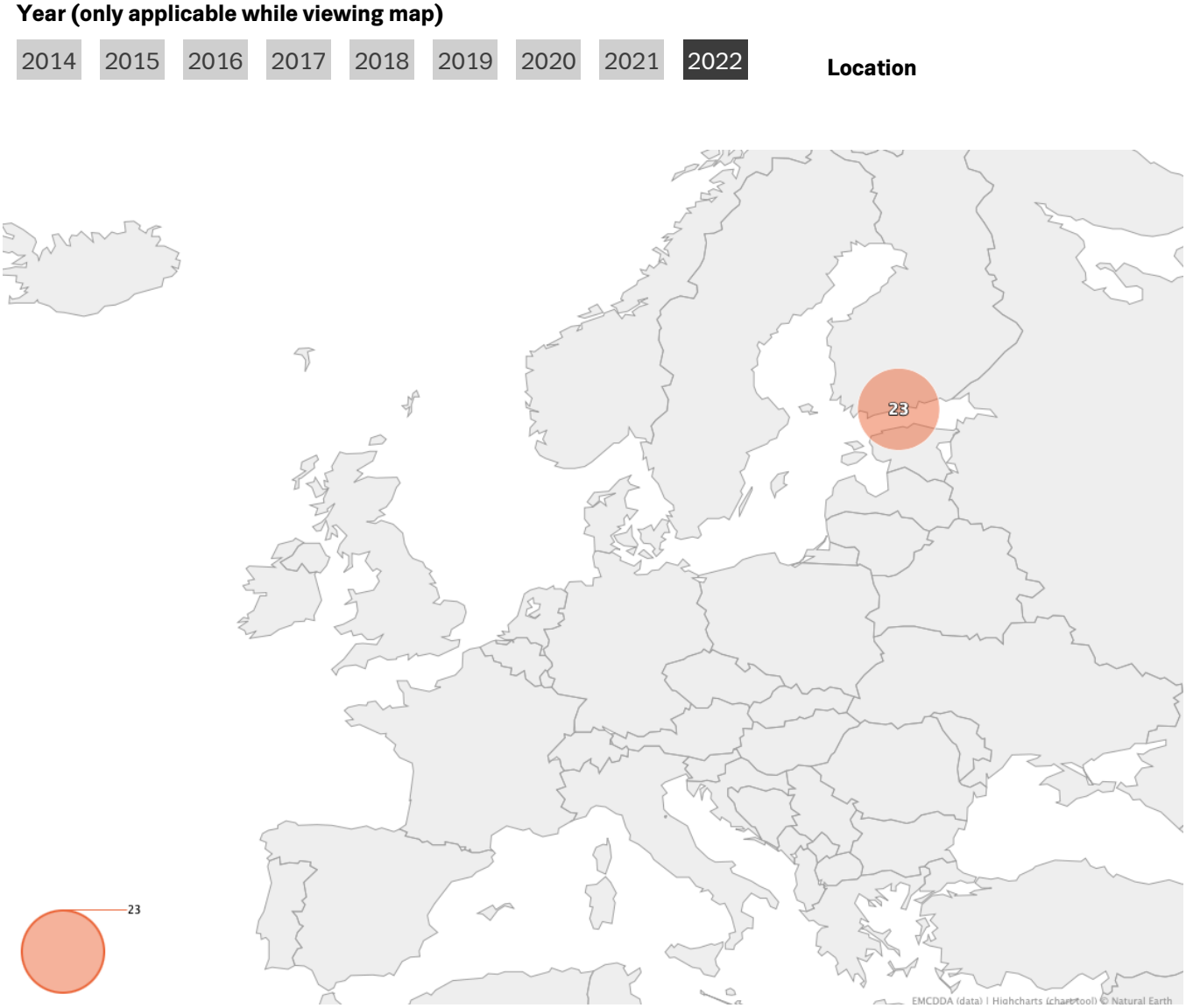
Concern exists that the low number of new HIV infections observed in 2021 may reflect, in part at least, a delay in diagnosis due to a disruption of testing caused by the pandemic, rather than a decline in transmission (see the figure New HIV notifications linked to injecting drug use in the European Union, 2009 to 2021, below). Local HIV outbreaks associated with stimulant injecting have been a recurrent problem in Europe in the last decade, with city-level outbreaks in Luxembourg (2014–16), Dublin (2014–15), Munich (2016), Cologne (2018), Thessaloniki (2020) and Helsinki (2022) highlighting the need for adequate treatment and harm reduction coverage (see the figure Most-recent HIV outbreaks in Europe among people who inject drugs: number of cases and the associated injected substance, 2014 to 2022).

Figure. New HIV notifications linked to injecting drug use in the European Union, 2009 to 2021



Source: ECDC.

Figure. Most-recent HIV outbreaks in Europe among people who inject drugs: number of cases and the associated injected substance, 2014 to 2022

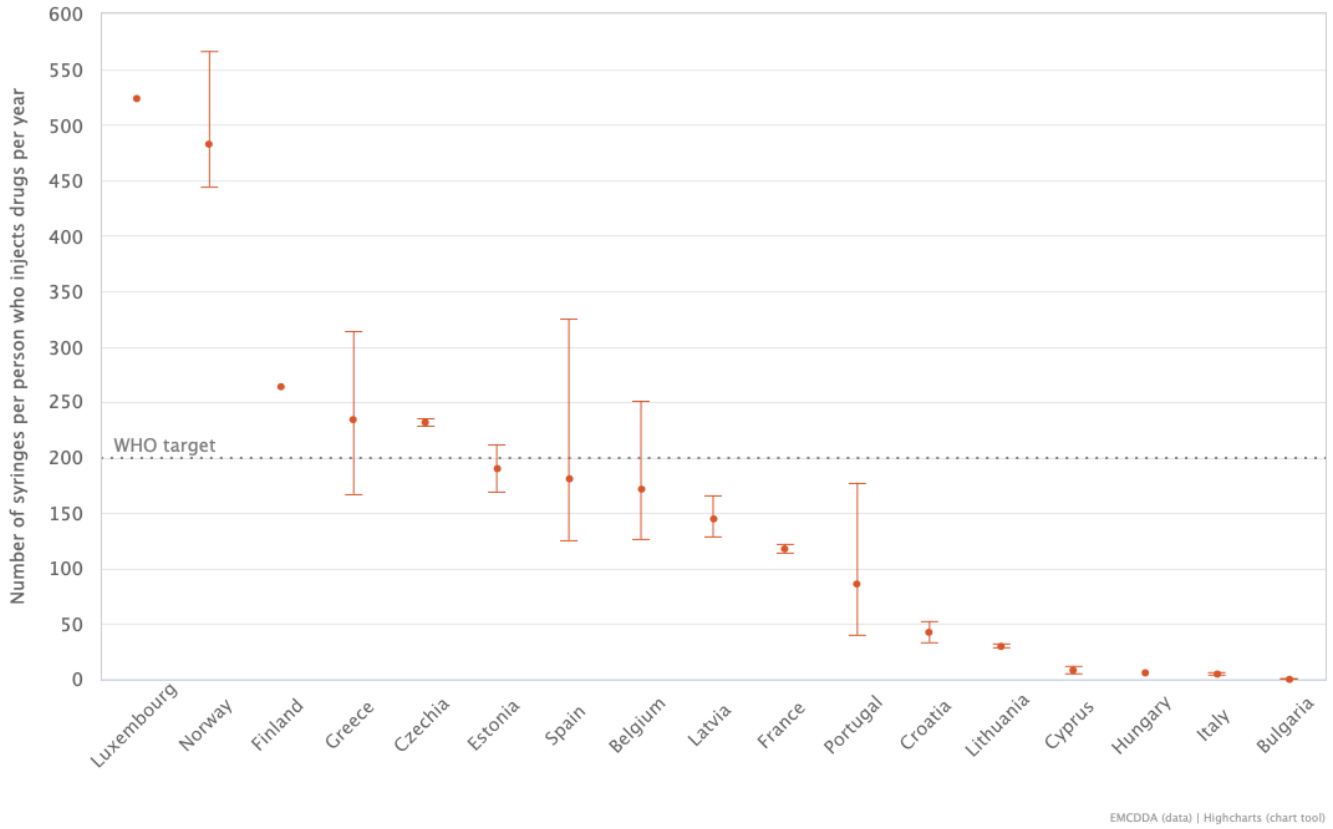


Over half of new HIV cases among people who inject drugs in the European Union and Norway were diagnosed late. This is a concern, as those with a late HIV diagnosis are at increased risk of HIV-related morbidity and mortality and may have a poorer response to antiretroviral treatment.

Harm reduction approaches, particularly the provision of sterile injecting equipment, are now regarded as an important component of reducing HIV transmission among people who inject drugs. However, coverage and access to needle and syringe provision remain insufficient in many countries, with only 5 of the 17 EU countries with available data achieving the WHO service provision targets in 2021 (see the figure Number of sterile syringes distributed per person who injects drugs per year, 2021 or latest data). Obtaining secure funding for harm reduction services working with people who inject drugs can be challenging in some countries. NGOs in Bulgaria and Romania, for example, have experienced funding and procurement difficulties over the last few years that led to a reduction in provision. In Sofia, during the period of reduced syringe provision, HIV prevalence rates from routine diagnostic tests conducted in

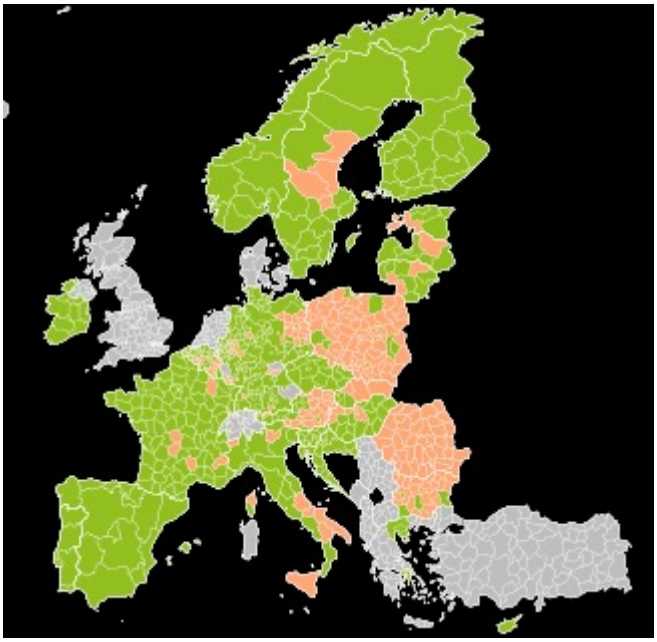
drug treatment centres increased, reaching 13 % in 2019, reflecting the risk of increased infections when service levels are inadequate.

Figure. Number of sterile syringes distributed per person who injects drugs per year, 2021 or latest data



In Europe, people injecting substances also have a high burden of viral hepatitis, and injecting drugs remains the most common risk factor for new HCV diagnoses. There is also evidence that harm reduction services, such as needle and syringe programmes, as well as the provision of opioid agonist treatment, can reduce the risk of HCV transmission. As noted earlier, the coverage of and access to these interventions vary considerably between European countries (see the figure Availability of needle and syringe programmes in Europe at the regional level, 2021 or the most recent year available, below). In addressing the harms associated with HCV infection, it is particularly important to identify individuals who remain chronically infected with the virus, as they are at risk of cirrhosis and cancer, and can transmit the virus to others through the sharing of any injecting paraphernalia that has been in contact with their blood. However, barriers to the uptake of HCV testing and treatment exist in many countries, and this can mean many HCV infections go undiagnosed and untreated. Positively, more European countries are now making efforts to gather data about HCV linked to injecting, whether through ad hoc studies or routine surveillance systems. This information, together with the establishment of effective referral pathways to specialist health services, can contribute to a more systematic approach to providing the continuum of care needed for people who inject drugs and have acquired HCV infection.

Figure. Availability of needle and syringe programmes in Europe at the regional level, 2021 or the most recent year available



Not available | Available | No information

Data are at NUTS levels 2 or 3. For information on NUTS (nomenclature of territorial units for statistics) visit the Eurostat website. The lack of data at NUTS levels 2 or 3 does not mean that the intervention is not available within a country.

European policymakers have made a commitment to the WHO global health sector strategies to end AIDS and the epidemics of viral hepatitis and sexually transmitted infections by 2030. Achieving these objectives, however, still requires greater investment to enhance harm reduction services, testing and linkage to treatment, as the provision in many countries remains insufficient. Greater efforts therefore are still needed to prevent future outbreaks and reduce transmission and thereby reduce the burden of disease linked to HIV, HCV and other infections among people who inject drugs.

Key data and trends

Human immunodeficiency virus (HIV)

- In 2021, a continued downward trend in new HIV diagnoses linked to injecting drug use was observed in the European Union, with 581 new cases reported (623 in 2020). These numbers are considerably lower than the total for the year before the COVID-19 pandemic (916 in 2019) (see the Drug-related infectious diseases infographic).
- Overall, in 2021, 4.8 % of new HIV cases in the European Union with a known route of transmission were attributable to injecting drug use. The share of new HIV cases related to injecting drug use was greater than 10 % in 2021 in Lithuania (32 %), Latvia (24 %), Greece (20 %), Slovenia (13 %) and Finland (12 %).
- In 2021, 156 new AIDS diagnoses related to injecting drug use were notified in the European Union.

- The recent HIV outbreak in Helsinki involved 23 analytically linked infections acquired in Finland between 2018 and 2022, against a baseline of 2 infections between 2012 and 2017. This suggests that high levels of harm reduction coverage are required to prevent HIV transmission where stimulant-based polydrug use is common. This is because Finland, along with Czechia, Greece, Luxembourg and Norway, was one of the 5 European countries reaching the WHO target of distributing 200 syringes per year per person who injects drugs in 2021.

Hepatitis B and C viruses (HBV and HCV)

- Six European countries have recent prevalence estimates of active HCV infection (as measured by the presence of HCV-RNA) among people who inject drugs and access drug services. The prevalence of active HCV infection derived from seroprevalence studies ranged from just under 9 % (Oslo, 2022) to 27 % (Bavaria, 2022), while estimates from routine HCV diagnostic tests were higher, ranging from 15 % (Belgium, 2019) to 56 % (Greece, 2021) (see the figure Prevalence of active HCV infection among people who inject drugs, by country, 2021 or latest available data).

- Snapshots of HCV diagnosis and treatment in several European countries provide insight into existing linkages to care. In 2022 data from Greece, a selection of treatment programmes indicated that out of the 26 % of people who inject drugs who tested positive for HCV-RNA, 85 % reported being prescribed treatment, and 54 % of those who had a diagnosis of HCV completed treatment. In Norway, a yearly seroprevalence study conducted among ever-injectors attending drug services in Oslo found a significant decrease in HCV-RNA prevalence, from 46 % in 2015 to 8.9 % in 2022, reflecting the impact of prevention and treatment measures.

- In 2021, people who inject drugs were reported to face clinical or financial restrictions in accessing direct-acting antiviral HCV treatment in 6 EU Member States.

- Estimates for hepatitis B virus (HBV) infection (as measured by the presence of the hepatitis B surface antigen), derived from the latest seroprevalence studies among people who inject drugs, ranged from 0.5 % (Oslo, 2021) to 8.7 % (Bucharest, 2017).

- In 2021, there were 20 EU Member States with a viral hepatitis policy that included people who inject drugs. Integrating testing and treatment of HCV, HBV and HIV within harm reduction, drug treatment services and prisons is key to reaching the continuum of care targets for people who inject drugs.

HIV and AIDS

New HIV cases attributable to injecting drug use: 581

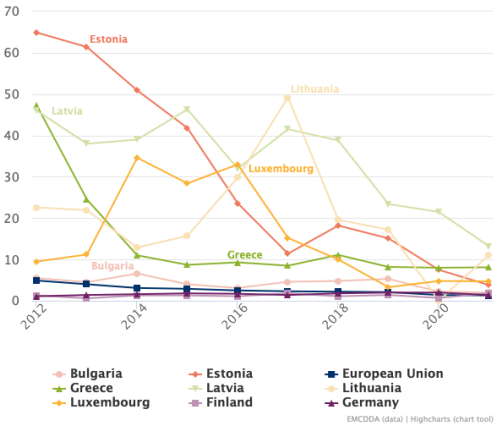
As a share of all new HIV cases (percent)

New AIDS cases attributable to injecting drug use: 156

As a share of all new AIDS cases (percent)

Trends in drug-related HIV: EU and selected countries

Cases per million population



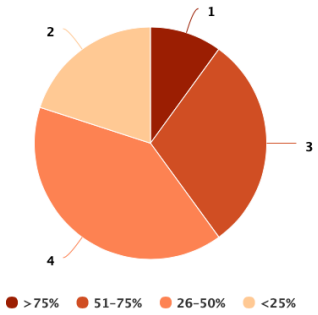
HCV and HBV

HCV antibody prevalence among people who inject drugs 2020/2021

12 % to 83 %

in 10 countries

Countries with national data



HCV current infections among people who inject drugs 2020/21

9–62 %

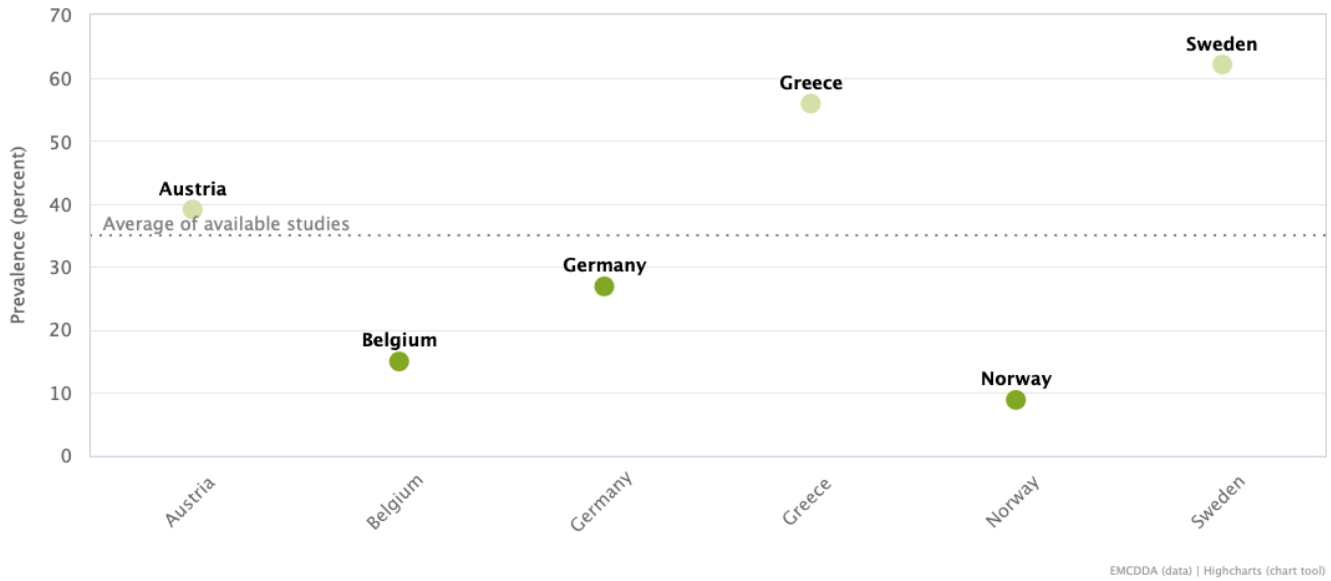
in subnational samples in 6 countries

HBV current infections, national data for 2020/21

an average of 4.1 % (1.2–6.4 %)

among people who inject drugs

Figure. Prevalence of active HCV infection among people who inject drugs, by country, 2021 or latest available data



Low evidence | Moderate evidence

Source data

Source data can be found in the online version

12. Drug-induced deaths – the current situation in Europe

Drug-induced deaths are those that are directly attributable to the use of drugs. On this page, you can find the latest analysis of drug-induced deaths in Europe, including key data on overdose deaths, substances implicated and more.

Last update: *16 June 2023*

Diverse opioids causing overdose deaths among ageing polydrug-using population – response implications

Drug-induced deaths are those that are directly attributable to the use of drugs. This is clearly a key area for understanding the harms the use of illicit drugs can cause, but it is also a complex one where, for both methodological and data availability issues, there are considerable areas of uncertainty and any conclusions must be made with caution. This is especially true when interpreting recent and short-term trends, considering that data for the current reporting year (2021) were available for only 22 of the 29 reporting countries. It should also be noted that, for methodological reasons, the numbers of drug-induced deaths identified are likely to represent minimum estimates; that reporting capacity varies between countries, meaning that national comparisons should be made with caution; and that a lack of detailed toxicological information in several countries currently means that our understanding of the role different drugs play in driving rates of drug-induced deaths over time is limited. Moreover, estimates of drug-induced deaths only represent a share of the overall mortality associated with drug use, as they do not include mortality from accidents, violence, suicides by means other than drug poisoning or chronic disease, where drug consumption may have played a role.

Despite these limitations a review of the current information available in this area is informative. It highlights the fact that opioids, usually in combination with other substances, remain the group of substances that are most commonly implicated in drug-induced deaths. Overall, trends in deaths where opioids are implicated appear stable, but the proportion of deaths in older age groups is increasing. Importantly, heroin remains involved in many opioid-related deaths, but the data available suggest it is now present in the majority of overdose deaths only in a few countries, and other opioids are now playing a more important role. The data also suggest the deaths where stimulants are implicated are rising in some countries, although with the important caveats that these are likely to be particularly prone to under-reporting and stimulants are often implicated in deaths where other drugs, including opioids, are also present. Stimulants also appear to be more commonly implicated in deaths among younger age cohorts. Viewing the data as a whole highlights the important role polydrug use plays in drug-related mortality and also a corresponding need for improved toxicological information to understand this issue better. For example, the data are limited but do suggest that, at least in some countries, benzodiazepines are also found to be present in the majority of drug-induced deaths with opioids involved. Benzodiazepines are central nervous system depressants and can potentiate the effects of other depressants such as opioids, alcohol and some prescription medicines. However, the implications of this for overdose reduction need to be better understood.

In 2021, the number of reported drug-induced deaths increased slightly in some EU countries and fell in others. The provisional estimate for the overall number of drug-induced deaths also rose slightly in total, but this observation should not be over-interpreted, as a number of countries with large populations have yet to provide data, and the increase is mostly explained by higher figures reported from Germany, where further analysis is needed to understand how this should be interpreted.

Available data suggest polydrug toxicity is the norm and that opioids other than heroin, including methadone and, to a much lesser extent, buprenorphine, oxycodone and fentanyl, are associated with a substantial share of overdose deaths in some countries. Potent synthetic opioids, such as the fentanyl derivative carfentanil and benzimidazole opioids (nitazenes), consumed in the context of polydrug use involving amphetamines, medicines and other drugs, do not currently figure prominently in the data available at EU level but are observed to be causing an increasing number of deaths in the Baltic countries, including Estonia and Lithuania in 2021. In Latvia, both the national statistics and the forensic registers reported a three-fold increase in the number of drug-induced deaths in 2022 compared with 2021. Part of the reported increase relates to improvements in laboratory capacity since June 2022, and year-on-year changes need to be interpreted with caution. However, recent shifts in the opioid market may also have played a role in this increase: while polydrug use dominates, xylazine was identified in one fatality in 2022, and nitazenes appear to be involved in a number of fatalities from December 2022, when these substances first became detectable, and through the early months of 2023. National data also suggest that acute drug toxicity presentations involving potent synthetic opioids increased in 2022 in emergency services in Latvia.

The often hidden, illegal and stigmatised nature of high-risk drug use makes preventing and responding to overdoses and deaths complex. The number of overdose deaths among 50- to 64-year-olds increased by 69 % between 2012 and 2021. A review of 36 studies covering 13 EU countries and Norway estimated that the excess risk of death among people engaged in high-risk drug use ranged from 3 times to more than 20 times that of people of the same age and sex in the general population. The excess risk is not only associated with overdose. Other causes of death where drug use may be implicated are also important but are not easy to quantify at the EU level: these include accidents, violence, cardiovascular and respiratory diseases, cancer and infections such as HIV and viral hepatitis, and suicide.

Cases of deliberate overdose may be included in the number of drug-induced deaths provided by some countries, further complicating the analysis of data in this area. Determining the intention of a person who has died from a drug overdose can be challenging. Many overdose deaths are reported as accidental, and others have an undetermined intent. However, in the data available from some countries, a high proportion of reported overdose deaths (one in six overall) were classified as intentional (i.e. with a suicidal intent). In all countries where such data are available, the proportion of overdose deaths with a suicidal intent was higher among women. In a few countries, more than a third of the reported overdose deaths among women were classified as having a suicidal intent.

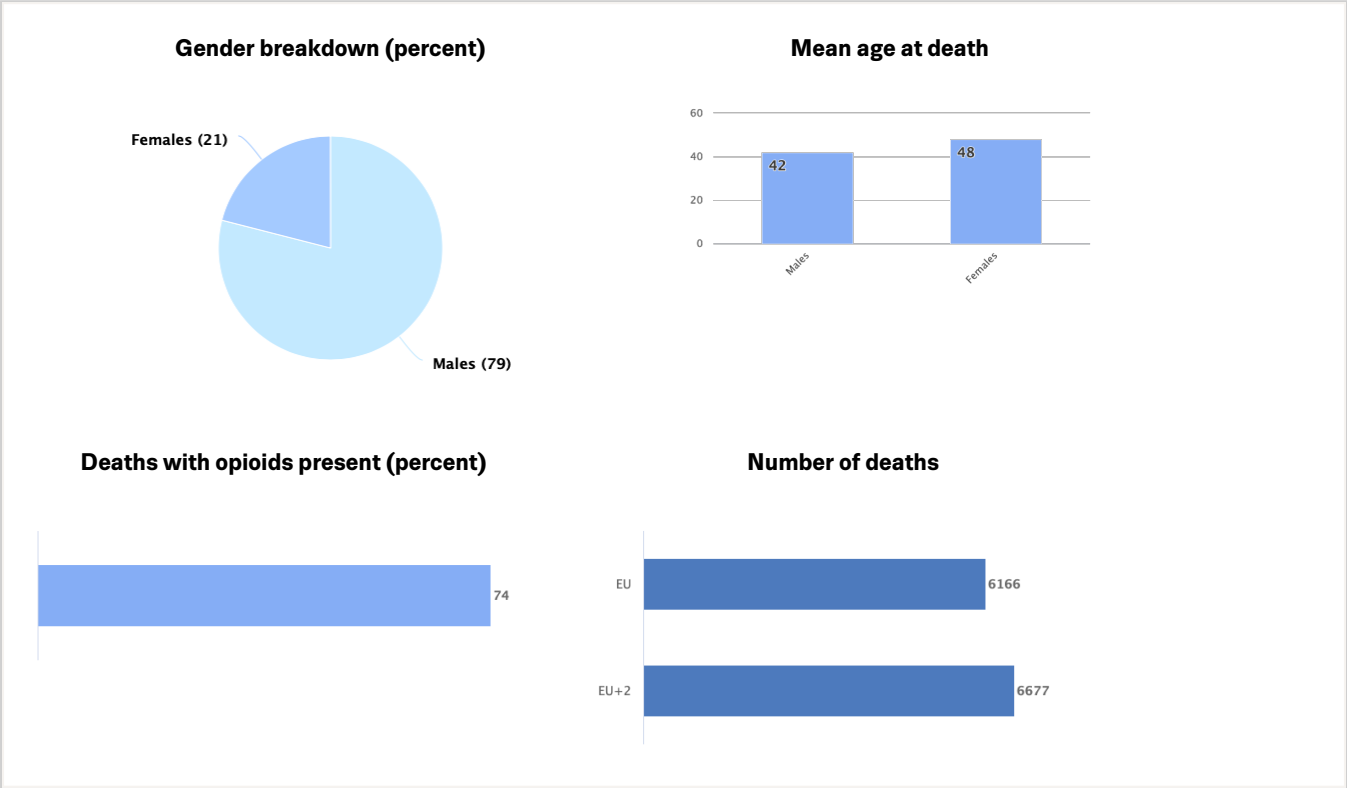
Changes in both the population of people who inject opioids and the types of substances they are using create new and greater challenges for interventions designed to reduce overdose death. These include the challenge to develop differentiated programmes to target the needs of different groups and, particularly, to be sensitive to the necessity to configure services to be appropriate to the needs of different age cohorts. Enrolment in opioid agonist treatment is strongly evidenced as a protective factor against opioid overdose and some other causes of death, yet coverage and access issues still exist in many countries. Similarly, the evidence is growing that the increasing availability of opioid antagonists can play an important role in preventing fatal overdoses. However, again, the extent to which this

approach is available varies between and within countries. The implementation of naloxone programmes, including pilot projects, to prevent overdose deaths was reported by 16 European countries up to 2022. Changing consumption patterns may also require services to review current delivery protocols. Overdoses involving potent synthetic opioids may require, for example, the administration of multiple doses of naloxone to reverse the opioid effects. Drug consumption rooms are provided in part as a response to reducing overdose mortality in some countries, and are now operational in 10 EU countries and Norway (see the section Harm reduction — the current situation in Europe). Where multicultural and new immigrant populations are present, increased own-language harm reduction messaging is desirable for high-risk drug users.

Key data and trends

- The mortality rate due to overdoses in the European Union in 2021 is estimated at 18.3 deaths per million population aged 15 to 64.
- It is estimated that at least 6 166 overdose deaths involving illicit drugs occurred in the European Union in 2021 (5 796 in 2020). This total rises to an estimated 6 677 deaths if Norway and Türkiye are included (6 434 in 2020). This number is provisional and is an underestimate, due to reporting delays and other limitations in reporting capacity apparent in some countries.

Infographic. Drug-induced deaths



EU+2 refers to EU Member States, Norway and Türkiye.

- Opioids, including heroin and its metabolites, often in combination with other substances, were estimated to be present in three quarters (74 %) of fatal overdoses reported in the European Union. It should be noted that multiple drugs are commonly found in toxicology reports from drug-induced deaths.
- The data available have limitations in respect to quality and coverage, however, the information available suggests that heroin was only present in the majority of overdose deaths in a relatively small number of EU countries. A significant share of overdose deaths was reported by Austria (67 %), Italy (56 %), Ireland (46 % in 2017), Poland (44 % in 2016) and Romania (43 %). In 7 other European countries, heroin was found in approximately a quarter to a third of reported overdose deaths: Portugal (37 %), Slovenia (33 %), Denmark (36 %), France (33 % in 2020), Türkiye (32 %), Spain (28 % in 2020) and Norway (23 %). In 2021, in the north of Europe, less than 1 in 6 overdose deaths in Finland, Sweden and in the Baltic countries was reported to involve heroin.
- Stimulants other than cocaine, including amphetamine and methamphetamine, are involved in many deaths, often alongside opioids. Out of 21 countries with post mortem data available for 2021, 19 reported deaths where stimulants were involved. Germany (348 cases) Türkiye (184), Finland (49), Norway (47), Austria (41), Sweden (36) and Denmark (35) reported the highest numbers of deaths involving these stimulants. The total numbers of such cases for the 17 countries that reported comparable data in all three years were 435 in 2019, 512 in 2020 and 477 in 2021. These data are provisional and should be regarded as an underestimate. Beyond these drug-induced deaths, other stimulant deaths, for example those associated with cardiovascular problems, may go undetected.
- The number of overdose deaths reported among those aged 50–64 increased by 69 % between 2012 and 2021 (by 31 % among women and by 86 % among men).

Figure. Age distribution of drug-induced deaths reported in the European Union, Norway and Türkiye in 2021 (percent)

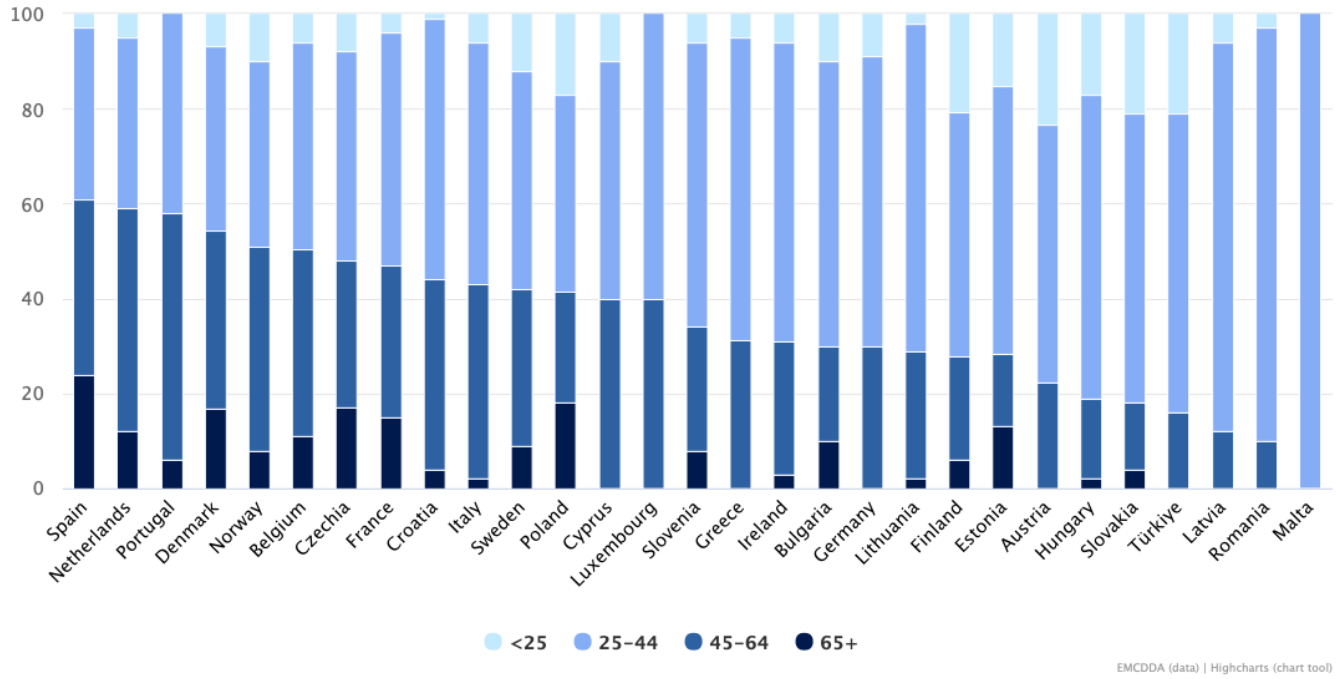


Figure. Proportion of males among drug-induced deaths in the European Union, Norway and Türkiye in 2021, or most recent year (percent)

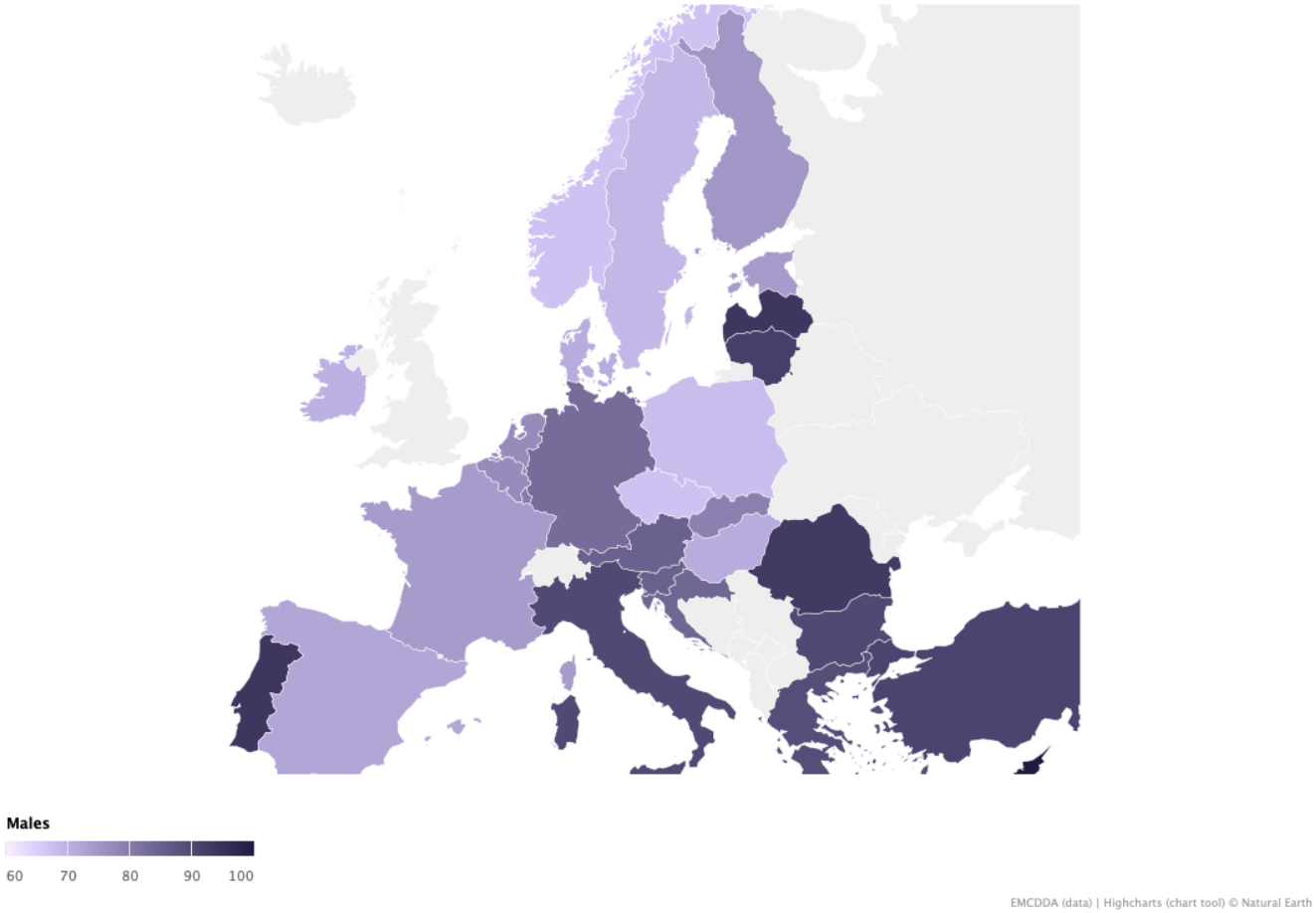


Figure. Drug-induced deaths in the European Union: age at death, 2021 or most recent available data (percent)

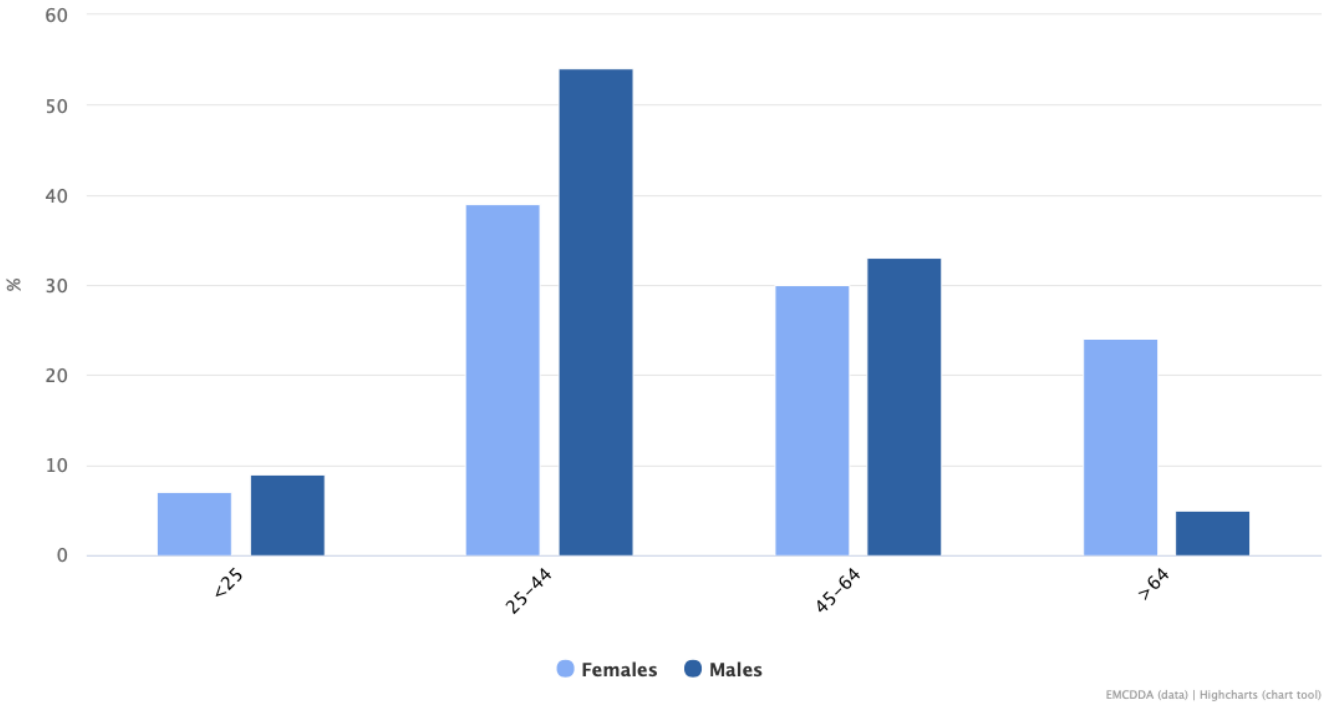
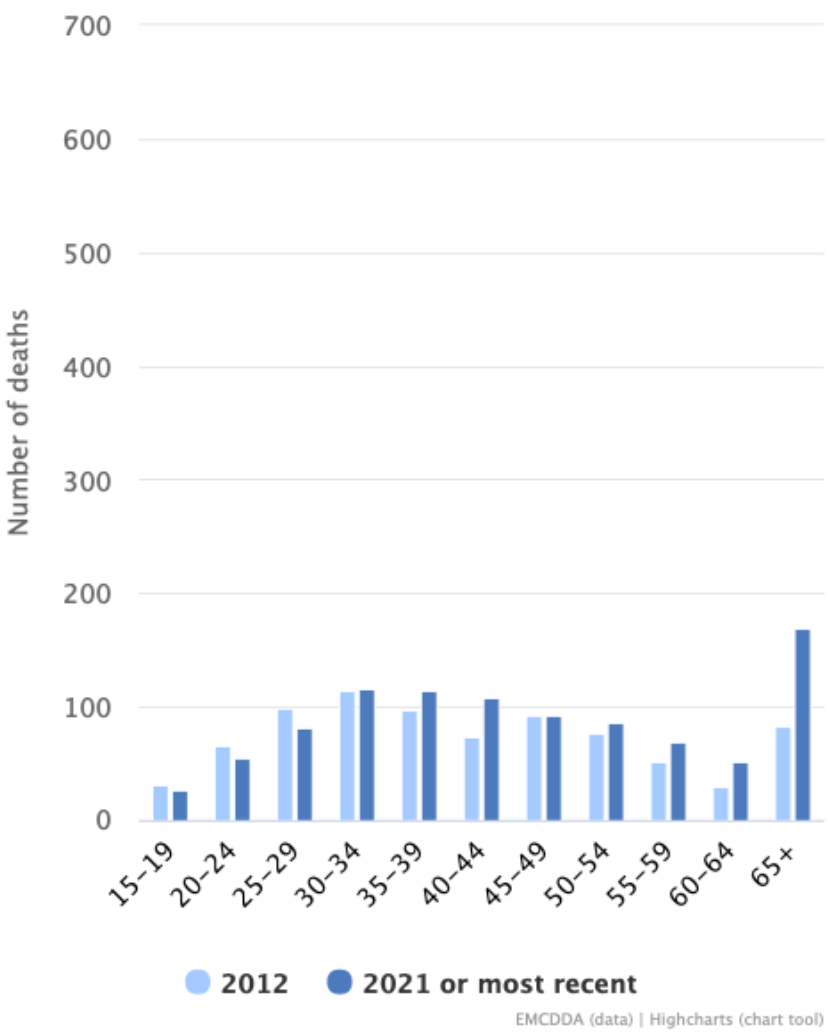


Figure. Number of drug-induced deaths reported in the European Union in 2012 and 2021, or the most recent year, by age band

Females



Males

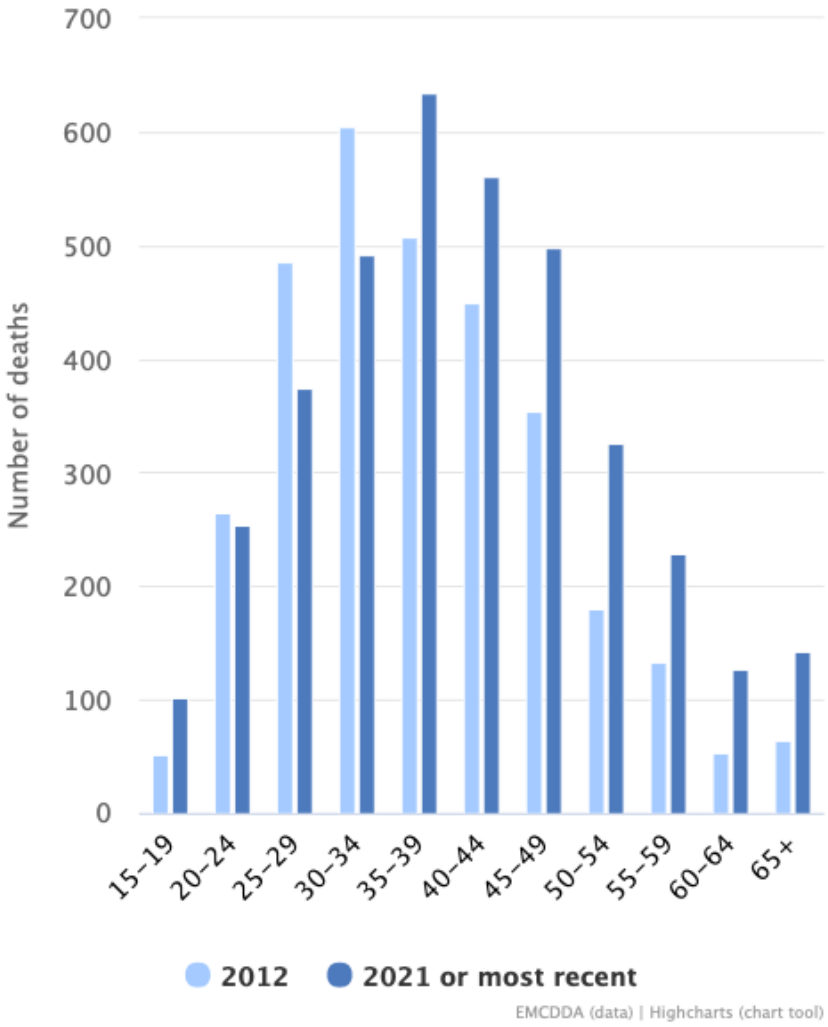
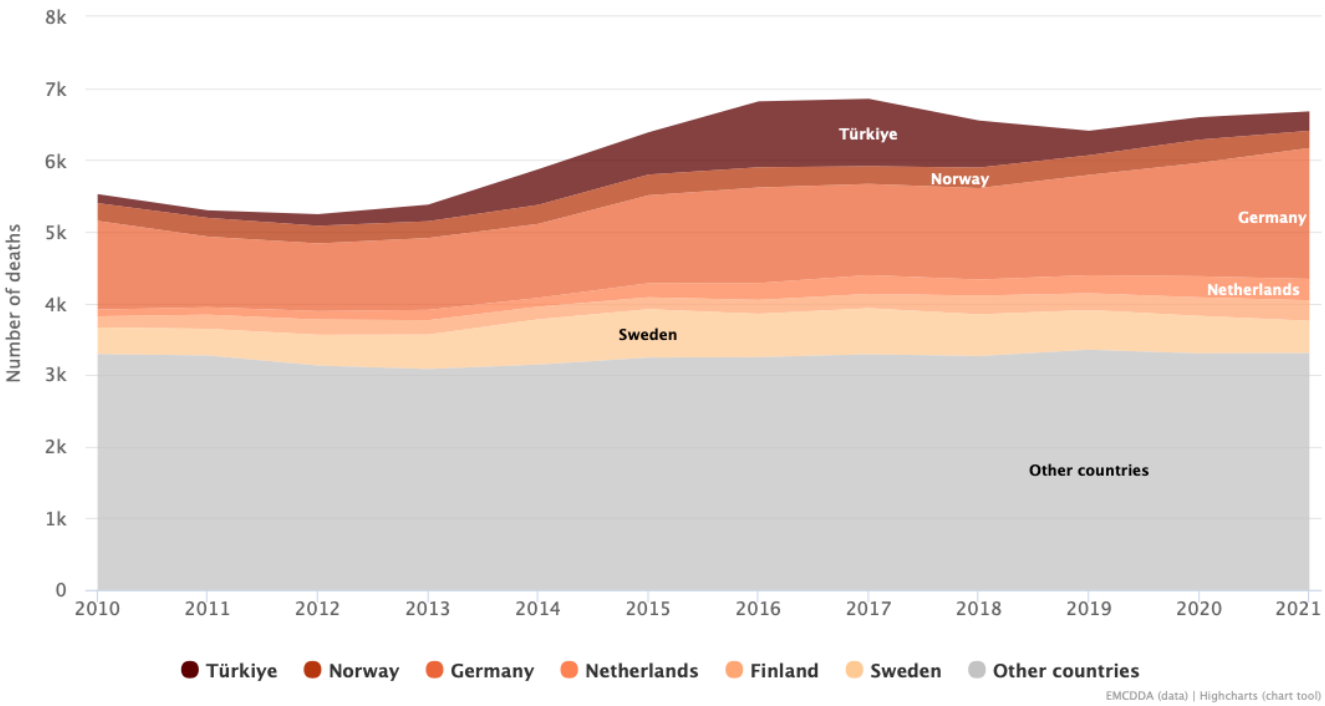


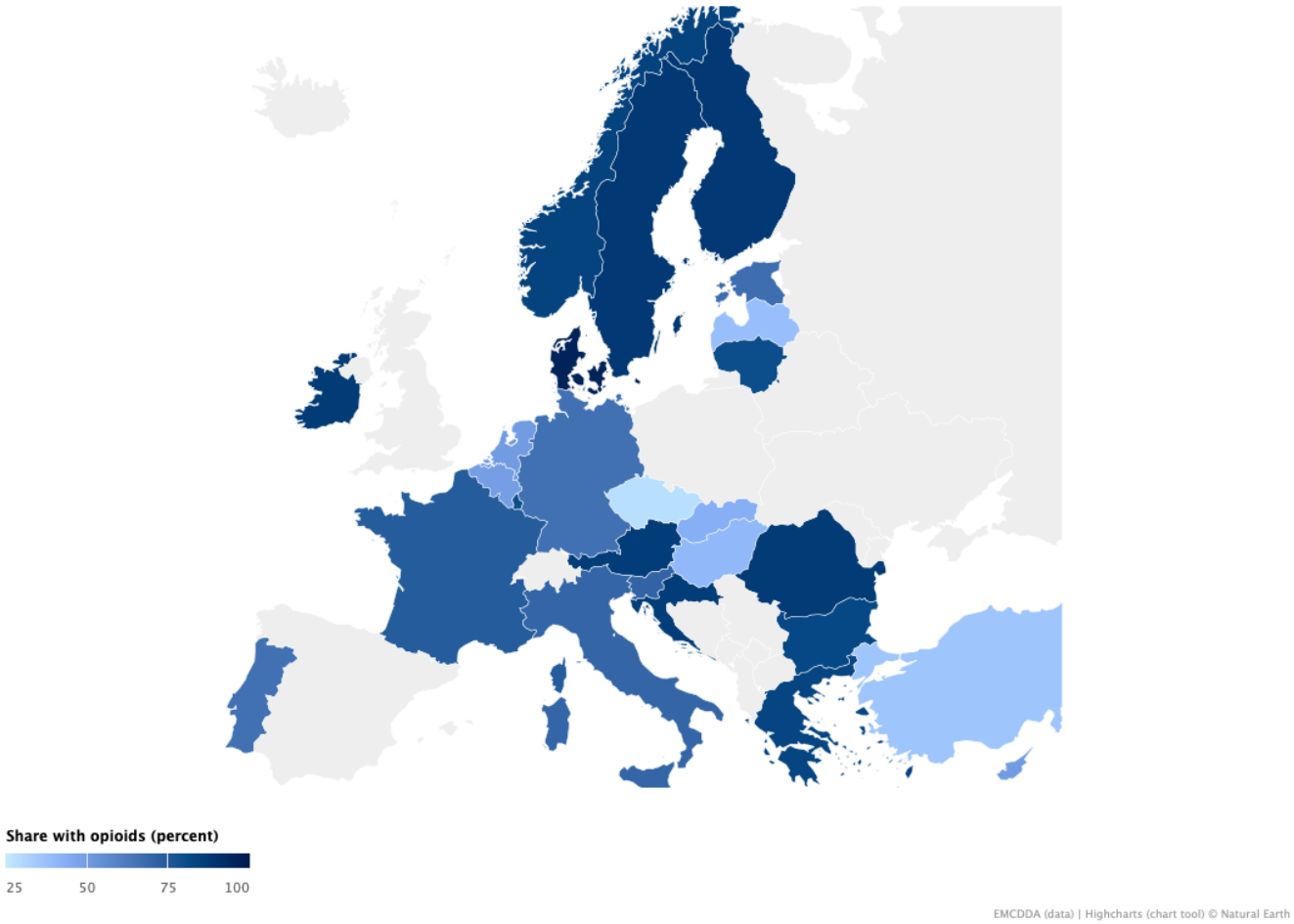
Figure. Trends in drug-induced deaths in the European Union, Norway and Türkiye



- In half of the 22 countries with post mortem toxicological data available for 2021, at least 1 in 5 drug-induced deaths involved methadone. The medicine was often identified with other opioids, alcohol and other medicines such as benzodiazepine. Buprenorphine was identified in 60 % of the drug-induced deaths reported in Finland in 2021, and 9 % of the deaths reported by the special register in France in 2020. In all other countries with available data, buprenorphine was reported in less than 5 % of fatal overdose cases or not reported at all.
- Tramadol, an opioid medicine used to treat moderate to severe pain, was involved in less than 5 % (93) of reported overdose deaths in 12 European countries in 2021. However, it was involved in 42 % of the deaths reported by the French registry of medicine misuse-related deaths, suggesting that improving surveillance and toxicological investigation might increase the detection of deaths associated with opioid medicines.
- Where available, data indicate that fentanyl and fentanyl derivatives were linked to 49 deaths in 2021 in Europe. With the inclusion of data from Germany, this number may be higher, rising to a minimum estimate of 137 deaths. Preliminary analysis, however, suggests that many of these fatalities might be associated with diverted fentanyl medicines rather than illicit fentanyl.
- Preliminary 2022 data from Estonia indicate that the number of drug-induced deaths involving new synthetic opioids doubled to 79 deaths (39 in 2021). The share of deaths related to new synthetic opioids involving benzimidazoles increased from 10 % (4/37) in 2021 (isotonitazene) to 37 % (29/79) in 2022 (protonitazene, metonitazene and isotonitazene).
- In countries with available data, between 2020 and 2021, oxycodone was reported as being involved in 103 drug-induced deaths, mainly in Denmark, Estonia, France and Finland.

- Cohort studies reveal overall far higher all-cause mortality among people that use drugs. Examples include the finding that between 2018 and 2022 the excess mortality risk of people who inject drugs in two Greek cities was 17 times that of the general population. Between 2010 and 2019, patients with opioid use disorders in Croatia had an excess mortality risk 17 times higher in females and 8 times higher in males compared with the general population.

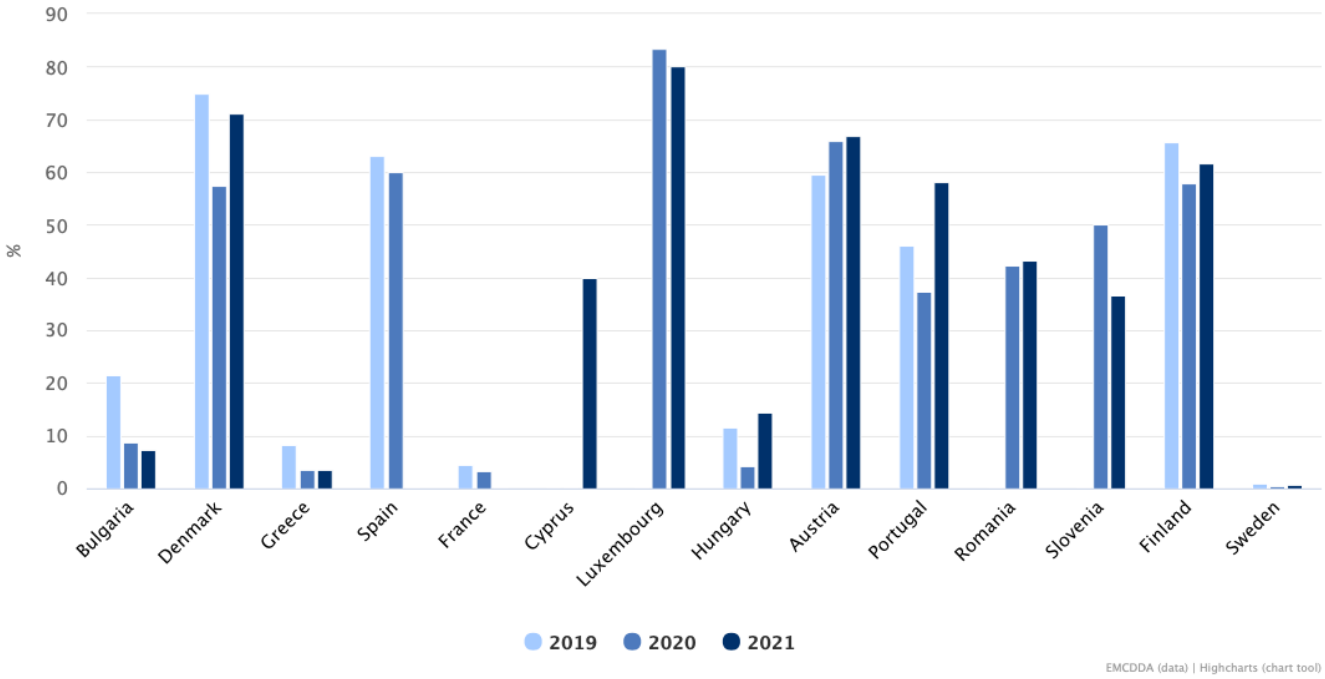
Figure. Proportion of drug-induced deaths cases with opioids mentioned, 2021 or most recent available data



Although information on toxicology is not available for data reported through the general mortality registers (preferred source) in Spain and Poland, available data from the alternative source (forensic special mortality registers) suggest that most drug-induced deaths in these countries involved opioids.

- In 2021, the proportion of overdose deaths involving benzodiazepines increased in a number of countries in which data were available, although the numbers were sometimes small. In some countries and where data exist, benzodiazepines are detected in a relatively large share of overdose deaths, including in over half of cases in Denmark (120), Luxembourg (4), Austria (119), Portugal (43) and Finland (127).

Figure. Proportion of drug-induced deaths with benzodiazepines involved, 2019 to 2021, selected countries among those with available information



For Greece, the most recent data available for this analysis were from the general mortality register (2017–2019).

- Few countries report information on the involvement of pregabalin in drug-induced deaths. Among those that do, Finland reported an increase from 63 deaths in 2020 to 90 in 2021.
- Deaths linked to synthetic cannabinoids declined to 16 in Hungary in 2021 (34 in 2020) and to 46 in Türkiye in 2021 (49 in 2020). Seven countries reported 26 deaths with synthetic cathinones involved in 2021, mainly in Austria (7 cases), Hungary (7 cases) and Finland (6 cases). Where data were available for 2020 and 2021, the numbers were stable, except in Austria, where only 2 cases were reported in 2020.

Source data can be found in the online version

13. Opioid agonist treatment – the current situation in Europe

Opioid users represent the largest group undergoing specialised drug treatment, mainly in the form of opioid agonist treatment. On this page, you can find the latest analysis of the provision of opioid agonist treatment in Europe, including key data on coverage, the number of people in treatment, pathways to treatment and more.

Last update: *16 June 2023*

Evolving need for multidisciplinary supports to treat ageing opioid clients

An estimated 1.6 million people received treatment for problems related to the use of illicit drugs in the European Union in 2021 (1.9 million, including Norway and Türkiye). Opioid users represent the largest group undergoing specialised drug treatment and consume the greatest share of available treatment resources, mainly in the form of opioid agonist treatment, typically combined with psychosocial interventions. The available evidence supports this approach, with positive outcomes found with respect to treatment retention, illicit opioid use, reported risk behaviour, drug-related harms and mortality.

There are important differences between countries, however, in the settings and form in which treatment is provided and the extent to which the availability of opioid agonist treatment is sufficient to meet the needs of those requiring this form of care. In some countries, the provision of opioid agonist treatment is still clearly insufficient. The relative importance of outpatient and inpatient provision within national treatment systems also varies greatly between countries. Approximately a quarter of drug treatment in Europe is provided in inpatient settings, mainly hospital-based residential centres (e.g. psychiatric hospitals), but this can also include therapeutic communities and specialised residential treatment centres in some countries prisons. Overall, however, opioid agonist treatment is more commonly provided in outpatient settings. These can include specialist drug treatment centres, low-threshold agencies and primary healthcare and general mental healthcare centres, which can include general practitioners' surgeries.

Trends in the total numbers receiving opioid agonist treatment indicate that provision did not drop significantly during the pandemic, although service delivery models may have been adapted during this period. Examples of this include a greater use of telemedicine and less restrictive approaches to providing take-home doses. There is also some information to suggest that access to care for new clients seeking opioid agonist treatment may have been disrupted temporarily during the pandemic period.

The data available on the characteristics of those receiving opioid agonist treatment underline the long-term nature of opioid problems. The data also indicate that Europe's cohort of those who have had problems with heroin is ageing. This is illustrated by the fact that over 60 % (60 500) of clients in opioid agonist treatment are now aged 40 or older, while less than 10 % are under 30 years old. This has important implications for service delivery, with services having to address a more complex set of healthcare needs in a population that is becoming ever more vulnerable. An important consideration

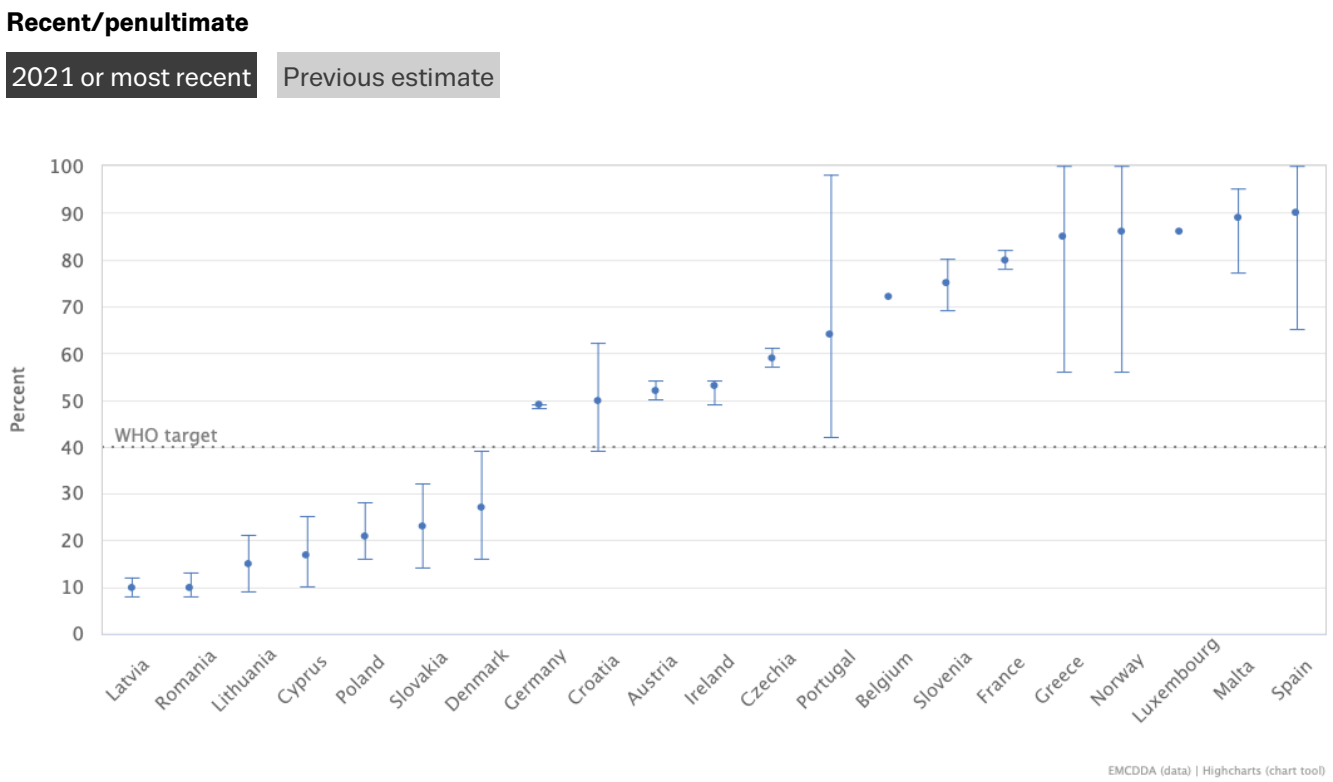
here is the need to ensure the existence of effective referral pathways to more generic services offering treatment for other conditions associated with the ageing process. This is becoming increasingly necessary in order to support older opioid treatment clients needing geriatric care, arising from the long-term impact of illicit drug use, but also tobacco and alcohol use, on their physical health. The treatment of this often highly marginalised group also needs to respond to a complex and often long-established set of problems related to mental health issues, social isolation, employment and housing.

Key data and trends

Number of people in treatment

- A comparison with current estimates of the number of high-risk opioid users in Europe would suggest that, overall, agonist treatment was received by about half of the number of high-risk opioid users in the European Union in 2021, an estimated 511 000 (524 000 including Norway and Türkiye). However, there are differences between countries. In those countries where data from 2011 or 2012 are available for comparison, there was generally an increase in coverage. Levels of provision, however, remain low and inadequate in some countries.
- Trends from countries that consistently reported data on clients receiving opioid agonist treatment between 2010 and 2021 show an overall stable trend of treatment levels during this period, with little fluctuation in the number of clients receiving this treatment.

Figure. Coverage of opioid agonist treatment in 2021 or the most recent year and in the previous estimate



Coverage is defined as the share of high-risk opioid users receiving the intervention. Data are displayed as point estimates and uncertainty intervals.

- At the onset of the COVID-19 pandemic, EU Member States sought to ensure continued access to opioid agonist treatment for people engaged in high-risk drug use. Comparing treatment data between 2019 and 2021 indicates that the number of clients remained stable, with only Croatia, Cyprus and Slovakia reporting a decrease greater than 10 % of their opioid agonist treatment population during this period.
- Some countries have continued to expand treatment coverage, with 10 countries reporting an increase in the number of people receiving agonist treatment between 2015 and 2021, including Romania (40 %), Poland (37 %) and Sweden (23 %).

Pathways to treatment

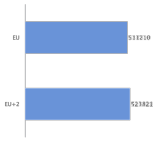
- Client pathways through drug treatment are often characterised by the use of different services, multiple entries and varying lengths of stay. Self-referral continues to be the most common route into specialised drug treatment for opioid clients. This form of referral, which also includes referral by family members or friends, accounted for more than half (55 %) of those with primary opioid problems entering specialised drug treatment in Europe in 2021. About one fifth (23 %) of clients were referred by health, education and social services, including other drug treatment centres, while 17 % were referred by the criminal justice system.

Opioid agonist medications

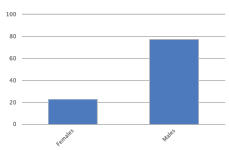
- The provision of more than one opioid agonist treatment medication in 2021 is reported by 24 countries (see the figure Number of European countries implementing opioid agonist treatment, up to 2022, below). Methadone is the most commonly prescribed, received by more than half (56 %) of opioid agonist treatment clients across Europe. Another 35 % are treated with medications based on buprenorphine, which is the principal medication reported to be used in 8 countries. Other substances, such as slow-release morphine or diacetylmorphine (heroin), are more rarely prescribed, being received by almost 10 % of opioid agonist clients in Europe, with 5 countries reporting some provision of heroin-assisted treatment, if pilot projects are included.

Infographic. Clients in opioid agonist treatment

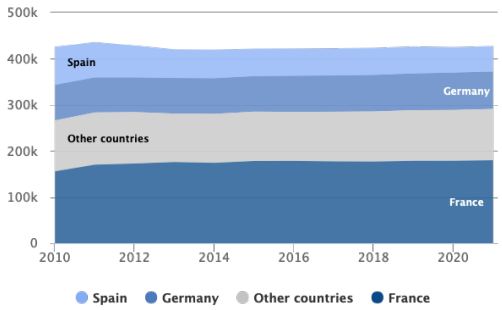
Number in treatment



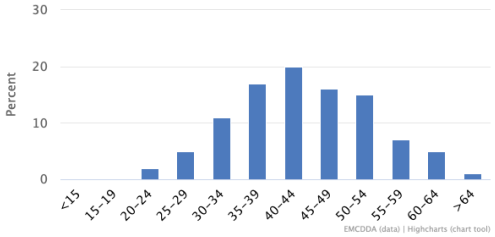
Gender breakdown (percent)



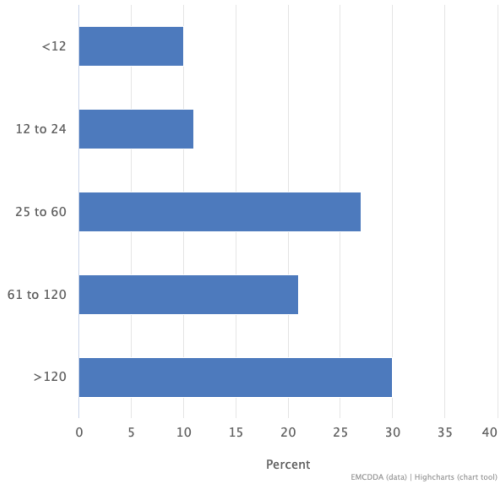
Trends in the number in opioid agonist treatment

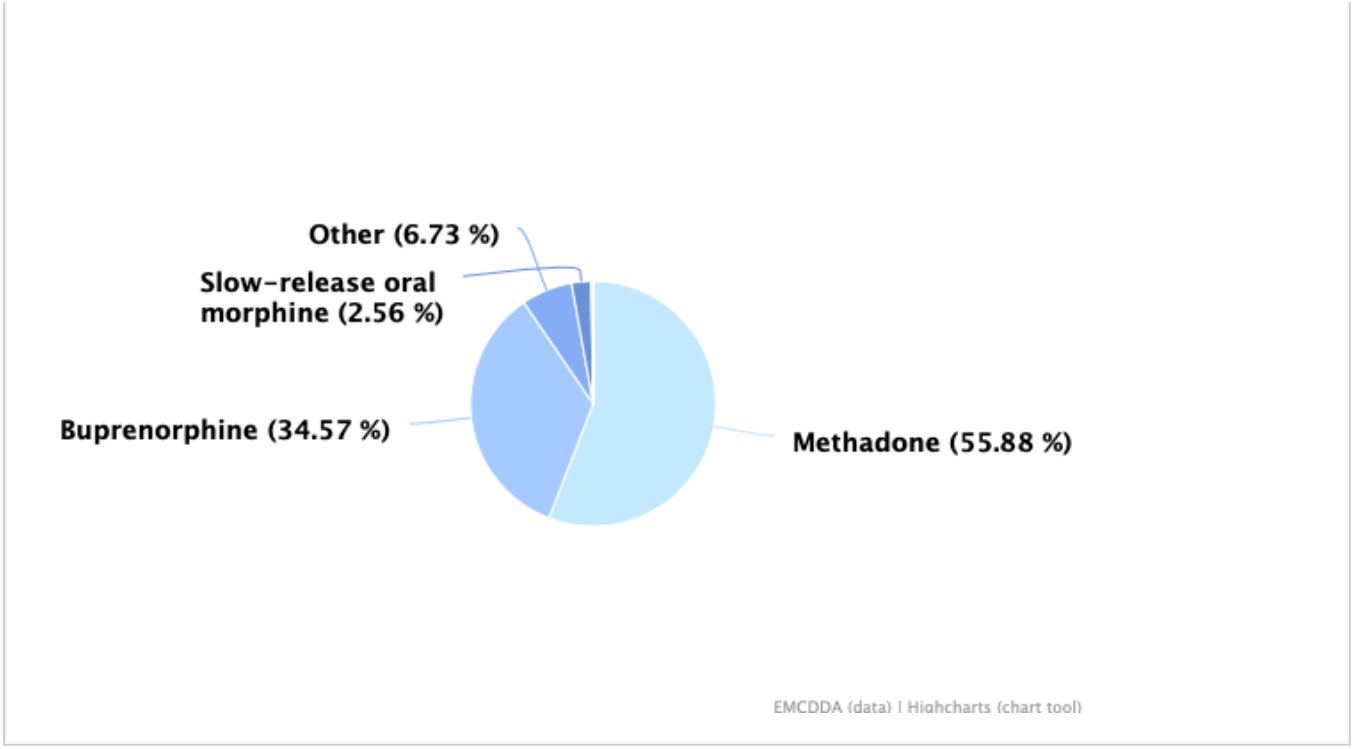


Age distribution



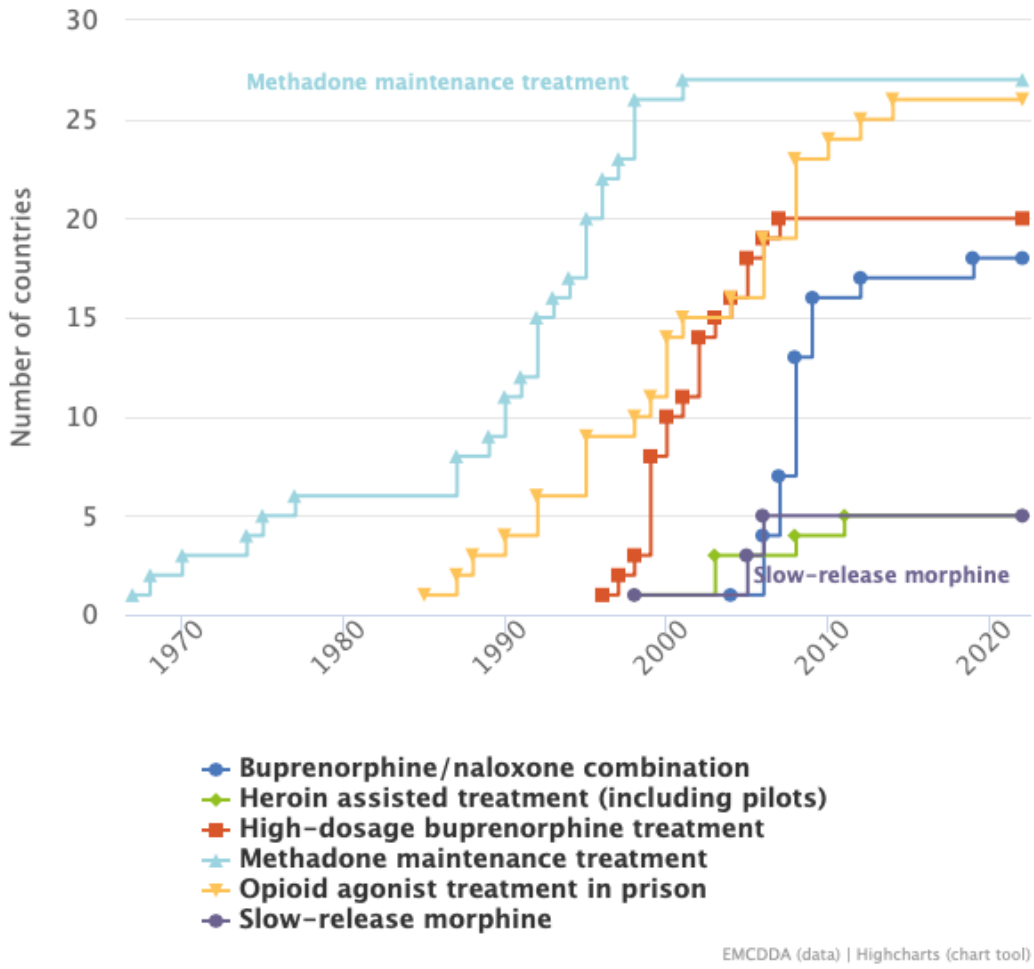
Treatment duration (months)





Trends in the number of opioid agonist clients are based on 25 countries. Only countries with data for at least 10 of the 12 years are included in the trends graph. Missing values are interpolated from adjacent years. Data for age distribution are based on 15 countries. Data for gender are based on 14 countries. Data for treatment duration are based on 7 countries.

Figure. Number of European countries implementing opioid agonist treatment, up to 2022



Implementation at any level, including pilot projects, is included.

Alternative treatment options

- Although less common than opioid agonist treatment, alternative treatment options for opioid users are available in all European countries. In the 11 countries for which data are available, between 5 % and 47 % of all opioid users in treatment receive interventions not classified as opioid agonist treatment, such as medically assisted detoxification and outpatient or inpatient abstinence-oriented interventions.

Source data

Source data can be found in the online version

About this page

14. Harm reduction – the current situation in Europe

Harm reduction encompasses interventions, programmes and policies that seek to reduce the health, social and economic harms of drug use to individuals, communities and societies. On this page, you can find the latest analysis of harm reduction interventions in Europe, including key data on opioid agonist treatment, naloxone programmes, drug consumption rooms and more.

Last update: *16 June 2023*

Europe's changing drug situation creates new challenges for harm reduction interventions

The use of illicit drugs is a recognised contributor to the global burden of disease. Interventions designed to reduce this burden include prevention activities, intended to reduce or slow the rate at which drug use may be initiated, and the offer of treatment to those who have developed drug problems. A complementary set of approaches goes under the general heading of harm reduction. Here the emphasis is on working non-judgmentally with people who use drugs in order to reduce the risks associated with behaviours that are mostly associated with adverse health outcomes, and more generally to promote health and well-being. Probably the best known of these is the provision of sterile injecting equipment to people who inject drugs, with the aim of reducing the risk of contracting an infectious disease. Over time these sorts of approaches appear to have contributed to the relatively low rate, by international standards, of new HIV infections now associated with injecting drug use in Europe. Over the last decade, as patterns of drug use have changed and the characteristics of those who use drugs have also evolved, to some extent, harm reduction interventions have needed to adapt to address a broader set of health outcomes. Among these are reducing the risk of drug overdose and addressing the often-considerable health and social problems faced by more marginalised populations.

Chronic and acute health problems are associated with the use of illicit drugs, and these are compounded by factors that include the properties of the substances, the route of administration, individual vulnerability, and the social context in which drugs are consumed. Chronic problems include dependence and drug-related infectious disease, while there is a range of acute harms, of which drug overdose is the best documented. Although relatively rare, the use of opioids still accounts for much of the morbidity and mortality associated with drug use. Injecting drug use also increases risks. Correspondingly, working with opioid users and those who inject drugs has been historically an important target for harm reduction interventions and also probably the area where service delivery models are most developed and evaluated.

Reflecting this, some harm reduction services have become increasingly integrated into the mainstream of healthcare provision for people who use drugs in Europe over the last two decades. Initially, the focus was on expanding access to opioid agonist treatment and needle and syringe programmes as a part of the response to high-risk drug use, primarily targeting injecting use of heroin and the HIV/AIDS

epidemic. In the last two decades, approaches to harm reduction have been broadened in some EU countries to encompass other responses, including supervised drug consumption rooms and take-home naloxone programmes intended to reduce fatal overdoses. In some countries, there are also drug checking facilities, set up to enable people to understand better what substances the illicit drugs they have bought contain. Tablets, for example, purchased as MDMA, may also contain adulterants and other drugs, such as synthetic cathinones. With many synthetic stimulants and new psychoactive substances now available on the illicit market in similar looking powders or pills, consumers may be increasingly at risk of being unaware what particular stimulant or mixture of substances they may be consuming.

Some of these interventions remain controversial for reasons that include their legal status and the evolving nature of their evidence base. Coverage of these newer interventions therefore remains uneven within and between countries, and where they do exist, they are often most commonly found only in large cities. Overall, coverage and access to harm reduction services more generally, including those service models that are long-established and relatively well evidenced, varies considerably between EU countries, and in some countries remains inadequate in comparison to estimated needs.

Some indicators now suggest that synthetic opioids and synthetic stimulants have a growing potential to cause drug-related harms in Europe, as inadvertent consumption of these substances in powders or mixtures sold as other drugs can lead to poisonings and deaths. This, together with more complex patterns of polydrug consumption, adds to the already considerable challenges of developing effective responses to reduce drug overdose deaths and drug-related poisonings. An example of this growing complexity, albeit currently on a relatively small scale, comes from Estonia where mixtures have been identified containing new synthetic opioids and new benzodiazepines and also the tranquilliser xylazine. Known respectively as ‘benzo-dope' and ‘tranq-dope', these sorts of mixtures have been linked to increases in overdose deaths and other negative health-related outcomes in the United States and Canada. The presence on the market of such mixtures highlights the need to review current approaches to the delivery of some harm reduction interventions. For example, these mixtures may need consideration to be given to reviewing distribution and administration of the opioid antagonist naloxone.

Reducing the risks associated with injecting drug use has always been an important target for harm reduction interventions, and the service models are relatively well developed and evidenced. However, even in this area, changes in drug consumption are creating new challenges for effective service delivery. In the last decade, there have been HIV outbreaks associated with the injection of illicit synthetic stimulants in 6 major European cities, across 5 EU countries. A potentially increased frequency of injection is associated with stimulant use compared to heroin use, while crushing and dissolving crack cocaine and other tablets for injection also brings additional health risks. These consumption patterns raise questions regarding, for example, the type and adequacy of needles and syringes provided to people in street-based open drug scenes, typically characterised by polydrug use. An additional concern exists that service restrictions during COVID-19 lockdowns adversely impacted on testing for drug-related infections, such as HIV and HCV, and on conduits to care among more vulnerable and marginalised populations of people who use drugs, including those experiencing homelessness.

The use of illicit stimulants and other drugs to facilitate group sexual encounters, sometimes of an extended duration, among men who have sex with men is known as chemsex. This high-risk sexual practice can involve participants having multiple sexual partners, with whom they engage in unprotected sexual activity, placing them at risk of sexually transmitted infections. Group chemsex sessions can be associated with the use of social media apps, where access to illicit drugs and group sex may be combined by some organisers. The drugs involved can range from stimulants, such as methamphetamine, cocaine and synthetic cathinones, to alcohol, depressants, such as GHB/GBL, and dissociatives, such as ketamine. High-risk consumption of some of these drugs, including injecting drug

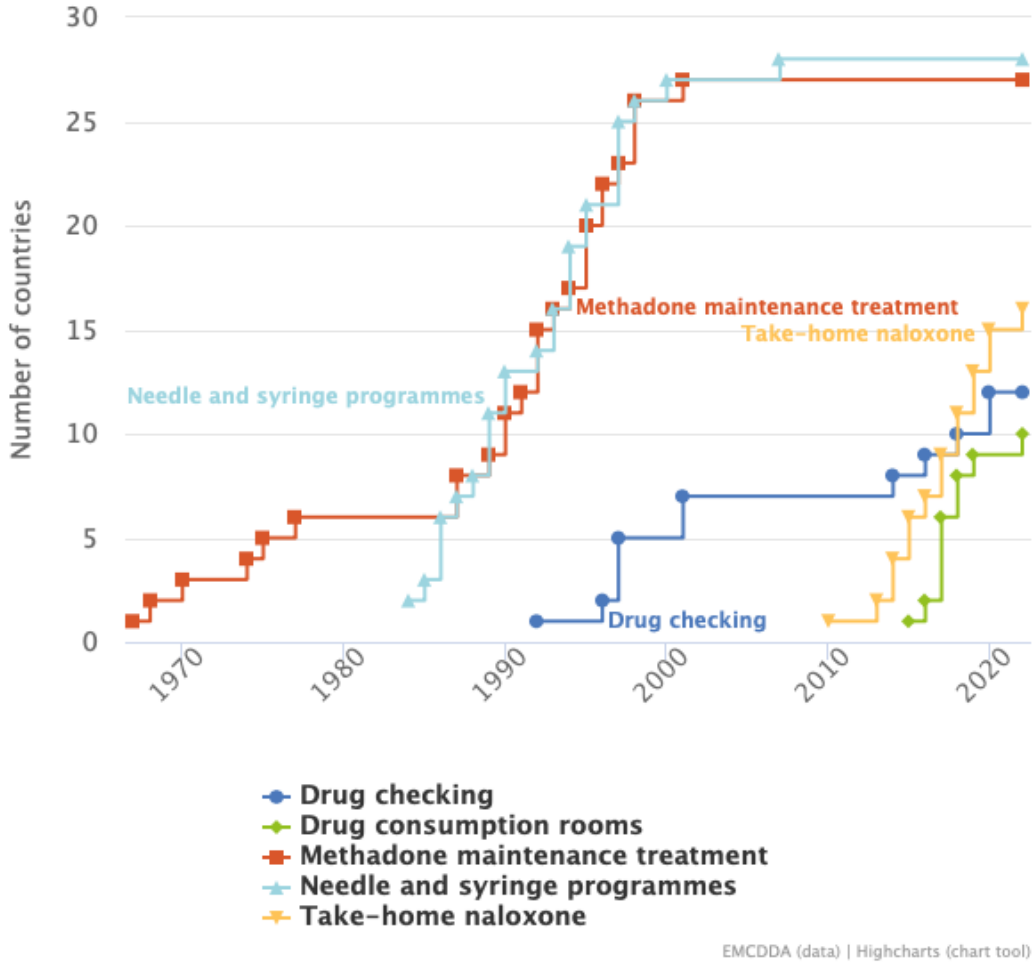
use, places people at risk of infectious diseases such as HIV and HCV, as well as acute drug toxicity, fatal overdose, acute psychiatric complications, substance use disorder and other psychiatric problems such as anxiety and depression. In 2022, a monkeypox outbreak was documented for the first time in Europe. Descriptive studies showing a potential association between monkeypox infection and specific exposures (chemsex, tattooing) have raised questions on the implications and specific harm reduction needs of some groups of people who use drugs. While it is difficult to estimate the prevalence of chemsex, information from research studies and treatment centres suggest it is an issue that is present, albeit at a small scale and among specific subgroups of people who use drugs, across Europe. It must be noted that this group of people are generally not present as clients in drug treatment clinics. Providing effective harm reduction responses for people engaged in these high-risk behaviours remains a challenge and the development of tailored harm-reduction interventions is needed. In Europe, treatment services for drug and sexual health problems are usually funded separately, have different eligibility criteria and are rarely co-located. This makes it difficult to provide integrated care for people exposed to the dual risks of unprotected sex and high-risk drug use in a chemsex context. Ongoing research is aimed at identifying the most appropriate service model to engage clients, such as integrating drug services into existing sexual health services for men who have sex with men.

Cannabis users in Europe often smoke the drug with tobacco, and an undeveloped area for the development of harm reduction approaches is the consideration of what might constitute effective inventions to reduce smoking-related harm in this group. More generally, as the types and forms of cannabis products available in Europe continue to change, so too have considerations about the implications this has for harm reduction responses. For example, natural cannabis products sprayed with potent synthetic cannabinoids, but mis-sold as natural cannabis, place consumers at risk of health complications. Generally, cannabis products, both resin and herb, are now of a higher potency than they were historically, while the diversity of product types has expanded, with edibles, e-liquids and extracts all now available. The semi-synthetic cannabinoid hexahydrocannabinol (HHC) has recently become commercially marketed in some EU Member States and sold as a ‘legal' alternative to cannabis. The newness of these cannabis forms raises issues around consumer safety, particularly where little information exists about their impact on human health and creates a complex harm reduction messaging challenge.

As noted elsewhere in this year's *European Drug Report,* there are also signs of increasing consumer interest in less commonly known substances, including dissociative drugs and psychedelics. Among these are substances such as nitrous oxide and ketamine. While these drugs are associated with episodic or recreational use in specific contexts, such as nightlife or entertainment settings, they are linked with a range of possible health harms, of which the people using them may not be aware.

While some harm reduction responses remain controversial in some countries in Europe, the overall concept that evidence-based measures to reduce harm are an important component of balanced drug policies is largely accepted. The contexts within which harm reduction services operate, the evidence base that supports them, and what constitutes standards for quality of care in this area therefore remain key areas for policy consideration. Looking forward, the evolving threats to health arising from Europe's dynamic illicit drugs markets highlight the growing need to evaluate new and evolving models of service provision that may be needed to protect the health of people at risk of adverse outcomes arising from more complex consumption patterns, new substances and mixtures or associated with particular subgroups or settings.

Figure. Number of European countries implementing harm reduction interventions, up to 2022



Implementation at any level, including pilot projects, is included.

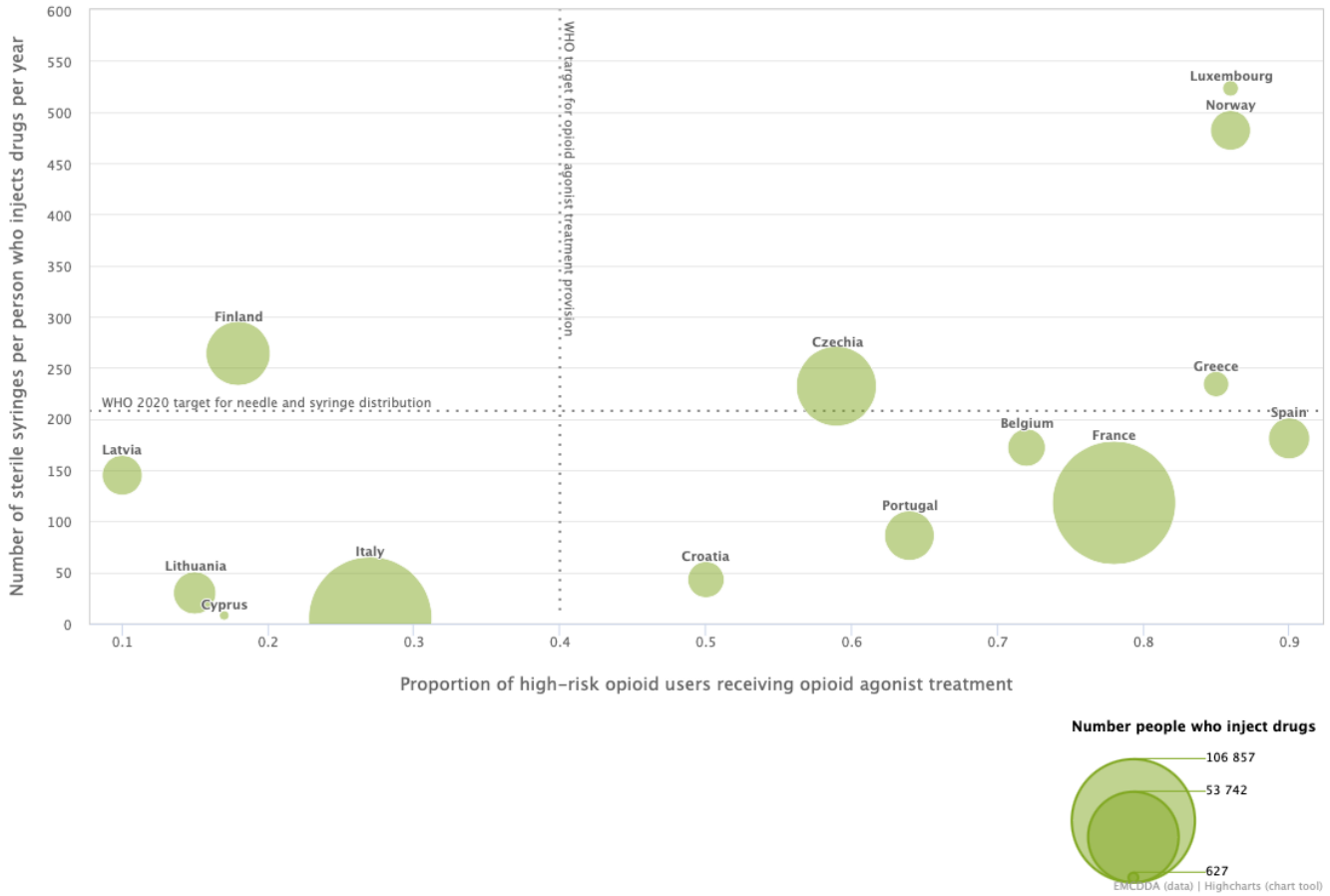
Health and social responses to drug problems: a European guide contains detailed information for those wanting to find out more about the evidence that exists for the relative effectiveness of harm reduction and other forms of intervention.

Key data and trends

Needle and syringe programmes

- Needle and syringe programmes are also a widely available and standard component of harm reduction services. In 2022, all EU Member States and Norway had needle and syringe programmes in place. Needle and syringe coverage and access remain a challenge, with only 5 of the 17 EU countries with available data reaching the WHO service provision targets in 2021.

Figure. Needle and syringe distribution and opioid agonist treatment coverage in relation to WHO 2020 targets, 2021 or latest available estimate



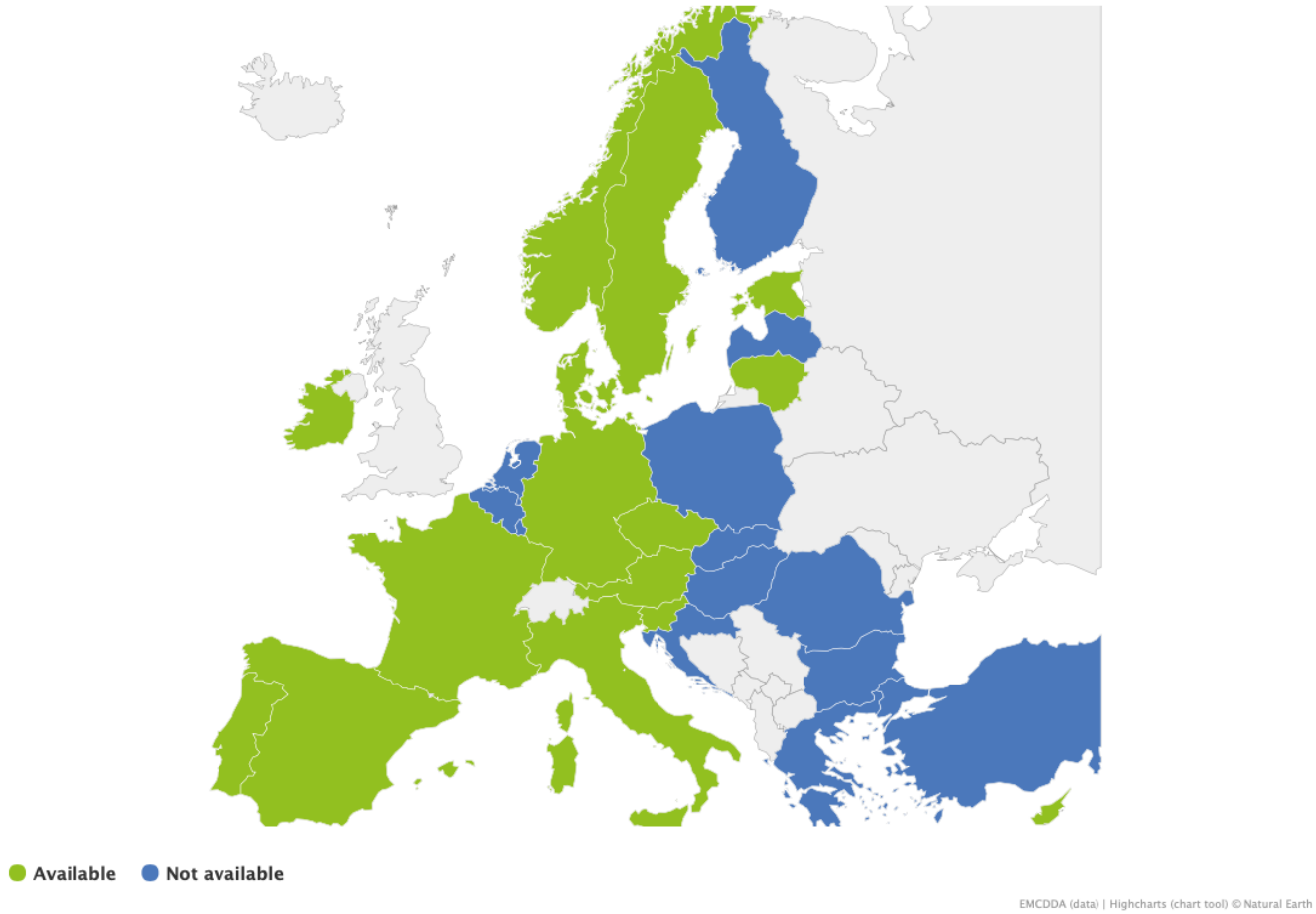
Opioid agonist treatment

- Opioid agonist treatment can be considered as an effective form of drug treatment and also as a service delivery model that addresses some harm reduction objectives. Opioid agonist treatment is a well-established intervention that is implemented in all European countries and is acknowledged as a protective factor against overdose deaths. A range of opioid agonist medications are prescribed in treatment clinics in Europe, but methadone is the most widely used, with about 56 % of opioid agonist clients receiving it, while another 35 % are treated with buprenorphine-based medications.

Take-home naloxone programmes

- Up to 2022, 16 European countries have reported the implementation of take-home naloxone programmes, which includes pilot projects, to prevent overdose deaths and 10 countries report having opened at least one supervised drug consumption room, intended to facilitate safer use and prevent various health problems.

Availability of take-home naloxone in Europe



Data for EU Member States, Türkiye and Norway in 2022 or most recent year.

Drug checking services

- Twelve European countries report the existence of some type of drug checking service. These services aim to prevent harms by allowing people to find out what chemicals are in the illicit substances they have bought, and, in some cases, provide access to counselling or brief interventions. The analytical techniques used by services range from sophisticated technology that can provide information on strength and content of a wide variety of substances, to methods that simply show the presence or absence of a particular drug.

Figure. An illustration of the range of drug checking technologies available and their relative accuracy and reliability

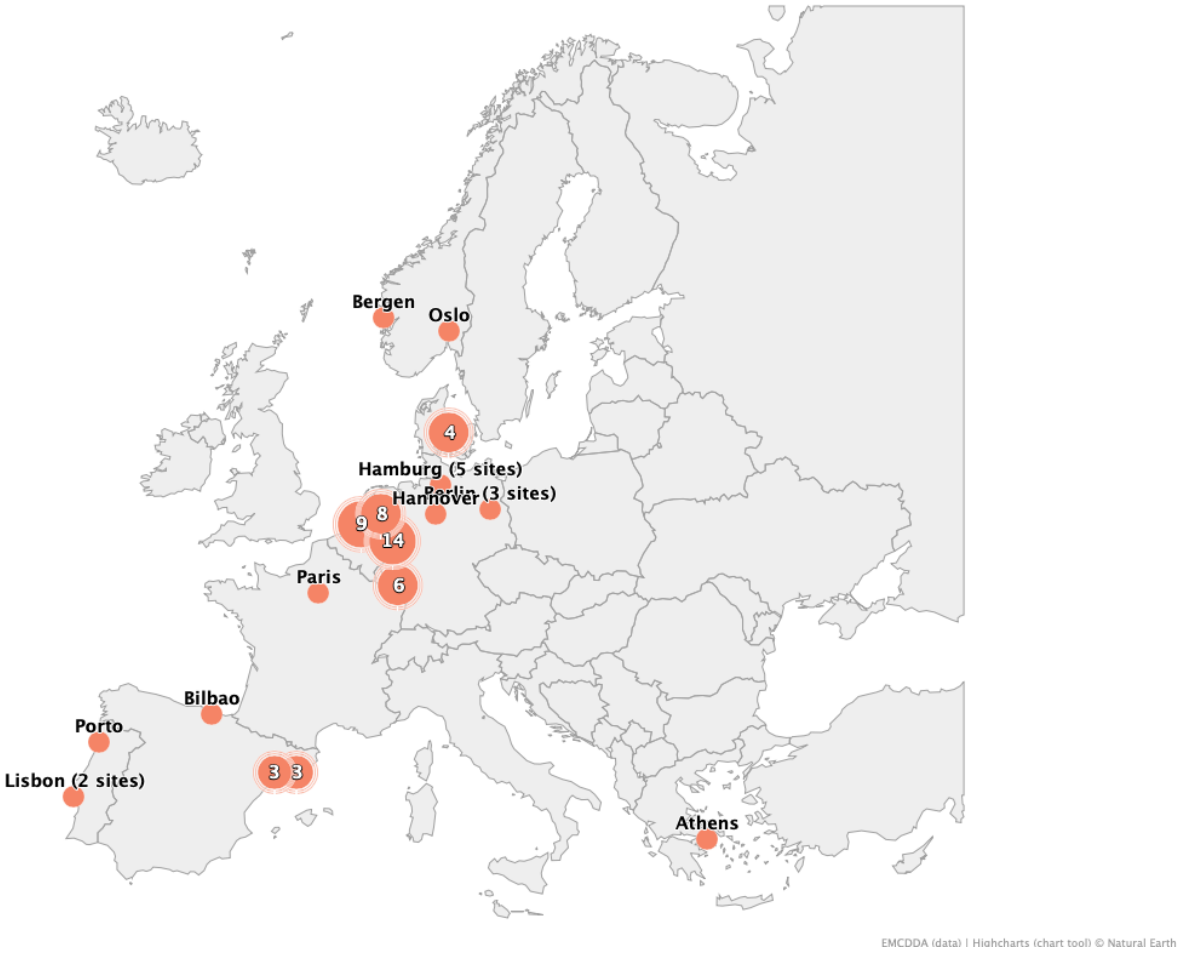
Drug checking technologies ranked in order of increasing accuracy and reliability of results:

- Multiple methods(most accurate and reliable)
- High-performance liquid chromatography
- Fourier transform spectroscopy
- Thin-layer chromatography
- Reagent test kit(least accurate and reliable)

Supervised drug consumption rooms

- While supervised drug consumption rooms have become a more accepted harm reduction response, establishing them remains problematic in some countries. In 2022, 9 EU countries and Norway had operational facilities. Where multicultural and new immigrant populations are present, increased own-language harm reduction messaging is desirable for people engaged in high-risk drug use.

Figure. Location and number of drug consumption facilities throughout Europe



European Network of Drug Consumption Rooms (ENDCR) and Correlation – European Harm Reduction Network (C-EHRN).

Interventions in prisons

- EMCDDA data on harm reduction and treatment interventions available in prisons in 2021 show that continuity of opioid agonist treatment was available in all EU Member States, apart from Slovakia, as well as in Türkiye and Norway. Initiation of agonist treatment in prison was not allowed in 6 countries. Needle and syringe programmes were available in prisons in 3 countries and take-home naloxone was available in 4 countries.

Source data can be found in the online version

15. Annex tables to the European Drug Report 2023

The data tables here are part of the annex of the European Drug Report 2023. National data presented here are mainly a subset of data available in the Statistical Bulletin 2023. In addition, for some

indicators, these data tables also provide values for the EU as well as for EU, Türkiye and Norway (EU+2).

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Table 1a. High-risk opioid use estimates for population aged 15–64 years (European Drug Report 2023)

Country	Year of estimate	Cases per 1 000
Belgium		
Bulgaria		
Czechia	2021	1.5-1.6
Denmark	2016	4.0-9.6
Germany	2020	1.7-2.0
Estonia		
Ireland	2019	6.6-7.3
Greece	2021	1.1-2.4
Spain	2020	1.2-2.7
France	2020	5.5-5.8
Croatia	2015	2.5-4.0
Italy	2021	6.2-8.7
Cyprus	2021	1.4-3.4
Latvia	2017	4.6-7.0
Lithuania	2016	2.7-6.5
Luxembourg	2019	3.3
Hungary	2010-11	0.4-0.5
Malta	2020	2.4-3.0
Netherlands	2012	1.1-1.5
Austria	2021	6.3-6.8
Poland	2014	0.4-0.7
Portugal	2018	3.0-7.0
Romania	2020	1.0-1.7
Slovenia	2021	2.8-3.3
Slovakia	2020	0.9–1.7
Finland	2017	6.9-8.6

Country	Year of estimate	Cases per 1 000
Sweden		
Türkiye	2011	0.2-0.5
Norway	2013	2.0-4.2

Notes

Cases per 1 000 population aged 15-64 (lower and upper limits - when not available central estimate is provided)

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Table 1b. Entrants into treatment during the year: opioids clients as a proportion of treatment demands (European Drug Report 2023)

Country	All opioids entrants - %	All opioids entrants - count	First-time opioids entrants - %	First-time opioids entrants - count	Previously treated opioids entrants - %	Previously treated opioids entrants - count
Belgium	18.6	2087	6.6	252	25.2	1751
Bulgaria	62	694	22.7	82	80.9	587
Czechia	37.7	2747	18.7	470	36.8	1229
Denmark	12.5	639	8.7	192	15.6	430
Germany	13.8	6143	6.9	1696	23.3	4012
Estonia	64.9	315	49	74	71.9	225
Ireland	33.7	3509	12.6	530	49	2811
Greece	50	1720	29.4	432	65.2	1264
Spain	22.1	8502	11.2	2249	34.7	5953
France	25.6	9562	13.2	1229	37.4	5863
Croatia	-	-	24.4	130	87.9	4475
Italy	37.1	12593	22.4	3181	47.6	9412
Cyprus	12.4	91	7.2	30	19.4	57
Latvia	33.4	209	17.7	63	54.1	146
Lithuania	78.3	364	32.1	25	89.7	331
Luxembourg	40.5	77	29.8	17	45.1	60
Hungary	2	87	0.8	23	5.6	43
Malta	49.7	990	17.3	71	58.2	919
Netherlands	11.5	1262	6.2	402	19.3	860
Austria	45.8	1946	28.4	486	57.5	1460
Poland	13.2	627	5.9	138	21.3	479
Portugal	36.8	1152	19	321	57.8	831
Romania	20.9	647	8.5	173	44.2	474
Slovenia	91.4	192	84.9	62	95.1	97

Country	All opioids entrants - %	All opioids entrants - count	First-time opioids entrants - %	First-time opioids entrants - count	Previously treated opioids entrants - %	Previously treated opioids entrants - count
Slovakia	11.8	285	6.9	72	16.2	209
Finland	39.1	167	40.2	66	38.4	101
Sweden ([1])	26.9	8654	16.5	2061	34.8	6335
Türkiye	47.2	4413	30	1277	61.5	3136
Norway ([2])	18.1	1058	11.4	280	23.1	778
European Union	24.8	65261	12.5	14527	38.3	50414
EU, Türkiye and Norway	25.4	70732	13.1	16084	38.7	54328

Notes

Data on entrants into treatment are for 2021 or most recent year available: Czechia, Spain, France, 2020; Netherlands, 2015. (1) Sweden: data for clients entering treatment refer to hospital-based care, specialised outpatient care facilities and prison and compulsory care. Data shown are not fully representative of the national picture. (2) Norway: the percentage of clients in treatment for opioid-related problems is a minimum value, not accounting for opioid clients registered as polydrug users.

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Table 1c. Entrants into treatment during the year: proportion of opioids clients with injection as main route of administration (European Drug Report 2023)

Country	All opioids entrants - %	All opioids entrants - count	First-time opioids entrants - %	First-time opioids entrants - count	Previously treated opioids entrants - %	Previously treated opioids entrants - count
Belgium	2.9	81	0.5	5	4.1	71
Bulgaria	1.3	1	2.3	1	0	0
Czechia	5	3	3.7	1	6.5	2
Denmark	1.1	11	0.2	1	2	10
Germany	1.4	35	0.9	12	2.1	20
Estonia	30	3	40	2	20	1
Ireland	0.5	17	0	0	1.1	15
Greece	9.2	56	3.5	12	16.5	43
Spain	0.7	121	0.3	26	1.2	91
France	6.9	276	2.8	26	10.1	196
Croatia	-	-	0	0	7.3	8
Italy	1.8	216	0.9	52	2.7	164
Cyprus	2.8	6	2	2	3.5	4
Latvia	5.6	1	8.3	1	0	0
Lithuania	0	0	-	-	-	-
Luxembourg	34.4	21	18.8	3	40	18
Hungary	1	2	1.3	2	0	0
Malta	5.9	40	1	2	8.1	38
Netherlands	0.4	5	0.1	1	0.6	4
Austria	4.1	22	1.5	4	6.6	18
Poland	2	2	0	0	3.8	2
Portugal	0.9	6	0.2	1	2.2	5
Romania	0	0	0	0	0	0
Slovenia	30	3	50	2	25	1

Country	All opioids entrants - %	All opioids entrants - count	First-time opioids entrants - %	First-time opioids entrants - count	Previously treated opioids entrants - %	Previously treated opioids entrants - count
Slovakia	9.1	2	8.3	1	12.5	1
Finland	0	0	0	0	0	0
Sweden (1)	11.1	1	-	-	-	-
Türkiye	0.4	1	-	-	0.7	1
Norway	-	-	-	-	-	-
European Union	2	931	0.7	157	3.1	712
EU, Türkiye and Norway	2	932	0.7	157	3.1	713

Notes

Data on entrants into treatment are for 2021 or most recent year available: Czechia, Spain, France, 2020; Netherlands, 2015. Missing cases of 30% or more for main route of administration: Czechia, Germany, the Netherlands and Slovenia. (1) Sweden: data for clients entering treatment refer to hospital-based care, specialised outpatient care facilities and prison and compulsory care. Data shown are not fully representative of the national picture.

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Table 1d. Number of clients in opioid agonist treatment (European Drug Report 2023)

Country	Count
Belgium	15426
Bulgaria	2975
Czechia ([1])	6000
Denmark	5533
Germany	81300
Estonia	1051
Ireland	11486
Greece	9039
Spain	55058
France	177100
Croatia	4480
Italy	75711
Cyprus	200
Latvia	685
Lithuania	1098
Luxembourg	1231
Hungary	577
Malta	796
Netherlands ([2])	5241
Austria	20138
Poland	3523
Portugal	18185
Romania	1769
Slovenia	3078
Slovakia	590
Finland	4729

Country	Count
Sweden	4331
Türkiye	4413
Norway	8198
European Union	511330
EU, Türkiye and Norway	523941

Notes

Data on clients in opioid agonist treatment are for 2021 or most recent year available: Spain, 2020; Finland, 2019; France, Italy, 2018; Netherlands, 2015. (1) Czechia: number of clients is an estimate derived from the treatment demand register and opioid agonist treatment provided by general practitioners. (2) Netherlands: data on the number of clients in agonist treatment are not complete.

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Table 2a. Cocaine prevalence estimates among the general population and school students (European Drug Report 2023)

Country	Year of survey	General population surveys - lifetime, all adults (15–64)	General population surveys - last 12 months, young adults (15–34)	School surveys - lifetime, students (15–16)
Belgium	2018		2.9	1
Bulgaria	2020	2	1.3	3
Czechia	2021	1.4	0.7	2
Denmark	2021	8.1	2.9	2
Germany	2021	5.6	3.1	1
Estonia	2018	5	2.8	2
Ireland	2019	8.3	4.8	3
Greece	2015	1.3	0.6	1
Spain	2022	12	3.1	2
France	2017	5.6	3.2	3
Croatia	2019	4.8	3.9	2
Italy	2017	6.9	1.7	2
Cyprus	2019	1.8	0.9	4
Latvia	2020	2.7	2.2	2
Lithuania	2021	1.8	0.8	2
Luxembourg	2019	2.9	0.9	2
Hungary	2019	1.7	0.6	3
Malta	2013	0.5	–	2
Netherlands	2021	7.9	4.7	2
Austria	2022	6.2	2.2	2
Poland	2018	0.7	0.5	2
Portugal	2016	1.2	0.3	2
Romania	2019	1.6	0.7	2
Slovenia	2018	2.7	1.8	3
Slovakia	2019	0.9	0.2	1

Country	Year of survey	General population surveys - lifetime, all adults (15–64)	General population surveys - last 12 months, young adults (15–34)	School surveys - lifetime, students (15–16)
Finland	2018	3.2	1.5	1
Sweden	2021		2.8	1
Türkiye	2017	0.2	0.1	
Norway	2021	5.8	2.7	2
European Union		5.4	2.3	
EU, Türkiye and Norway				

Notes

Prevalence estimates for the general population: age ranges are 18–64 and 18–34 for France, Germany, Greece and Hungary; 16–64 and 16–34 for Denmark, Estonia and Norway; 18–65 for Malta ; 17–34 for Sweden. Prevalence estimates for the school population are extracted from the 2019 ESPAD survey, except for Belgium (2019; Flanders only) and Luxembourg (2014). Germany ESPAD data refer to Bavaria only.

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Table 2b. Entrants into treatment during the year: cocaine clients as a proportion of treatment demands (European Drug Report 2023)

Country	All cocaine entrants - %	All cocaine entrants - count	First-time cocaine entrants - %	First-time cocaine entrants - count	Previously treated cocaine entrants - %	Previously treated cocaine entrants - count
Belgium	29.6	3325	28.6	1093	29.7	2065
Bulgaria	7.6	85	13.3	48	4.8	35
Czechia	0.9	62	1.1	28	1	32
Denmark	19.7	1009	20.8	457	19.2	529
Germany	8.5	3756	8.2	2035	8.7	1494
Estonia	2.1	10	3.3	5	1.6	5
Ireland	30.2	3139	38.4	1612	23.9	1372
Greece	17.7	609	23.6	346	13.5	262
Spain	45.4	17490	45.4	9092	45.1	7744
France	11.8	4424	10.9	1014	13.5	2114
Croatia	-	-	7.7	41	2.2	114
Italy	38.8	13184	44.5	6313	34.7	6871
Cyprus	29.5	217	23.4	98	38.4	113
Latvia	3.4	21	3.4	12	3.3	9
Lithuania	1.7	8	5.1	4	1.1	4
Luxembourg	33.2	63	28.1	16	35.3	47
Hungary	5.1	220	5.4	161	4	31
Malta	34	676	50.4	207	29.7	469
Netherlands	24.3	2675	20.8	1357	29.6	1318
Austria	14.1	600	17.6	301	11.8	299
Poland	2.2	103	2	47	2.4	54
Portugal	21.8	682	26	440	16.8	242
Romania	2.7	84	3.4	69	1.4	15
Slovenia	4.8	10	5.5	4	3.9	4

Country	All cocaine entrants - %	All cocaine entrants - count	First-time cocaine entrants - %	First-time cocaine entrants - count	Previously treated cocaine entrants - %	Previously treated cocaine entrants - count
Slovakia	1	23	1.3	13	0.6	8
Finland	0.7	3	1.2	2	0.4	1
Sweden ([1])	2	639	3.1	389	0.8	154
Türkiye	2.7	256	2.8	117	2.7	139
Norway	3.2	188	4.3	105	2.5	83
European Union	20.2	53117	21.7	25204	19.3	25405
EU, Türkiye and Norway	19.2	53561	20.7	25426	18.3	25627

Notes

Data on entrants into treatment are for 2021 or most recent year available: Czechia, Spain, France, 2020; Netherlands, 2015. (1) Sweden: data for clients entering treatment refer to hospital-based care, specialised outpatient care facilities and prison and compulsory care. Data shown are not fully representative of the national picture.

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Table 2c. Entrants into treatment during the year: proportion of cocaine clients with injection as main route of administration (European Drug Report 2023)

Country	All cocaine entrants - %	All cocaine entrants - count	First-time cocaine entrants - %	First-time cocaine entrants - count	Previously treated cocaine entrants - %	Previously treated cocaine entrants - count
Belgium	2.9	81	0.5	5	4.1	71
Bulgaria	1.3	1	2.3	1	0	0
Czechia	5	3	3.7	1	6.5	2
Denmark	1.1	11	0.2	1	2	10
Germany	1.4	35	0.9	12	2.1	20
Estonia	30	3	40	2	20	1
Ireland	0.5	17	0	0	1.1	15
Greece	9.2	56	3.5	12	16.5	43
Spain	0.7	121	0.3	26	1.2	91
France	6.9	276	2.8	26	10.1	196
Croatia	-	-	0	0	7.3	8
Italy	1.8	216	0.9	52	2.7	164
Cyprus	2.8	6	2	2	3.5	4
Latvia	5.6	1	8.3	1	0	0
Lithuania	0	0	-	-	-	-
Luxembourg	34.4	21	18.8	3	40	18
Hungary	1	2	1.3	2	0	0
Malta	5.9	40	1	2	8.1	38
Netherlands	0.4	5	0.1	1	0.6	4
Austria	4.1	22	1.5	4	6.6	18
Poland	2	2	0	0	3.8	2
Portugal	0.9	6	0.2	1	2.2	5
Romania	0	0	0	0	0	0
Slovenia	30	3	50	2	25	1

Country	All cocaine entrants - %	All cocaine entrants - count	First-time cocaine entrants - %	First-time cocaine entrants - count	Previously treated cocaine entrants - %	Previously treated cocaine entrants - count
Slovakia	9.1	2	8.3	1	12.5	1
Finland	0	0	0	0	0	0
Sweden (1)	11.1	1	-	-	-	-
Türkiye	0.4	1	-	-	0.7	1
Norway	-	-	-	-	-	-
European Union	2	931	0.7	157	3.1	712
EU, Türkiye and Norway	2	932	0.7	157	3.1	713

Notes

Data on entrants into treatment are for 2021 or most recent year available: Czechia, Spain, France, 2020; Netherlands, 2015. Missing cases of 30 % or more for main route of administation: Germany, the Netherlands and Latvia. (1) Sweden: data for clients entering treatment refer to hospital-based care, specialised outpatient care facilities and prison and compulsory care. Data shown are not fully representative of the national picture.

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Table 3a. Amphetamines prevalence estimates among the general population and school students (European Drug Report 2023)

Country	Year of survey	General population surveys - lifetime, all adults (15–64)	General population surveys - last 12 months, young adults (15–34)	School surveys - lifetime, students (15–16)
Belgium	2018		0.8	1
Bulgaria	2020	2.1	1.4	3
Czechia	2021	1.8	0.3	1
Denmark	2021	7.9	1.4	1
Germany	2021	6.1	2.9	2
Estonia	2018	6.1	2.1	3
Ireland	2019	4.8	2.3	2
Greece				1
Spain	2022	4.6	1.1	1
France	2017	2.2	0.6	1
Croatia	2019	4.6	3.5	2
Italy	2017	2.4	0.3	1
Cyprus	2019	0.4	0.2	2
Latvia	2020	1.8	1.2	2
Lithuania	2021	1.4	0.6	1
Luxembourg	2019	1.3	0.3	1
Hungary	2019	1.5	0.8	3
Malta	2013	0.3		1
Netherlands	2021	6.5	2.7	1
Austria	2022	4.5	1.4	2
Poland	2018	2.4	1.4	3
Portugal	2016	0.4	0	2
Romania	2019	0.2	0.1	1
Slovenia	2018	2.3	1.1	1
Slovakia	2019	0.9	0.2	1

Country	Year of survey	General population surveys - lifetime, all adults (15–64)	General population surveys - last 12 months, young adults (15–34)	School surveys - lifetime, students (15–16)
Finland	2018	4.7	3	2
Sweden	2021		1.6	1
Türkiye	2017	0		
Norway	2021	3.7	0.5	2
European Union		3.6	1.3	
EU, Türkiye and Norway				

Notes

Prevalence estimates for the general population: age ranges are 18–64 and 18–34 for France, Germany, Greece and Hungary; 16–64 and 16–34 for Denmark, Estonia and Norway; 18–65 for Malta ; 17–34 for Sweden. Prevalence estimates for the school population are extracted from the 2019 ESPAD survey, except for Belgium (2019; Flanders only) and Luxembourg (2014). Germany ESPAD data refer to Bavaria only.

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Table 3b. Entrants into treatment during the year: amphetamines clients as a proportion of treatment demands (European Drug Report 2023)

Country	All amphetamines entrants - %	All amphetamines entrants - count	First-time amphetamines entrants - %	First-time amphetamines entrants - count	Previously treated amphetamines entrants - %	tre
Belgium	9.9	1110	7	266	11.7	81
Bulgaria	10.6	119	19.4	70	6.6	48
Czechia	41.5	3026	51.6	1299	43	14
Denmark	6.3	323	5.4	118	7	19
Germany	16.2	7213	13.6	3354	21	36
Estonia	21	102	28.5	43	18.2	57
Ireland	0.7	76	1.1	47	0.5	28
Greece	1.4	48	1.8	27	1.1	21
Spain	1.8	709	2.1	418	1.6	27
France	0.5	201	0.4	37	0.5	86
Croatia	-	-	8.6	46	1.9	95
Italy	0.2	75	0.4	51	0.1	24
Cyprus	13	96	12	50	13.9	41
Latvia	21.1	132	25.6	91	15.2	41
Lithuania	4.7	22	11.5	9	3	11
Luxembourg	0.5	1	1.8	1	-	-
Hungary	14	599	14.2	422	11.6	90
Malta	0.2	4	0.5	2	0.1	2
Netherlands	7.4	817	7.5	487	7.4	33
Austria	6.8	289	7.1	122	6.6	16
Poland	37.9	1801	40.5	948	35	78
Portugal	0.3	9	0.4	6	0.2	3
Romania	1.5	48	1.7	35	1.2	13
Slovenia	0	0	0	0	0	0

Country	All amphetamines entrants - %	All amphetamines entrants - count	First-time amphetamines entrants - %	First-time amphetamines entrants - count	Previously treated amphetamines entrants - %	tre
Slovakia	49.9	1206	54.7	567	46.2	59
Finland	30.9	132	25	41	34.6	91
Sweden (1)	8.6	2770	10.3	1293	5.5	99
Türkiye	27	2528	38.1	1620	17.8	90
Norway	14.2	832	11.2	275	16.5	55
European Union	8	20928	8.5	9850	7.5	98
EU, Türkiye and Norway	8.7	24288	9.6	11745	8.1	11

Notes

Data on entrants into treatment are for 2021 or most recent year available: Czechia, Spain, France, 2020; Netherlands, 2015. Data on entrants into treatment for Sweden and Norway are for 'stimulants other than cocaine'. (1) Sweden: data for clients entering treatment refer to hospital-based care, specialised outpatient care facilities and prison and compulsory care. Data shown are not fully representative of the national picture.

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Table 3c. Entrants into treatment during the year: proportion of amphetamines clients with injection as main route of administration (European Drug Report 2023)

Country	All amphetamines entrants - %	All amphetamines entrants - count	First-time amphetamines entrants - %	First-time amphetamines entrants - count	Previously treated amphetamines entrants - %
Belgium	12.6	119	6.3	14	14.6
Bulgaria	1.8	2	0	0	4.8
Czechia	65.2	1827	62.5	779	67
Denmark	1	3	0	0	1.6
Germany	1.5	63	1.1	23	2
Estonia	86.3	88	79.1	34	91.2
Ireland	21.3	16	19.1	9	25
Greece	14.6	7	18.5	5	9.5
Spain	2.7	19	3.1	13	2.2
France	19.3	32	6.7	2	23.6
Croatia	-	-	0	0	0
Italy	2.9	2	4.3	2	-
Cyprus	9.4	9	2	1	14.6
Latvia	53.8	63	47.4	37	66.7
Lithuania	17.6	3	25	2	11.1
Luxembourg	-	-	-	-	-
Hungary	2.6	15	1.7	7	6.8
Malta	0	0	-	-	-
Netherlands	1.3	4	1	2	1.9
Austria	5.8	15	1.8	2	8.9
Poland	1.8	32	1	9	3
Portugal	22.2	2	33.3	2	0
Romania	0	0	0	0	0
Slovenia	0	0	0	0	0
Slovakia	25.6	298	24.3	135	27.6

Country	All amphetamines entrants - %	All amphetamines entrants - count	First-time amphetamines entrants - %	First-time amphetamines entrants - count	Previously treated amphetamines entrants - %
Finland	78.6	99	59.5	22	86.5
Sweden (1)	56.7	76	-	-	-
Türkiye	0.8	20	0.8	13	0.8
Norway	-	-	-	-	-
European Union	19.8	2794	16.3	1100	22.1
EU, Türkiye and Norway	16.9	2814	13.3	1113	19.5

Notes

Data on entrants into treatment are for 2021 or most recent year available: Czechia, Spain, France, 2020; Netherlands, 2015. Data on entrants into treatment for Sweden and Norway are for 'stimulants other than cocaine'. Missing cases of 30 % or more for main route of administation: Germany, the Netherlands and Latvia. (1) Sweden: data for clients entering treatment refer to hospital-based care, specialised outpatient care facilities and prison and compulsory care. Data shown are not fully representative of the national picture.

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Table 4a. MDMA prevalence estimates among the general population and school students (European Drug Report 2023)

Country	Year of survey	General population surveys - lifetime, all adults (15–64)	General population surveys - last 12 months, young adults (15–34)	School surveys - lifetime, students (15–16)
Belgium	2018		2.5	2
Bulgaria	2020	1.3	0.7	3
Czechia	2021	4.6	1.6	4
Denmark	2021	4	1.2	2
Germany	2021	5.6	2.7	2
Estonia	2018	5.4	2.5	5
Ireland	2019	10.3	6.5	3
Greece	2015	0.6	0.4	1
Spain	2022	5.1	1.8	1
France	2017	3.9	1.3	2
Croatia	2019	4.2	2.6	2
Italy	2017	2.7	0.8	1
Cyprus	2019	1.2	0.4	3
Latvia	2020	1.9	1.6	5
Lithuania	2021	1.8	0.8	3
Luxembourg	2019	2	0.9	1
Hungary	2019	2.5	1.1	3
Malta	2013	0.7	–	1
Netherlands	2021	12.2	7.8	3
Austria	2022	4.9	1.5	3
Poland	2018	1	0.5	3
Portugal	2016	0.7	0.2	3
Romania	2019	1	0.8	1
Slovenia	2018	2.9	1.3	3
Slovakia	2019	3.1	1	3

Country	Year of survey	General population surveys - lifetime, all adults (15–64)	General population surveys - last 12 months, young adults (15–34)	School surveys - lifetime, students (15–16)
Finland	2018	5	2.6	1
Sweden	2021		2	1
Türkiye	2017	0.4	0.2	
Norway	2021	3.9	1.6	2
European Union		4	1.8	
EU, Türkiye and Norway				

Notes

Prevalence estimates for the general population: age ranges are 18–64 and 18–34 for France, Germany, Greece and Hungary; 16–64 and 16–34 for Denmark, Estonia and Norway; 18–65 for Malta ; 17–34 for Sweden. Prevalence estimates for the school population are extracted from the 2019 ESPAD survey, except for Belgium (2019; Flanders only) and Luxembourg (2014). Germany ESPAD data refer to Bavaria only.

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Table 4b. Entrants into treatment during the year: MDMA clients as a proportion of treatment demands (European Drug Report 2023)

Country	All MDMA entrants - %	All MDMA entrants - count	First-time MDMA entrants - %	First-time MDMA entrants - count	Previously treated MDMA entrants - %	Previously treated MDMA entrants - count
Belgium	0.4	42	0.7	26	0.2	16
Bulgaria	1.3	15	3	11	0.6	4
Czechia	0.5	33	0.7	18	0.3	9
Denmark	0.3	15	0.2	5	0.4	10
Germany	0.5	213	0.6	143	0.3	60
Estonia	0.2	1	0.7	1	-	-
Ireland	0.1	12	0.2	8	0.1	4
Greece	0.2	8	0.3	5	0.2	3
Spain	0.2	72	0.3	59	0.1	12
France	0.5	169	0.7	62	0.3	54
Croatia	-	-	0.6	3	0.3	17
Italy	0.1	32	0.1	12	0.1	20
Cyprus	0.1	1	0.2	1	-	-
Latvia	1.1	7	1.4	5	0.7	2
Lithuania	0.4	2	2.6	2	-	-
Luxembourg	-	-	-	-	-	-
Hungary	2.8	121	2.9	87	2.7	21
Malta	0.3	5	0.2	1	0.3	4
Netherlands	0.7	80	1	67	0.3	13
Austria	1	41	1.3	23	0.7	18
Poland	0.6	28	0.9	21	0.3	7
Portugal	0.2	5	0.2	3	0.1	2
Romania	1.1	34	1.5	31	0.3	3
Slovenia	0	0	0	0	0	0

Country	All MDMA entrants - %	AllMDMA entrants - count	First-time MDMA entrants - %	First-time MDMA entrants - count	Previously treated MDMA entrants - %	Previously treated MDMA entrants - count
Slovakia	0.2	4	0.2	2	0.1	1
Finland	0	0	0	0	0	0
Sweden	-	-	-	-	-	-
Türkiye	0.8	79	0.9	40	0.8	39
Norway	-	-	-	-	-	-
European Union	0.4	940	0.5	596	0.2	280
EU, Türkiye and Norway	0.4	1019	0.5	636	0.2	319

Notes

Data on entrants into treatment are for 2021 or most recent year available: Czechia, Spain, France, 2020; Netherlands, 2015.

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Table 5a. Cannabis prevalence estimates among the general population and school students (European Drug Report 2023)

Country	Year of survey	General population surveys - lifetime, all adults (15–64)	General population surveys - last 12 months, young adults (15–34)	School surveys - lifetime, students (15–16)
Belgium	2018	22.6	13.6	17
Bulgaria	2020	8.7	5.9	17
Czechia	2021	25.9	16.1	28
Denmark	2021	37.9	12	17
Germany	2021	34.7	17.2	22
Estonia	2018	24.5	16.6	20
Ireland	2019	24.4	13.8	19
Greece	2015	11	4.5	8
Spain	2022	40.9	19.1	23
France	2021	47.3	19.2	23
Croatia	2019	22.9	20.3	21
Italy	2017	32.7	20.9	27
Cyprus	2019	14.1	8.1	8
Latvia	2020	15	8.2	26
Lithuania	2021	13.7	8.8	18
Luxembourg	2019	23.3	12	19
Hungary	2019	6.1	3.4	13
Malta	2013	4.3	–	12
Netherlands	2021	29.8	19.2	22
Austria	2020	22.7	11.1	21
Poland	2018	12.1	7.8	21
Portugal	2016	11	8	13
Romania	2019	6.1	6	9
Slovenia	2018	20.7	12.3	23
Slovakia	2019	17	7.7	24

Country	Year of survey	General population surveys - lifetime, all adults (15–64)	General population surveys - last 12 months, young adults (15–34)	School surveys - lifetime, students (15–16)
Finland	2018	25.6	15.5	11
Sweden	2021	17.6	6.5	5
Türkiye	2017	2.7	1.8	
Norway	2021	25.5	9.3	9
European Union		29.3	15.1	
EU, Türkiye and Norway				

Notes

Prevalence estimates for the general population: age ranges are 18–64 and 18–34 for France, Germany, Greece and Hungary; 16–64 and 16–34 for Denmark, Estonia, Sweden and Norway; 18–65 for Malta.

Prevalence estimates for the school population are extracted from the 2019 ESPAD survey, except for Belgium (2019; Flanders only) and Luxembourg (2018). Germany ESPAD data refer to Bavaria only. Due to possible overstating, Luxembourg cannabis lifetime prevalence may be slightly overestimated.

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Table 5b. Entrants into treatment during the year: cannabis clients as a proportion of treatment demands (European Drug Report 2023)

Country	All Cannabis entrants - %	All Cannabis entrants - count	First-time Cannabis entrants - %	First-time Cannabis entrants - count	Previously treated Cannabis entrants - %	Previously treated Cannabis entrants - count
Belgium	30.6	3429	45.6	1746	22.6	1574
Bulgaria	10.9	122	23.8	86	4.4	32
Czechia	14.7	1072	21.4	539	14.1	469
Denmark	57	2917	61.3	1347	53.5	1477
Germany	58.2	25852	67.9	16804	43.9	7564
Estonia	5.6	27	9.9	15	3.5	11
Ireland	21.4	2228	35.2	1477	11.7	671
Greece	26.1	899	40.4	593	15.5	301
Spain	27.5	10587	36.7	7334	16.9	2893
France	56.6	21186	69.7	6504	43.7	6851
Croatia	-	-	51.9	276	6.1	313
Italy	21.7	7376	29.7	4213	16	3163
Cyprus	44.2	325	56.2	235	27.6	81
Latvia	33.5	210	42.7	152	21.5	58
Lithuania	7.5	35	35.9	28	0.8	3
Luxembourg	24.7	47	38.6	22	18.8	25
Hungary	64.5	2764	67.4	2001	54.5	422
Malta	14.6	291	28	115	11.1	176
Netherlands	47.3	5202	55.5	3625	35.4	1577
Austria	29.7	1264	43.1	739	20.7	525
Poland	31.2	1482	36.8	862	24.7	556
Portugal	36.7	1150	49.4	836	21.9	314
Romania	58.2	1801	71.2	1442	33.5	359
Slovenia	3.3	7	9.6	7	0	0

Country	All Cannabis entrants - %	All Cannabis entrants- count	First-time Cannabis entrants - %	First-time Cannabis entrants - count	Previously treated Cannabis entrants - %	Previously treated Cannabis entrants - count
Slovakia	19.3	466	23.6	244	14.6	188
Finland	14.5	62	22	36	9.9	26
Sweden (1)	10.1	3263	13.1	1633	6.4	1158
Türkiye	17.3	1619	22.1	942	13.3	677
Norway	27.8	1622	37.7	929	20.5	693
European Union	35.7	94064	45.7	52911	23.4	30787
EU, Türkiye and Norway	35	97305	44.7	54782	22.9	32157

Notes

Data on entrants into treatment are for 2021 or most recent year available: Czechia, Spain, France, 2020; Netherlands, 2015. (1) Sweden: data for clients entering treatment refer to hospital-based care, specialised outpatient care facilities and prison and compulsory care. Data shown are not fully representative of the national

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Table 6. Other indicators: drug-induced deaths, HIV diagnoses, injecting drug use estimates, syringes distributed through specialised programmes (European Drug Report 2023)

Country	Drug-induced deaths - Year	Drug-induced deaths - All ages - Count	Drug-induced deaths - Cases per million population - Aged 15-64	Drug-induced deaths - Aged 15–64 - Count	HIV diagnoses related to injecting drug use (ECDC) - Cases per million population (a)	HIV diagnoses related to injecting drug use (ECDC) - Count (a)	Injecting drug use estimate - Year of estimate	Injecting drug use estimate - Cases per 1 000 population	Syringes distributed through specialised programmes
Belgium	2019	168	20	149	1	11	2019	0.5-1.0	1203860
Bulgaria	2021	20	4	18	2	14	2020	2.1-2.4	534
Czechia	2021	64	8	53	0.7	7	2021	6.0-6.2	9381890
Denmark	2020	197	44	164	1.7	10			–
Germany	2021	1826	-	-	1.4	118			4197853
Estonia	2021	39	40	34	3.8	5	2015	9.0-11.3	1634981
Ireland	2017	235	73	227	1.4	7			522137
Greece	2019	230	34	229	8.1	86	2021	0.3-0.5	576494
Spain	2020	774	19	585	0.9	44	2020	0.2-0.4	1551973
France	2017	417	-	-	0.7	44	2020	2.6-2.8	25145060
Croatia	2021	77	28	74	0.2	1	2015	1.8-2.9	269894
Italy (1)	2021	293	8	288	1.2	74	2021	2.1-3.5	515445
Cyprus	2021	10	17	10	5.6	5	2021	0.8-1.5	5224
Latvia	2021	17	14	17	13.2	25	2016	5.3-6.8	1116157
Lithuania	2021	62	34	61	11.1	31	2016	4.4-4.9	264647
Luxembourg	2021	5	11	5	4.7	3	2019	1.9	430281
Hungary	2021	42	6	41	0	0	2015	1	39925
Malta	2021	5	-	-	0	0			106276
Netherlands	2021	298	23	262	0.2	3	2015	0.07-0.09	–
Austria	2021	235	39	234	1.6	14			12708532
Poland	2020	229	7	187	0.3	13			88862

Country	Drug-induced deaths-Year	Drug-induced deaths-Allages-Count	Drug-induced deaths - Cases per million population - Aged 15-64	Drug-induced deaths-Aged 15–64-Count	HIV diagnoses related to injecting drug use (ECDC) - Cases per million population (a)	HIV diagnoses related to injecting drug use (ECDC) - Count (a)	Injecting drug use estimate - Year of estimate	Injecting drug use estimate - Cases per 1 000 population	Syringes distributed through specialised programmes
Portugal	2020	63	9	58			2015	1.0-4.5	1132770
Romania	2021	30	2	30	2.5	48			341791
Slovenia	2021	65	44	60	1.9	4			458197
Slovakia	2021	28	7	27	0.2	1			21125
Finland	2021	287	79	271	1.8	10	2017	7.4	6595051
Sweden	2021	450	64	410	0.3	3			1742203
Türkiye	2021	270	5	269	0.1	11			2564798
Norway	2021	241	63	222	0.7	4	2021	1.9-2.4	3800000
European Union		6166	18.3	3494	1.3	581			–
EU, Türkiye and Norway		6677	15.9	3985	1.1	596			–

Notes

Overdose data must be interpreted with caution. Methodological differences should be considered when comparing between countries. In some cases, the age band is not specified, and these cases were not included in the calculations of mortality rate referring to the population aged 15–64 years: Germany (1 826), France (417) and Malta (5). HIV diagnoses related to injecting drug use are from 2020. Injecting drug use estimates are cases per 1 000 population aged 15-64 (lower and upper limits - when not available central estimate is provided). Syringes distributed through specialised programmes refer to 2021, except for Spain (2020), Germany (2018; not all sites covered), France (2018) and Italy (2017; data from about half of all sites).

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Table 7. Seizures data (European Drug Report 2023)

Country	Heroin - Quantity seized (kg)	Heroin - Number of seizures (count)	Cocaine - Quantity seized (kg)	Cocaine - Number of seizures (count)	Amphetamine (2) - Quantity seized (kg)	Amphetamine (2) - Number of seizures (count)	Methamphetamine (2) - Quantity seized (kg)	Metham (2) - N seizure
Belgium	1,554	1,810	96,313	5,228	29	2,278	114	130
Bulgaria	1,158	34	12	34	263	49	170	38
Czech Republic	107	88	181	128	1	45	33	2,404
Denmark	-	-	397	4,287	160	2,103	3	279
Germany ([1])	222	-	21,549	-	1,318	-	381	-
Estonia	< 1	17	16	152	26	387	3	68
Ireland ([1])	88	1,404	670	2,674	-	335	-	52
Greece	364	2,658	1,086	971	< 1	9	59	473
Spain	235	7,873	48,882	38,294	288	2,717	163	591
France	1,300	-	26,500	-	226	-	-	-
Croatia	250	119	745	413	110	1,059	< 1	26
Italy	568	1,720	20,066	7,785	9	97	28	205
Cyprus	< 1	13	5	126	-	-	4	161
Latvia	< 1	3	3	126	13	219	17	358
Lithuania	2	93	5	-	25	463	25	129
Luxembourg	2	81	4	218	2	10	-	-
Hungary	13	41	26	325	54	936	2	192
Malta	1	25	762	54	< 1	2	< 1	2
Netherlands ([1])	1,734	-	71,796	-	19	-	20	-
Austria	72	1,096	81	1,664	83	1,068	10	535
Poland	120	1	2,133	13	2084	-	163	12
Portugal	23	270	9,916	513	1	23	< 1	2

Country	Heroin - Quantity seized (kg)	Heroin - Number of seizures (count)	Cocaine - Quantity seized (kg)	Cocaine - Number of seizures (count)	Amphetamine (2) - Quantity seized (kg)	Amphetamine (2) - Number of seizures (count)	Methamphetamine (2) - Quantity seized (kg)	Metham (2) - N seizure
Romania	1,437	244	875	541	8	276	1	23
Slovenia	226	348	828	325	98	155	9	26
Slovakia	36	59	< 1	27	< 1	2	24	938
Finland	< 1	23	63	328	393	1,660	2	81
Sweden	11	689	394	3,606	1,555	7,923	9	471
Türkiye	22202	14924	2841	2961	3519	2,442	5,528	57,897
Norway	33	510	160	1,291	572	3,328	4	133
European Union	9522	18709	303308	67832	6766	21816	1242	7196
EU, Türkiye and Norway	31756	34143	306310	72084	10858	27586	6774	65226

Notes

([1]) Data on number and quantity of seizures do not include all relevant law enforcement units and should be considered partial, minimum figures. See below: German Customs: https://www.zoll.de/DE/Presse/Zolljahresstatistik_2021/_functions/faq_5... Dutch Customs: https://open.overheid.nl/repository/ronl-ae341114359e6f908dcab7e401b434... Irish Customs, only amounts of quantities siezed: https://www.revenue.ie/en/search.aspx?q=Revenue%20seize%20cocaine%202020 (2) Amphetamines and methamphetamines tablets were converted to mass-equivalents by assuming a mass of 0.25 grams per tablet. Methamphetamine: methamphetamine/methylamphetamine

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