The situation regarding the COVID-19 pandemic and responses to it continues to evolve rapidly. Regular updates are provided by the European Centre for Disease Prevention and Control and the World Health Organization, and in most countries national public health guidelines are available. The EMCDDA has created a COVID-19 resource hub that provides access to up-to-date materials on drugs and COVID-19-related issues.

Summary

Since the start of 2020, European countries have been experiencing an unprecedented public health threat with the emergence of the coronavirus disease (COVID-19). In order to investigate the effects and implications of this pandemic for people who use drugs in Europe, the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) instigated a mixed-method trendspotter study to investigate the current situation. This briefing provides a snapshot of the state of play with respect to the impact of COVID-19 on drug consumption patterns and drug-related harms during the early stages of the pandemic.

- Preliminary findings suggest an overall decline in drug use, or some forms of drug use, in Europe during the first 3 months of the pandemic.
- A combination of factors could explain this, notably national confinement measures, which have reduced opportunities to use drugs within social environments, and the disruption of street drug markets, resulting in a decline in the availability of some substances.
- The use of cocaine and MDMA appears to have been most affected, largely linked to the closure of the night-time economy and the implementation of stay-at-home measures. Decreases in the use of these drugs have been confirmed by wastewater studies in a number of European cities.
A more mixed picture is reported with respect to cannabis. The data available here suggest that some occasional users may have stopped using or reduced their use during the lockdown period, while those who had more frequent or intensive patterns of use may have increased their consumption. The relief of both boredom and anxiety were cited as reasons for increased use by respondents to the European web survey. Increases in the online search interest were observed for some terms such as ‘buy cannabis’, ‘seeds’ and ‘growing cannabis’, and ‘cannabis home delivery’ in various European countries during the period.

- Localised shortages of heroin have also been reported and may have contributed to reductions in the use of this drug in some countries. Among dependent opioid users, this is reported in some cases to have resulted in an increase in the use of replacement substances. It has also been associated with an increase in attempts to access opioid substitution treatment services in some countries.

- More generally, an increase in alcohol consumption has been reported, alongside an increase in the use of prescription medicines, especially benzodiazepines, among some groups. This may in part be explained by users wishing to combat the anxiety experienced in response to the COVID-19 pandemic and the resulting lockdown measures.

- An important caveat here is that the situation at national level appears to be heterogeneous and variable by drug type. For example, wastewater data from Finland and a city monitor in Norway suggest that amphetamine use increased during the early months of 2020.

- Bearing in mind that there has been an overall reduction in health service provision during the period, in particular for non-COVID-19-related issues, clinicians in a number of countries have highlighted increases in emergency presentations for mental health problems, but drops in those associated with illicit drug consumption.

- In conclusion, the data currently available suggest that there have been some changes in drug consumption patterns during the initial phases of the COVID-19 pandemic in Europe, mostly resulting from the implementation of confinement and social distancing measures. There is an urgent need to continue to monitor developments in this area closely — especially with respect to the establishment of particularly damaging or risky patterns of use.

Introduction

In response to the outbreak of the COVID-19 pandemic in March 2020, European countries have implemented a range of containment measures to reduce the spread of the virus among their general populations. While people who use drugs run the same risk of infection with the virus responsible for COVID-19, as the general population, they also face additional risks and vulnerabilities that need both consideration and mitigation (EMCDDA, 2020a).

To gain insights into the impact of COVID-19 on drug use, harms and drug services, and of the adaptations that have been made since the beginning of the pandemic in Europe, the European Monitoring Centre for Drugs and Drug Addiction initiated an investigative rapid assessment using the agency’s trendspotter methodology. This study was initiated in April 2020, with the first wave of the study investigating the impact of COVID-19 on drug service provision and help-seeking behaviour, and reporting the initial findings after 6 weeks (EMCDDA, 2020b). The second investigative wave, focusing on drug use and harms, was planned in April and initiated in May 2020. Following 4 weeks of fieldwork and write up, the preliminary results are presented here.

When focusing on possible changes in drug consumption patterns and related harms, it is likely that the true impact of the pandemic and national measures implemented in response to it will only
become evident in time. We can assume that it will be necessary to wait some months, if not years, for any medium to longer-term implications to become clear. A more distant perspective may also enhance our understanding of whether the current disruption will have any long-lasting implications. This may represent a break or change in direction for some drug supply and use patterns, as was evident from the heroin shortages reported in the early 2010s, or it might be that there will be a slow but steady resumption of ‘business as usual’ in most national drug markets.

Future investigative rounds using this trendspotter methodology will follow up on these questions, and identify emerging trends related to drug consumption, drug-related harms and drug services, as the complex systems that constitute illicit drug demand, supply and service responses adapt and reshape in response to a new, post-COVID-19 reality.

The trendspotter methodology

The trendspotter methodology is based on the triangulation of a range of rapid investigative approaches and data collection from multiple qualitative and quantitative sources with a systematic analysis incorporating the use of expert opinion (EMCDDA, 2018). Specifically, for this COVID-19 impact study, the methodology was adapted to suit online investigation, taking into account the national emergency restrictions on both the EMCDDA team and the study participants (Figure 1). The study was divided into a number of investigative and reporting waves, with this second wave focusing on the impact of COVID-19 and related measures on drug use patterns and harms.

For this online briefing, the results of the following data collection exercises have been brought together in the analysis:

- review of the international literature and available epidemiological data;
- seven online expert surveys, sent to the Reitox network of national focal points, an EMCDDA network of trendspotters, and European professionals working in the forensic, treatment and harm reduction, and toxicology fields, including the ESCAPE (European Syringe Collection and Analysis Project Enterprise) network, Euro-DEN Plus (European Drug Emergencies Network), Euro-Yoda (Youth Organisations for Drug Action) and FESAT (European Foundation of Drug Helplines);
- the European Web Survey on Drugs: COVID-19 (EWSD-COVID), in 21 languages, targeting adults aged 18 years or over with experience of illicit drug use, aimed at gathering information on changes in drug consumption behaviours in Europe due to COVID-19, with over 10 000 respondents (see Box 1);
- five virtual facilitated groups made up of more than 50 European drug professionals, researchers and representatives of civil society organisations.

For any literature-based results presented, references are cited; other findings are based on EMCDDA monitoring and the sources described above.
Box 1: The European Web Survey on Drugs — Impact of COVID-19 on patterns of use

The EMCDDA European Web Survey on Drugs: COVID-19 (EWSD-COVID) aimed to collect perspectives from people who use drugs on the impact of COVID-19-related restrictions. Around 10,600 respondents completed the online questionnaire (with around 30 questions) in one of the 21 languages made available between 8 April and 25 May 2020. Respondents from Estonia, Spain, Italy and Finland accounted for 50% of the sample. In the absence of appropriate sampling frames covering all people who use drugs, this method relies on self-selected samples, which limits generalisability and introduces the potential for multiple responses and unknown biases; these limitations need to be borne in mind when considering the results presented here.

While web surveys are not representative of the general population, when carefully conducted, they can provide a timely and more detailed picture of the behaviour of groups of drug users who are often difficult to access by other means. This survey therefore contributes to the overall analysis of the situation and of the changes associated with the COVID-19 pandemic and its consequences. However, follow-up and triangulation with other data sources will be required to increase confidence that the findings are applicable to wider patterns of drug use in Europe.

Overall, the average age of the EWSD-COVID respondents was 29 years, and the majority were male (58%). Around 90% of respondents reported some level of illicit drug use in the last year, and only this sample has been included in the analysis presented in this briefing. Almost 60% of the sample reported use of some form of cannabis product in the 30 days prior to responding to the survey, use of other drugs in the same period was less common: ecstasy/MDMA (10% of the sample), cocaine (10%), LSD (10%), non-prescribed opioids other than heroin (10%), amphetamines (5%), heroin (4%), synthetic cannabinoids (4%).

FIGURE 1
Online trendspotter methodology

Planning
- Virtual team meetings
- Adapt trendspotter method
- Identify data sources
- Mini European Web Survey on Drugs launched

April 2020

Data gathering and analysis
- Seven online surveys
- Five virtual facilitated groups
- Data and literature reviews

April and May 2020

Output production
Trendspotter briefing drafted and published

June 2020

Presentation and interpretation of results

The data collected in this study were analysed using three broad and overlapping categories: the impact on patterns of recreational drug use, the impact on high-risk drug use behaviours and the impact on levels of harm associated with the use of illicit substances. Results, as presented below,
are structured loosely by themes emerging from the analysis. A number of important issues need to be taken into account when considering these results.

Firstly, these are the preliminary findings of a rapid information assessment that can at best provide a snapshot of the state of the subject under consideration during a given period of time that is based on the insights of those participating in the exercise. In this case, the picture that emerges is one of countries in lockdown in late March, April and early May 2020. At the time of writing up this analysis, the situation was already changing and most European countries were slowly lifting restrictions.

The impacts identified are primarily the result of national confinement measures implemented in response to the COVID-19 pandemic, which means that the degree or extent of the impacts varies from country to country, in many cases in line with the timing and severity of the restrictions and lockdown measures implemented. As the findings show, these measures appear to have disrupted, to different degrees, the availability of and access to different illicit drugs and the opportunities to use them, with marked differences across countries and drug-using populations.

As would be expected in the early stages of a rapidly developing pandemic, the data available for an in-depth investigation are extremely limited, although increasing on a daily basis. As such, the study necessarily utilises, and attempts to systematise, the expert opinions of frontline professionals alongside quantitative data, where these exist. Data source and methodological triangulation is employed in order to enhance the validity of the results, both through confirmatory and complementary analyses.

The analysis presented here, particularly with regard to findings on the perceived impacts on recreational drug use behaviours, draws heavily on self-reports from people who use drugs responding to a web survey. This is a ‘convenience’ sample — one based on the ease of availability of participants — and the results are in no way generalisable. Nevertheless, the views and input of over 10 000 European respondents do provide a rich and valuable bank of experiences on which to draw.

Results on changes in drug use behaviours and related harms need to be considered in the wider context of drug availability, markets and distribution mechanisms. At the simplest level, when supply chains are broken or distribution networks cease to function, individuals will not be able to maintain their existing patterns of drug consumption. While the impact of COVID-19 and confinement measures on drug markets are described in more detail elsewhere (EMCDDA and Europol, 2020), some of the key findings are incorporated here in summary form, as they were largely confirmed by respondents in this investigation and are clearly interrelated with the patterns of consumption and harm reported here.

Similarly, our understanding of patterns of drug use and, in particular, associated harms cannot be viewed separately from the availability and provision of health services, in particular with respect to high-risk drug users. This was the topic of a first EMCDDA investigation (EMCDDA, 2020b), and results from that study are referenced where they provide contextual clarity.

Finally, while changes in drug use patterns and new harms have emerged, with the easing of the lockdown measures and the return to a new social reality in the wake of the COVID-19 pandemic, it is uncertain whether or not the changes identified will remain. It will take time and further investigation to ascertain the longer-term and lasting implications of the pandemic and the resultant measures on drug-using populations.
Results

At the broadest level, and looking across the range of available data sources, there is evidence that there was some reduction in illicit drug consumption during the early period of the COVID-19 pandemic. This is more pronounced in certain sub-populations and for particular substances, with national variation also evident. This is likely to be the result of a combination of reduced opportunities to use drugs, with lockdown measures and closures of entertainment venues, and a decline in access to sellers of some substances. The reduction in illicit drug consumption is clearly evident in results from a sizable online sample of people who use drugs, with almost half (46%) of EWSD-COVID respondents reporting either no drug use or reduced drug use during the lockdown period (see Figure 2). Respondents provided diverse explanations for this reduction, with the most commonly cited reasons being a lack of social opportunity, a drop in drug availability and reduced access to sources of drug supply. Financial factors including loss of income and financial uncertainty also appeared to play significant roles (see Figure 3).

FIGURE 2
EWSD-COVID respondents (%) reporting how the amount of drugs they used changed after the implementation of COVID-19 containment measures

Note: number of respondents = 7 352.
Reduced opportunity to use drugs — home confinement and night-time economy closure

The placing of strict restrictions by national governments on the movement and gatherings of people as a rapid response to the pandemic has greatly limited social opportunities to use drugs. Restrictions have affected both venues and the ability to socialise. On the one hand, pubs and clubs have been closed and festivals cancelled; on the other hand, individuals’ movements and social gathering options have been severely restricted with the implementation of quarantine and confinement measures. These responses were commonly cited as primary reasons for decreases in the recreational use of illicit drugs, in particular MDMA and cocaine, which are typically linked to the nightlife and party scenes.

Reports of the use of drugs by people at home alone, while listening to online DJ sets and meeting friends online, suggest the emergence of ‘streaming parties’ as a substitute for physical opportunities. However, in some countries illegal raves outside urban areas associated with drug taking are reported to have taken place during the confinement period, with media reports suggesting that this has happened in, for example, Belgium, Germany, Ireland, Spain, Italy and the Netherlands.

Disruptions in access to and availability of drugs

It was reported that it was considerably harder for people under lockdown to access their usual sources of drug supply, whether that be friends or trusted street dealers, with a third of EWSD-COVID respondents who reported a decline in use citing this as a primary reason. Survey results suggest that, although people found it harder to obtain their drugs of choice, there was no major change in the

Note: number of respondents = 3 278.
way they accessed drugs during the confinement period. Out of 8,969 respondents (who reported any use of illicit drugs in the past 12 months) to the EWS-D-COVID, 40% reported that they had not changed the way they obtained illicit drugs during the confinement period compared with before. Nearly one quarter (24%) reported that they had not tried to access drugs during the confinement period and 5% reported that they had stopped buying drugs.

Several sources indicate that some individuals rapidly adapted their usual behaviour early in the lockdown period in order to ensure continuity in their access to drugs. Overall, reports suggest an increased ‘digitalisation’ of the drug market, with, for example, dealers promoting transactions through encrypted mobile communication platforms in order to facilitate transactions and limit the need for social interaction. In addition, suppliers were reported to have initiated more flexible distribution systems, offering home deliveries, sending drugs by mail, allowing bank transfers and arranging fixed time slots to meet and deliver the drugs.

A recent EMCDDA report, COVID-19 and drugs: drug supply via darknet markets (2020c), highlights the increased role of the darknet as an alternative for accessing drugs during the lockdown, especially for cannabis products. However, only 2% of EWS-D-COVID respondents reported obtaining illicit drugs from the darknet more often during the confinement period than before. This would indicate a smaller-than-expected role for this channel of drug supply as an alternative to the usual acquisition sources.

The recent EMCDDA and Europol update to the EU Drug Markets Report on COVID-19 developments (2020) reports that the measures imposed by national governments in response to the crisis have had an impact to some extent on retail-level supply and distribution systems. Shortages of cannabis products, in particular resin, have been reported in some countries, while others have reported shortages in the local availability of heroin. Experts in some countries have reported increasing drug prices and decreasing purity at the consumer level, indicative of localised supply shortages. In addition, the wholesale prices of amphetamines and MDMA are reported to have increased in several countries; however, country variation is evident, with the Netherlands, for example, reporting decreasing prices, indicative of attempts to increase sales.

Reductions in consumption of cocaine and MDMA

Cocaine is Europe’s most commonly used illicit stimulant drug with an estimated 2.6 million last-year users aged 15-34 (young adults). By comparison, MDMA was used by 2.1 million young adults during the same period (EMCDDA, 2019). Survey responses from people who use drugs and evidence from national experts indicate that stimulants associated with the night-time economy (mainly MDMA and cocaine) have seen the sharpest reduction in use during the pandemic. About 20% of MDMA or cocaine users who participated in the EWS-D-COVID reported to have stopped using one of these two drugs during this period. This result is supported by findings from the Global Drug Survey interim report, which found that overall about 40% of the drug-using respondents reported using less cocaine and MDMA during the COVID-19 pandemic (Winstock et al., 2020).

Data from wastewater analysis in two European cities (Amsterdam, the Netherlands, and Castellon, Spain) further support this, showing a decrease by half in the mass loads of cocaine and MDMA during the lockdown period compared with similar periods in previous years (see Box 2). Wastewater data from Helsinki during the lockdown period similarly indicate that rates of cocaine use in the city stabilised and started to decrease.
There were no reports of difficulties in accessing stimulant drugs according to experts in this study and there was little evidence of any disruption of activities at the wholesale importation level for cocaine during this period (EMCDDA and Europol, 2020). This would suggest that the overall reduction observed in the use of these drugs was primarily related to a reduction in drug-taking opportunities rather than a consequence of market-related factors.

According to Neutravel, an Italian non-governmental organisation (NGO), which carried out an online ‘inreach’ harm reduction intervention programme with a private drug chat group on an encrypted mobile communication platform during the lockdown period, only a few requests for advice were made by users about stimulants, with little interest in club drugs like MDMA and ketamine. This was in marked contrast with the typical pre-COVID-19 requests made by users through their services. They reported that there had been some queries about cannabis edibles, but most requests had been in relation to prescription medicines and psychedelic drugs.

**Increases in amphetamine use in Nordic cities**

Increases in the use of amphetamines were reported in some cities in northern Europe. The Bergen Earlier Warning System (BEWS) identified increased use of amphetamines and GBL (gamma-butyrolactone) in the city during the lockdown period, and highlighted concerns about an associated increase in GBL overdoses. Wastewater monitoring in Helsinki led to reports of the same phenomenon: the Finnish Institute for Health and Welfare’s wastewater analyses indicated that a record amount of amphetamine was being used in the Helsinki metropolitan area. Specifically, since the state of emergency was declared in mid-March, the average mass loads of amphetamine in the wastewater increased by 15% in the Helsinki metropolitan area compared with the previous 6 months. By comparison, no major changes were observed for methamphetamine use during the lockdown period.

A severe disruption of the new psychoactive substance stimulant market was reported by experts from Estonia, with the supply of the frequently used cathinone alpha-PVP or ‘flakka’ being cut off as a result of border closures with neighbouring Russia. The supply is reported to have restarted within 2 weeks, as alternative means of distribution were found.
Box 2: The impact of the COVID-19 pandemic on drug loads in wastewater

As countries across Europe faced an increasing number of cases of COVID-19, and mitigation measures were put in place, laboratories within the Sewage Analysis Core Group Europe (SCORE) and participating in the Europe-wide Sewage Analysis to Monitor Emerging Drug Problems (EUSEME) project continued collecting wastewater samples from the influent of sewage treatment plants. Following the harmonised procedure that has been used in the European multi-city study published yearly by the EMCDDA, samples were collected in Amsterdam, the Netherlands (18 to 24 March 2020), and Castellon, Spain (26 March to 1 April 2020). In the Netherlands, lockdown measures (i.e. social distancing and the closure of all restaurants, bars and nightclubs) were introduced on 15 March. In Spain, a state of emergency was declared and lockdown measures were implemented on 14 March, with a halt to all non-essential activities put in place on 29 March.

Compared with previous years, notable decreases in weekly average mass loads of MDMA and cocaine were observed in Amsterdam and Castellon (see figure below). In both cities, MDMA loads decreased by half compared with the same period in 2019. A sharp decrease in benzoylecgonine (a metabolite of cocaine) loads was also observed in Castellon compared with 2019. In Amsterdam, a decrease in benzoylecgonine loads of around 25% was observed compared with 2019. By contrast, cannabis loads (THC-COOH) remained relatively stable in both cities when compared with previous years.

Drug residues in wastewater in two selected European cities: trends and most recent data

Note: Mean daily amounts of benzoylecgonine, MDMA and THC-COOH in milligrams per 1 000 population per day.

Source: EUSEME project funded by the EU justice programme — drugs policy initiative.
Impact of COVID-19 on patterns of drug use and drug-related harms in Europe

Cannabis — occasional users have reduced their consumption while some frequent users have increased their consumption

Cannabis is Europe’s most commonly used illicit drug, with an estimated 24.7 million last year users (EMCDDA, 2019). Unlike the findings for cocaine and MDMA, cannabis use appears to have been less affected during the pandemic lockdown period, although differences between and within countries exist. Findings from wastewater analyses appear to confirm this preliminary observation, with loads of THC-COOH (a cannabis metabolite) in wastewater remaining stable in two European cities during the confinement period compared with similar periods in 2019 (see Box 2).

In terms of availability, shortages of cannabis resin have been reported in some European countries, although the domestic production of herbal cannabis, the main form of cannabis used in Europe, does not appear to have been significantly disrupted during the confinement period (EMCDDA and Europol, 2020). Shortages of cannabis just prior to the COVID-19 pandemic may, however, have accentuated...
some changes in drug use patterns during the lockdown. For example, an ongoing cannabis drought was observed in Norway (see Case study 1) at the time confinement measures were imposed.

Reported cannabis use patterns have remained relatively stable, with nearly half (42%) of the cannabis users who participated in the EWSD-COVID reporting no change in their cannabis use compared with that before the confinement period. Only 9% of the cannabis users who participated in the survey reported having stopped using cannabis during the confinement period.

Compared with other recreational drugs, a greater proportion of web survey respondents reported using cannabis more frequently and in greater quantities during the confinement period (see Figure 4). It should however be noted that, on average, only around 10% of the cannabis users reported using greater quantities during the confinement period.

Data from the EWSD-COVID highlight that regular (weekly) cannabis users were twice as likely to report an increased frequency of use compared with non-regular users during the confinement period. Similarly, regular cannabis users were three times as many to report greater amounts used compared with non-regular users. Experts from France, Italy, the Netherlands and Portugal report similar findings and suggest that increases in use were more commonly observed among frequent and regular cannabis users.

Qualitative responses from EWSD-COVID participants suggest that these changes may have varied over the period of confinement and between people, with some reporting more cannabis use at the beginning and less later on, and others describing the opposite pattern.

Major national differences were observed regarding changes in cannabis use during the confinement period. For example, relatively high proportions, between 30% and 50%, of the cannabis users from Ireland, Italy, Poland and Portugal reported having stopped or reduced the frequency of cannabis use during the confinement period. The proportion that reported having stopped using cannabis was on average much lower (compared to the countries above) in many northern and eastern European countries.

This pattern may be partly explained by difficulties in accessing cannabis (reported by experts from Spain, Italy and Portugal). For example, strict restrictions on movement in some Italian regions meant that people were not allowed to travel outside a limited radius (e.g. 200 m) from their residence, which may have impeded the purchasing of drugs. According to participants in a qualitative study carried out by the Portuguese NGO Kosmicare, cannabis availability decreased in Portugal during the lockdown, alongside a considerable increase in price.

Information about users stockpiling drugs, especially cannabis, started to emerge from several countries in the early phases of the lockdown (EMCDDA, 2020c). This gave rise to concerns that larger quantities might be consumed and of potentially harmful health consequences. Moreover, some experts in this study reported that drug dealers were selling greater quantities at once in order to reduce the frequency of buyer-dealer contacts. Preliminary findings suggest that larger quantities being available did not necessarily lead to the greater use of drugs. A survey in Hungary found that only a very small proportion of those who used cannabis more frequently declared that they had stockpiled drugs since the start of the lockdown. Similarly, data from the EWS-COVID revealed that only 14% of those who reported using more drugs did so because they had stockpiled drugs.

Finally, the complexity of the European cannabis markets, with an increasing variety of products available, was mentioned by study participants, with reference to an increased demand for CBD
(cannabidiol) and low-THC (tetrahydrocannabinol) products. Some EWSD-COVID respondents reported switching entirely to CBD or low-THC products during the confinement period.

**FIGURE 4**

EWSD-COVID respondents (%) reporting how their use of drugs changed after the implementation of COVID-19 containment measures

Note: The number of users per drug was as follows: cannabis, 7 006; MDMA, 3 637; cocaine, 2 928; amphetamines, 2 837; and LSD, 2 052 (only respondents who have used the substance in the last 12 months have been analysed).

**An increased interest in home cultivation of cannabis**

A number of respondents to the Portuguese NGO Kosmicare study reported increasing their online purchases of cannabis cultivation paraphernalia (e.g. seeds, lights). An increased interest in home cultivation, predominantly of cannabis products, was also reported by experts and indicated by survey data from several countries in this study, including Belgium, Germany, Ireland, Spain and the Netherlands. A Google Trends analysis also indicated that there had been an increase in the search interest in domestic cannabis cultivation during the confinement period compared with before (see Box 3).
Box 3: Online search interest in drug-related terms in Europe during the lockdown — an infodemiological analysis using Google Trends

Google Trends was used to analyse changes in the search interest in drug-related terms during the period of COVID-19-related confinement in EU countries. Google Trends provides a time series index of the relative volume of Google searches (RSV) for a specific search term within a particular geographical region and time period divided by the total number of searches in that region during the period being examined. The results are then re-scaled to values between 0 and 100. To analyse changes in interest in drug-related terms, a Google Trends search for each of the 27 EU countries was performed for cannabis, cocaine and MDMA between the 90 days before and the 45 days after each country entered lockdown (lockdown dates differed by country, and for Sweden the date of the first case was used. The dates were provided by Google). Daily means were computed by averaging the individual daily RSV values of the 27 EU countries. A mean was also computed for the 90 days before and 45 days after lockdown, by averaging the individual RSV values of the 27 EU countries for the two entire periods.

Results

Cannabis

Google search interest remained relatively stable during the lockdown when compared with the average of the 90 days before. During the 45 days after lockdown, ‘seeds’, ‘smoking’, ‘CBD’, ‘cannabis growing’, ‘medical cannabis’, ‘oil’, ‘THC’ and ‘cannabis shopping’ were among the most popular search topics for this drug. In four countries, ‘cannabis coronavirus’ appears in the top related queries. Important increases in search interest were observed for the terms ‘buy cannabis’ in Belgium and the Netherlands, the terms ‘seeds’ and ‘growing cannabis’ in Germany, Poland, Italy, Spain and Finland, and the terms ‘buy cannabis seeds’ and ‘cannabis home delivery’ in Spain during the confinement period compared with before.

Cocaine

Search interest remained below the average of the 90 days before lockdown for more than 5 weeks after lockdowns were introduced. On average, it took 39 days for values to return to average values of the 90 days before lockdown.

MDMA

MDMA was the substance for which search interest decreased the most during the lockdown period. MDMA-related searches were below the 90 days before lockdown average for the entire period.

Daily trends of drug-related search interest during the 45 days after lockdown
A minority of survey respondents reported increasing drug use to counteract boredom and anxiety

While the majority of web survey respondents reported stable or reduced drug use, it is notable that a quarter of the respondents reported increasing their use of drugs during the period under study, with reasons reported including boredom and anxiety (see Figure 5). Some respondents also reported increasing their use of some drugs in order to enhance performance and creativity, and cope with fatigue and lack of concentration. Although these findings are not generalisable to the general population, similar reports have emerged from the special COVID-19 version of the Global Drug Survey (Winstock et al., 2020) and from experts participating in this study.

FIGURE 5
Reasons for increased drug use after the implementation of COVID-19 containment measures: reported by EWSD-COVID respondents

Switching to licit substances — increased alcohol and benzodiazepine consumption

Changes in patterns of alcohol use were fairly commonly reported in this study, including drinking more frequently, consuming greater quantities of alcohol and drinking alone. In some cases, the increased use of alcohol was associated with the greater use of prescription medicines including benzodiazepines. Data from the EWSD-COVID show that a greater proportion of cannabis users than other drug users increased their alcohol intake as a replacement for their drug of choice. A recent French TREND report also reports a shift from illicit stimulants, which are considered unsuitable for the confinement situation, towards alcohol, which is more easily available and appropriate under the circumstances.

‘I used about a gram of cocaine every other day before confinement. During the lockdown, cocaine made me go around in my apartment and I had a big anxiety attack that made me quit after the third day. Today, I drink wine and whiskey at the end of the day, it relaxes me a
Increased use of alcohol and benzodiazepines among high-risk drug users was a recurrent finding across data sources. Motivations for the increased use of these two substances included coping with anxiety and depression, and the self-medication of withdrawal symptoms linked to the decreased availability of other drugs. Increases in the use of alcohol and prescription medications to cope with increased mental health issues during the COVID-19 pandemic are also highlighted in the interim report from the Global Drug Survey (Winstock et al., 2020), which cites loneliness, feeling depressed and stress as the top reasons for increased use of benzodiazepines. There are a few examples of possible increases in harms related to this combined use of alcohol and prescription medications; for example, in Bulgaria, preliminary national data from forensic toxicology studies suggest that there has been an increase in severe acute intoxications associated with illicit drugs and alcohol, most of them regarded as suicide attempts, with benzodiazepines and prescription drugs being involved, and some severe cases of alcohol poisoning (higher than 3.0 g/l).

Problems linked to a reduced supply of benzodiazepines on the illicit market were also reported. Harm reduction experts from Helsinki reported a cut in the supply of benzodiazepines to the city as a result of COVID-19-related border closures.

**Overall decline in drug-related emergency presentations, but increase in those related to mental health problems**

During the early period of the response to the COVID-19 pandemic, the provision and use of many health services, including those related to emergency admissions, declined. Data are available on drug-related emergency presentations at hospitals from only a limited number of services that operated during this period; these data mostly indicate either stable or decreased numbers of presentations. For example, the number of people presenting with acute drug intoxication in a hospital surveyed in Mallorca halved from 4.6 people a day before the lockdown to 2.2 people a day during the lockdown.

Nevertheless, a survey of 15 hospital emergency lead clinicians reported a perceived (not formally documented) increase in presentations related to acute mental health issues, violence-related harms, withdrawal and relapses, compared with the pre-COVID-19 period (see Figure 6). The observed perceived increase in acute mental health related presentations is in line with recent studies suggesting that pre-existing psychiatric conditions could have been exacerbated by the lockdown and concerns about COVID-19 (e.g. Chatterjee et al., 2020; WHO, 2020). Particularly salient anxiety-inducing factors experienced by individuals during this period included the abrupt loss of and changes to employment, loneliness and lack of physical contact with others, the fear of contracting the virus and worries about people close to them who are particularly vulnerable. Any drug taking (including for self-medication) by individuals, particularly those with pre-existing psychiatric conditions, may in turn have increased anxiety levels and potentially triggered acute psychiatric episodes.

According to the lead clinicians surveyed, depending on the substance involved, the number of drug-related presentations at hospital emergency departments remained largely unchanged or decreased during the lockdown period, compared with the ‘pre-COVID-19’ period. As an exception to this, a limited number of hospitals have observed increases in presentations related to cannabis, stimulants, alcohol and benzodiazepines.
Local shortages affect high-risk opioid use behaviours

A recent analysis of the impact of COVID-19 on drug markets in Europe suggests that there has been a decrease in the availability of heroin, as well as an increase in heroin price in some countries (EMCDDA and Europol, 2020). Simultaneously, in some countries opioid users are reported to have experienced a severe drop in their primary sources of income (including begging and sex work) and a restriction in their ability to access drugs from their usual street dealer sources. Indicative of the more urgent nature of opioid dependence, this crisis has led some heroin users to approach drug treatment services, while others are reported to have switched to using other, more readily available substances. A reduction in heroin use among high-risk opioid users has been observed in Czechia, Germany, Ireland, the Netherlands, Portugal and Slovakia.

In Czechia, there were early indications of limited heroin availability at street level, with initial concerns about a possible increase in fentanyl use, home-made substance use and the use of alcohol in combination with benzodiazepines (UNODC, 2020). However, the initial concerns about a switch to fentanyl derivatives and home-produced substances as alternatives were not confirmed (National Monitoring Centre for Drugs and Addiction, 2020). An analysis of a small sample of syringes collected during the confinement period in Prague revealed that syringe residues contained mainly methamphetamine, buprenorphine and heroin, with no unexpected substances being identified (National Monitoring Centre for Drugs and Addiction et al., 2020). In Slovakia, a shortage of heroin was reported to have led to more varied polydrug use patterns involving all available substances, mostly alcohol and benzodiazepines. Information from drug workers in some countries also suggests that heroin has been substituted with other substances, such as synthetic opioids (diverted medicines...
or new psychoactive substances) or alternative drugs (e.g. crack cocaine, amphetamines, synthetic cathinones), in countries where there have been shortages (EMCDDA and Europol, 2020).

High-risk drug use patterns vary greatly by country. In Estonia, the use of fentanyl has for many years featured strongly in drug use repertoires. During the study period, frontline workers reported a new phenomenon — the injection of illicitly manufactured ‘crystallised’ methadone — with associated concerns about the high purity of this substance.

According to experts in this study, in many localities high-risk drug-using practices became more ‘visible’ during the confinement period. In some cases, it has been reported that a larger number of homeless people have converged in city centres where essential services are concentrated. While there have been reports that the open drug scene in Oslo had closed for a time during the lockdown period, reports from Lisbon and Frankfurt indicate that the drug scene in these cities remained unchanged.

**Increase in demand for substitution medications**

In a number of countries, including Czechia, Germany, Ireland, France, Italy and Luxembourg, an increased demand for low-threshold substitution treatment was reported by key informants as a possible consequence of reduced heroin availability and a reduced ability to purchase heroin due to loss of income.

Treatment experts surveyed during this study reported that clients have generally adhered to treatment recommendations during the lockdown. However, the greater availability of opioid medications has given rise to some concerns among experts about possible increases in the diversion and opportunities for the misuse of these medications. Signs have emerged of the increased misuse of buprenorphine and methadone in some countries, with deaths associated with the consumption of these medications being reported in France and Finland (Gérome and Gandilhon, 2020). As a response, harm reduction services in some countries have reported the introduction of new interventions dedicated specifically to reducing the risks associated with the misuse of opioid substitution medications, particularly for new clients who might be less familiar with these products.

In this area, the epidemiological data are currently limited, and assessing the extent of any positive impact or unintended harms associated with improving access to opioid substitution medications for those already in treatment, or providing services to opioid users not currently in treatment, will require close monitoring over the longer term.

**Unclear signals on drug-related deaths — delays in autopsies and toxicological examinations**

Assessing trends in drug-related deaths during the pandemic is likely to be particularly challenging. Some national focal points and experts from countries such as Bulgaria, Ireland, Cyprus and Portugal have reported an increase in delays in ascertaining causes of death by pathologists or coroners, as work in courts has been severely disrupted and autopsies and toxicological examinations have been cancelled or postponed. As an example, in Portugal there was a two-thirds (66 %) decrease in the number of medico-legal autopsies carried out in March/April 2020 compared with the same period in 2019. This decrease in ascertaining causes of deaths will most likely result in an underestimation of the number of drug-related deaths occurring across the board in early 2020.
During the confinement period, a number of experts raised concerns about possible increases in drug-related deaths in some countries, including in Bulgaria (mostly among young people and due to benzodiazepines), Denmark, France (associated with the consumption of large doses of methadone) and Finland (where preliminary national data suggest that the number of post-mortem examinations in which buprenorphine was found was higher in March/April 2020 than in the same period in 2019). Other countries saw few changes. For example, in Norway, based on the weekly survey from the Directorate of Health, 85 % of municipalities experienced very little, or only a small, change in the number of overdose events related to drug use during the period compared with before lockdown. However, given the possible difficulties mentioned above in recording drug-related deaths during this period and the partial and preliminary nature of the data currently available, it will be necessary to follow this up over the medium term to draw any firm conclusions on the impact of the pandemic in this area.

**Interruption of infectious disease testing and treatment**

Concerns were also raised by national experts about interruptions to testing for blood-borne viruses among high-risk drug users during the lockdown. The Czech national drugs monitoring centre estimated that the 2-month interruption to harm reduction services might have prevented 2 500 rapid tests for HIV, hepatitis C virus (HCV), hepatitis B virus and syphilis. HCV and HIV testing was interrupted in Lithuania, and concerns about interruptions to testing for sexually transmitted diseases were also identified in several other countries. In addition, delayed initiation of HCV treatment has been reported in a number of countries, in some cases because of the reorganisation of hospital services to prepare for the influx of COVID-19 patients.

An increase in the risk of infectious disease transmission, linked to the closure or reduction in the operational capacity of harm reduction services, including needle and syringe exchange programmes, was highlighted by study respondents. Some Polish experts, for example, reported a substantial decline in the distribution of injecting equipment, while in Portugal concerns were raised about increases in the number of users sharing paraphernalia, not only for injecting but also for smoking. Experts in Germany reported that the situation varied across the country but that services provided in some drug consumption rooms had been reduced, suggesting that there may have been an increase in unsupervised high-risk drug use both at home and in street settings.

**Limited information is available on COVID-19 among people who use drugs**

An area where great uncertainty remains, and where there is almost no evidence to date, is the level of SARS-CoV-2 infection and related health problems among people who use drugs. Initial reports from experts in this study suggest that, to date, there have been few diagnoses of COVID-19 among clients attending drug services (see box 4). For the first EMCDDA trendspotter briefing on the impact of COVID-19 on drug services, most health professionals surveyed did not report identifying cases of clients with the disease (EMCDDA, 2020b). However, seven experts reported five or fewer COVID-19 cases among their clients, two reported more than 10 cases and one Belgian doctor involved in opioid substitution treatment (OST) provision reported that two of his clients had died from COVID-19. The prevalence of SARS-CoV-2 infection will undoubtedly have been underestimated among people who use drugs, as for the general population, as tests are often not available or used for only symptomatic individuals. Another important caveat here is that without systematic testing of different groups of drug users, it is not possible at this stage to comment with any confidence on the extent to which SARS-CoV-2 infection rates differ from non-drug users with similar demographic profiles.
Box 4: A multi-centre sero-behavioural study among clients of drug services in Czechia

A multi-centre sero-behavioural study was initiated on 28 April 2020 across Czechia among clients of harm reduction, outpatient and inpatient drug services. Preliminary results from client testing on 17 May reveal a low prevalence of coronavirus infection (5 out of 968 clients with positive IgG/IgM rapid tests). Just over half of respondents reported no change in their frequency of drug use (54%), the amounts used (59%) and high-risk behaviours such as injecting or mixing drugs (61%). While most clients reported no change with regard to health quality indicators, there were reports of deteriorations in financial situation (32%), mental health (26%), overall quality of life (25%), job offers (24%), attitudes of other people (22%) and food availability (14%).

Source: Czech sero-behavioural ADI-COVID-19 study.

COVID-19 and drugs in prisons — the impact of a ‘double lockdown’

Prisons, as closed and tightly populated environments, represent a major challenge in controlling the spread of infectious diseases, including COVID-19. Prison settings are often associated with overcrowding, and populations suffering from poor health compared with peers in the community (WHO Regional Office for Europe, 2014). Despite these challenges, as of May 2020 few COVID-19 cases had been reported among people in European prisons (Wephrren, 2020).

International organisations and NGOs were quick to publish guidance and recommendations for preventing the spread of COVID-19 in prison settings, and many European countries have implemented prevention and containment measures since March 2020. In most European prisons, external visiting has been interrupted and common prison areas closed. Study respondents cited examples of staff and detainees implementing the use of personal protective equipment, paying increased attention to hygiene, and receiving education and training on COVID-19. Reports suggest that, where identified, people with suspected COVID-19 are quarantined in designated spaces, and diagnosis, surveillance and treatment implemented (WHO Regional Office for Europe, 2020). To reduce overcrowding, which is a risk factor for the spread of the disease, several European countries have introduced regulations for the early release of some detainees, which has resulted in a reduction of around 10% in the prison populations in some European countries (CoE, 2020; Europris, 2020).

The introduction of containment measures in response to COVID-19 is also reported to have affected drug availability and use in prison. In particular, the interruption of external visiting appears to have disrupted one of the ways that drugs are smuggled into prison settings. Although this route is reported to have been partly replaced by an increase in the use of other methods, such as the use of drones for drug trafficking and drugs being ‘thrown over-the-walls’, the overall drug availability in prisons is reported in many cases to have declined. According to experts, this has contributed to a more general reduction in the use of illicit drugs in prisons.

The reduction in drug availability is reported to have also contributed to an increase in demand for opioid substitution medication, benzodiazepines and nicotine replacement therapies as ways of dealing with withdrawal symptoms and increased levels of stress and anxiety. Respondents in this study described efforts made to maintain the provision of OST, with, for example, medication being directly distributed to cells by prison staff and/or administrated in health units.
Case study 2: Lisbon’s response to COVID-19 — emergency shelters and harm reduction interventions for people who use drugs and alcohol

The Municipality of Lisbon created four new emergency centres in sports centres and in unoccupied buildings to host approximately 220 homeless people in response to the COVID-19 pandemic. The centres are inclusive for lesbian, gay, bisexual, transgender and intersex (LGBTI) people and people with any other sexual identities, people with reduced mobility, couples, people with pets and also those using alcohol and drugs. The following interventions were implemented specifically for people who use drugs or alcohol:

- low-threshold treatment to prevent and manage alcohol withdrawal;
- OST (methadone), including the possibility of starting treatment;
- the distribution of needles, syringes and crack pipes;
- the availability of a mobile drug consumption room at two of the centres providing supervised consumption, primary healthcare, social support, distribution of drug equipment and rapid testing:
  - the provision of training for staff and some clients in recognising and responding to opioid overdose;
  - the provision of nasal naloxone.

Moreover, clients and staff from the largest centre (90 people) undertake a daily street clean-up in the vicinity to promote positive relationships with local residents and the wider community.

This innovative set of responses was developed specifically in response to the COVID-19 crisis but discussions are under way as to the value of continuing such a response as restrictions ease.
Reports of drug-related violence during the lockdown

While, overall, national confinement measures may have had, in the short term, a positive impact on low-level violent crime, drug-related violence is nevertheless reported to be increasing in a number of EU countries, and local conflicts over drug distribution and territory during the pandemic have also been noted (EMCDDA and Europol, 2020). Specifically, reduced mobility, the disruption of social networks and reduced access to money and drugs have been accompanied by increased violence among high-risk users in some countries, such as Denmark, Ireland and Cyprus. In addition, an increase in the severity and intensity of drug-related intimidation and violence since the start of the lockdown was mentioned by study participants in some areas in Ireland and Cyprus. In Denmark, an increase in violence, attempted killings and killings among different organised crime groups (OCGs) has been reported, but violent conflicts between these OCGs are not uncommon and it is unknown if the recent conflicts are related to circumstances caused by COVID-19. In Portugal, there have been reports of increases in petty crime associated with shortages of substances on the market and difficulties in obtaining income.

What next? Some ‘known unknowns’ about drug use post-COVID-19 lockdown

European countries are entering a new stage of containing COVID-19 and of restoring a sense of normality for their citizens. Lockdown measures are gradually being relaxed: national borders, shops, bars and restaurants are reopening; more social and cultural events are being allowed to take place under strict conditions; and a progressive, safe return to work is under way for many. The emergency restrictions on movement and on gatherings of people are also gradually being lifted in many countries.

As reported in this study, a number of these lockdown measures appear to have disrupted, at different levels, opportunities to use drugs and in many cases drug access and availability. As a result, changes in drug use patterns and new harms may have emerged during the lockdown. With the easing of confinement measures and the gradual emergence of a new social reality, many uncertainties exist and a wide range of questions remains to be answered. This study has provided a small snapshot of a complex and rapidly changing situation that, even during the preparation of this report, will have in many respects moved on and developed. The following sections highlight a few of the many outstanding questions that future rounds of this study and others working in this area will need to address.

How will COVID-19-related measures affect patterns of drug use in the medium to long term?

This study has provided a snapshot of the immediate impact of the pandemic and the response to it in European countries, but what are the implications for the longer term? Some people have abstained from or decreased drug use during the lockdown because of limited opportunities, reduced availability of drugs or difficulties accessing drugs. As restrictions are removed, access to drugs through the usual channels (e.g. known dealers, friends) may resume. It appears that large gatherings of people, for example at summer festivals or nightclubs, may be restricted for the foreseeable future. However, a resurgence of illegal rave parties as an alternative is now being observed in some countries. Of particular concern is the increase in alcohol consumption more generally among people who use
drugs, but also misuse of benzodiazepines among some groups, during the lockdown. The consequences in terms of increases in dependence on these substances may only become visible with time. It is well known that alcohol treatment services, especially for younger people, are scarce or limited in most European countries, and therefore alcohol-related problems among these populations may require urgent attention, with appropriate services being tailored to the emerging needs of these groups.

**Will we see long-term changes in consumption patterns among opioid users?**

One of the primary service-level responses to the COVID-19 outbreak was to try to ensure access to and the continuity of provision of opioid substitution medications for both existing clients and other heroin users in need. In some cases this was ensured by an increase in provision or less restrictions on access to medications. Any positive or negative impact on the health of opioid users associated with efforts to scale up access to OST will also only become clear with time and careful monitoring. With a greater number of opioid users accessing unsupervised OST medications, it is yet to be determined whether or not prescription opioids such as methadone and buprenorphine, perhaps acquired and/or used illicitly, will become drugs of choice among certain users, and to what extent diverted and illicitly produced OST medications will replace heroin on the market in European countries that have reported COVID-19-related heroin shortages.

Studies will also need to investigate how many fatalities and new drug-related infections have been prevented by providing OST access to a wide group of users who would not have had access otherwise or who were not willing to access this treatment before the COVID-19 pandemic.

**Might some drug taking behaviours be high risk for SARS-CoV-2 infection?**

During the lockdown period, a range of high-risk behaviours were reported among both recreational and high-risk drug users. For example, many reported using drugs alone during the lockdown, and in some countries more medicines were dispensed with reduced supervision.

Importantly, some behaviours associated with drug taking prior to the COVID-19 pandemic may now be considered ‘high-risk’ in terms of infection. For example, sharing cannabis joints or cocaine straws, sharing preparation equipment among high-risk drug users (e.g. crack pipes, spoons, filters), and splitting and handing over MDMA tablets may all pose potentially new and little-explored risks of coronavirus transmission at the moment of drug taking. There is an urgent need for studies exploring these risks, linked to modes of transmission, and implications for prevention and risk reduction messages, as well as to ensure that sufficient levels of equipment are distributed to clients by harm reduction services.

**How quickly will essential health services reopen after the lockdown and will they have changed?**

Reports emerged during this study of difficulties for services during the first weeks of the lockdown in terms of staying open and maintaining essential treatment and harm reduction services (EMCDDA, 2020b). As an example, several countries reported problems with distributing clean needles and syringes (see also EMCDDA, 2020b), and testing for and the treatment of blood-borne diseases among high-risk drug users was halted or significantly reduced in several countries. This is of particular concern in areas where HIV outbreaks among the drug-using population were observed
before the COVID-19 pandemic and in countries with high incidences of HIV or HCV infection. It will be important to see how quickly services can bounce back and reopen, as well as to identify whether their provision will change as a result of recent experiences.

What will happen to European drug markets as countries emerge from the lockdown?

Drug market studies suggest that the production and wholesale distribution of most drugs have not been significantly disrupted during the lockdown period (EMCDDA and Europol, 2020), and important questions have been raised about the increased use of social media and darknet markets for acquiring drugs in the future. One scenario identified is the potential for unsold stockpiles of drugs and competition at the mid-level and retail level of the market to result in the ‘dumping’ of drugs on local markets after lockdown measures are lifted. It is currently uncertain whether or not some countries will witness a more permanent change in their drug supply mechanisms and in the primary drugs sold on their markets. We note that this was indeed the case for several European countries after previous drug market supply shocks, for example the heroin droughts in both the early 2000s and the early 2010s, which resulted in more or less permanent changes in a number of national opioid markets (EMCDDA, 2011).

How might a post-COVID-19 economic recession affect drug markets and patterns of use?

Adaptation to new economic realities has certainly played a role in promulgating certain drug retail market changes. Experts interviewed in this study, for instance, cited examples of dealers repackaging heroin doses into smaller quantities, to accommodate reductions in income among opioid users. A possible economic recession across European countries may trigger further unknown dynamics within the European drug market. At this stage, it is unclear whether this will lead to people decreasing their drug use due to limited opportunities and insufficient disposable income, or whether more marginalised populations will bear the brunt of possible threats and cuts to essential drug treatment and harm reduction services.
References


EMCDDA (2020a), EMCDDA update on the implications of COVID-19 for people who use drugs (PWUD) and drug service providers, EMCDDA, Lisbon.


Impact of COVID-19 on patterns of drug use and drug-related harms in Europe


Resources on COVID-19

EMCDDA


Europe

- WHO Europe: http://www.euro.who.int/en/home

World

- WHO: https://www.who.int/emergencies/diseases/novel-coronavirus-2019

EMCDDA Trendspotter briefing | Impact of COVID-19 on patterns of drug use and drug-related harms in Europe

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