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Is Europe facing an opioid epidemic: What does European monitoring data tell us?

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Abstract

This paper addresses the question of whether Europe is facing an opioid epidemic and utilizes data from the European monitoring system on opioid use, harms and availability, to help assess the situation. Data sources covering the last decade on overdose deaths, drug treatment entrants and drug-related emergencies suggest that the health burden associated with opioid use is mostly related to the consumption of heroin – and to a lesser extent diverted opioid substitution treatment medications – and that it is primarily affecting an ageing cohort of vulnerable users, with little evidence of an increase in initiation. While opioid-related deaths are currently at much lower levels than in the United States, they still represent a large preventable health burden with differences across EU countries. There is also increasing concern related to the high availability of heroin, illicitly produced synthetic opioids and diverted opioid pain medications on the European drugs market. Trends in the latter categories are poorly monitored and we may miss signs of emerging problems. Moreover, the economic recession following the COVID-19 pandemic has a potential to lead to resurgence in opioid use and harms.

Significance: This paper looks at data from the European monitoring system to address the question of whether Europe is facing an opioid epidemic. It reviews available health and supply side indicators, considering the limitations of each data source. A summary of the available evidence would suggest that while opioid-related deaths in Europe represent a large preventable health burden with differences across EU countries, Europe as a whole is not facing an opioid crisis of the size and nature seen in the US.

1 | INTRODUCTION

The US government declared the opioid crisis a public health emergency in 2017. From 1999 to 2018, it was estimated that almost 450,000 people died in the United States from an overdose involving an opioid (Wilson et al., 2020). This emergency can be characterized as having distinct waves: in the 1990s it was dominated by prescription opioids; from 2010 heroin played a greater role; and from 2013 onwards synthetic opioids, particularly illicitly manufactured fentanyl became the major focus for concern (Centers for Disease Control & Prevention, 2019). While the first wave might find some of its causes in the specificities of the US medical prescription regulations (van Amsterdam & van den Brink, 2015; Van Zee, 2009), which differ from those found in Europe, drug markets are increasingly global in nature and there is a need to assess the risk for the EU.

In this paper, we review those data collected as part of the routine annual surveillance of drug use conducted by the European Monitoring Centre on Drugs and Drug Addiction (EMCDDA) to answer the question: are there signs that an opioid epidemic is happening in the EU?

2 | METHODS

The EMCDDA reporting system covers all Member States of the European Union (EU), Norway and Turkey. As no simple direct measure exists to track trends in illicit opioid use, assessment can only be made by triangulating data from different sources. For this purpose the European monitoring system utilizes epidemiological indicators on drug-related deaths, drug treatment demand, drug-related infectious diseases, and prevalence and patterns of drug use, alongside an early warning system (EWS) on uncontrolled new psychoactive substances (NPS). Supply side indicators include number and volume of seizures, by drug, by country. The methods for each indicator have been described in previous publications (Mounteney et al., 2016) and detailed protocols are available on the EMCDDA's website. These indicators are complemented by city-level sentinel monitoring systems on drug-related emergency visits (European Monitoring Centre for Drugs & Drug Addiction, 2020a), syringes residues analysis (European Monitoring Centre for Drugs & Drug Addiction, 2019a) and wastewater analysis (European Monitoring Centre for Drugs & Drug Addiction, 2020d).

National and local data sources include registries, surveys, laboratory analysis and other routine data. Aggregated data are reported annually through an online platform or *ad hoc* tools, following the EMCDDA's protocols. The EWS collects case-based data on an ongoing basis. Numerical data collected in the annual reporting exercise are published annually in the EMCDDA *Statistical Bulletin*, and includes detailed methodological information (European Monitoring Centre for Drugs & Drug Addiction, 2020c). The handling of numerical and statistical information is governed by a formal statistical code of practice (European Monitoring Centre for Drugs & Drug Addiction, 2015). Data and analyses are provided through a network of focal points (Reitox), which coordinate national expert networks responsible for submitting and checking data. Data availability and coverage vary by country, and the issue of data comparability across countries are reviewed regularly and detailed within the reporting exercise. Compatibility and coverage issues do exist and mean that any analysis must be accompanied with a note of caution. However, similar problems exist in respect to any regional health information system and we would argue that the information available is sufficient to support with a reasonable degree of confidence an assessment of opioid trends within the EU.

3 | RESULTS

3.1 | Drug-related deaths

Opioids, either alone or in combination with other substances, play a predominant role in drug overdose deaths and have historically been used as an indicator of the extent of opioid problems. The definition of drug-related death used for monitoring purposes in Europe is intended to capture primarily unintended drug overdoses. The term drug-related death is used here to refer to fatal poisonings resulting from the use of psychoactive substances but excludes deaths that are indirectly related to drugs, e.g., deaths related to violence or trauma.

Over the medium-term overdoses have been increasing in Europe but at much lower levels than in the United States. In addition, the most recent estimates have been relatively stable. In 2018, there were an estimated 8,317 overdose deaths in the EU. This represents an increase of about 15% compared to 2014 (European Monitoring Centre for Drugs & Drug Addiction, 2020b). It should be noted that a few countries, such as the UK, account for a relatively large share of deaths and thus European trends disproportionately reflect the situation in a small number of countries with large at-risk populations. Under-reporting is a problem in some countries and the overall number of deaths reported is therefore an under-estimate. However, even taking this into account the European total is still far lower than that observed in the United States. The mortality rate due to overdoses in Europe in 2018 was estimated at 22.3 deaths per million population aged 15–64. In comparison, in 2018, there were 67,367 drug overdose deaths reported in the United States (Wilson et al., 2020). This translates into an age-adjusted rate of drug overdose deaths of 207 per million which is more than nine times the figure found in the EU.

In Europe, overdoses victims are disproportionally male and the age at which death occurs has been increasing overtime. The rate among males (35.1 cases per million males) is almost four times that among females (9.5 cases per million females). Males aged 35–44 are the most affected, with a mortality rate of 53.7 deaths per million, more than double the average seen for all ages. Between 2012 and 2018 overdose deaths in the European Union increased in all age categories with the exception of those aged 20–29 (Figure 1). Deaths among the 50-plus age groups increased by 75% overall, while deaths among younger age groups have generally been stable (European Monitoring Centre for Drugs & Drug Addiction, 2020b).

A limitation of these data are that it also includes deaths associated with other illicit drugs. However, the majority (around 78%) of drug related deaths reported in Europe involves opioids often found in combination with other substances. The most commonly identified opioid is heroin. In interpreting these data, it is important to note that the number of estimated opioid deaths have been higher at points during the last 20 years – particularly at the height of the heroin epidemic that affected many European countries during the 1980s, 1990s and early to mid 2000s. The peak of heroin related deaths varies considerably between countries reflecting

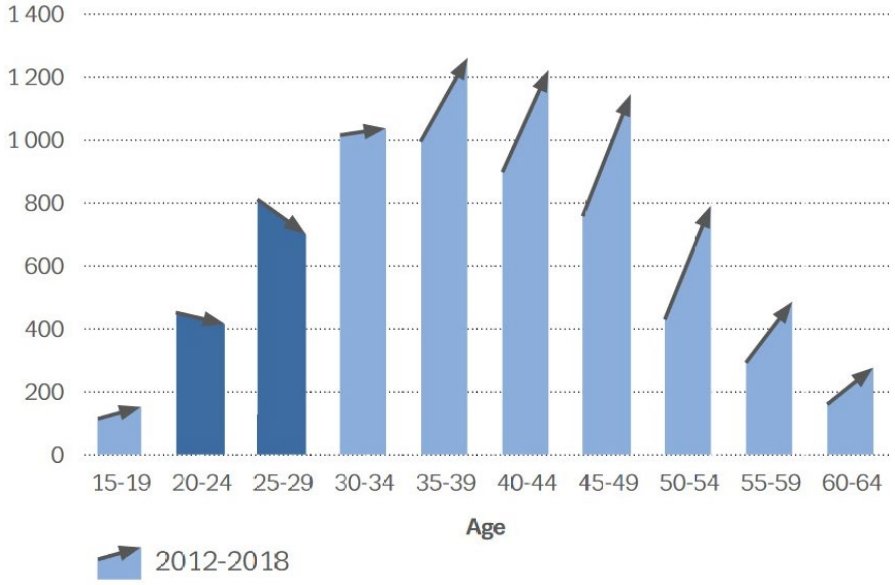

FIGURE 1 Number of drug-related deaths reported in the European Union in 2012 and 2018, or most recent year, by age group (source: EMCDDA)

its historical experience of problems with this drug. It is also important to note that the relatively high levels of opioid-related deaths now reported is not thought to reflect an increase in new opioid users but more probably is indicative of both improvements in reporting and an ageing cohort of long-term opioid-dependent individuals who are becoming increasingly more vulnerable.

An inspection of national data can also provide for some countries a more detailed understanding of both time trends and the role that opioids play in overall levels of drug related death. Focusing first on heroin, in England and Wales, heroin and morphine continue to be the most frequently mentioned opiates with 1,336 drug poisoning deaths mentioning one of these substances in 2018 (a rate of 23.4 deaths per million people and a statistically significant increase when compared to the rate in 2017 (20.5 deaths per million)). In 2017, in France, heroin is mentioned in 131 deaths recorded in the special mortality register, or 40% of the cases where this information was available. In Germany, heroin is reported in 409 deaths reported by the police, or 32% of all cases. In Norway it is mentioned in 49 overdose deaths reported in the general mortality register in 2017, or 20% of all cases (European Monitoring Centre for Drugs & Drug Addiction, 2019b).

There is a concern that deaths associated with synthetic opioids are a growing problem but may be underreported. In some European countries opioids other than heroin are responsible for either a substantive or the greatest share of opioid related mortality an over the last decade the relative importance of opioids other than heroin has increased overall. In Estonia for example, since around 2010, illicitly-produced fentanyl has been the main opioid used in the country (Mounteney et al., 2019) and are responsible for the greatest share of deaths. Buprenorphine, diverted from therapeutic use, plays a similar role in Finland. Methadone is widely used for opioid substitution treatment is also commonly found in post-mortem examinations in some countries. The role played by other opioids, especially those used for pain relief, is less clear although they clearly play overall a more minor role than heroin, or opioids typically used for opioid substitution treatment. However, concerns do exist that other opioids may be slowly playing a more important role in overdose deaths but that current reporting systems may be insensitive to changes in this area. For example, at least 300 drug-induced deaths were reported in 2017 in which tramadol was either present or implicated but reports of tramadol related deaths were concentrated in a few countries. In England and Wales, 185 tramadol related deaths were reported, representing about 10% of all opioid-related deaths where the opioid was known. In addition, in 2017, Spain reported 40 tramadol related deaths, France 37 and Finland 20 (European Monitoring Centre for Drugs & Drug Addiction, 2019b).

3.2 | Fentanyl and fentanyl analogues

Fentanyl and fentanyl analogues, either diverted from medical use or illicitly manufactured have and do still play a relatively minor role in deaths and acute poisoning in the EU, and remain at a far lower level than that reported in the US. An important caveat here is the relative importance of illicitly produced fentanyl(s) found on the drug market in some Baltic countries (Mounteney et al., 2019). A recent concern has been the availability of often highly potent and uncontrolled synthetic opioids appearing in Europe and reported to the EU early warning system on new psychoactive substances (European Monitoring Centre for Drugs & Drug Addiction, 2018c). Since 2009, more than 57 new synthetic opioids have been reported to this mechanism and since 2012 over 30 fentanyl analogues have appeared (European

Monitoring Centre for Drugs & Drug Addiction, 2020b). These are usually obtained from online sources although they have also been sold at street level, sometimes misrepresented as heroin, or other illicit drugs or even psychoactive medicines. Novel dosage forms such as nasal sprays and e-liquids have also appeared in recent years and may increase the risk of accidental overdose. Fentanyl and its analogues can cause rapid onset of life-threatening respiratory depression, and their appearance on the drug market has been associated with poisonings. Cyclopropylfentanyl, carfentanil and acryloylfentanyl, in particular, have been associated with a relatively large numbers of deaths in the EU: 78, 61 and 47 deaths, respectively, at the time of their risk assessments (European Monitoring Centre for Drugs & Drug Addiction, 2018b; European Monitoring Centre for Drugs & Drug Addiction, 2018a; European Monitoring Centre for Drugs & Drug Addiction, 2017).

There is also sporadic evidence of a few deaths resulting from fentanyl diverted from medical use, for example resulting from deficiencies in the disposal practices of fentanyl patches. On a few occasions illicit fentanyl production has been detected, sometimes associated with local clusters of deaths or poisonings. However, to date, with the exception of Estonia, the impact of this on overall reported drug-related deaths has been limited.

3.3 | Drug-related emergency visits

Drug-related emergency presentations can also provide an indirect indicator of opioid trends but currently no comprehensive system for monitoring drug-related emergency visits exist within Europe. A few countries do have national systems although the coverage of these varies and the compatibility of the data at European level is very limited. Drug-related emergency visits are usually monitored through specialist sentinel systems, due to the limitations of routine hospital records, which tend to underestimate the number of drug-related emergency visits. Recently a collaborative study (Euro-DEN Plus) has been developed that uses a standard tool to audit drug-related presentations in participating hospitals (European Monitoring Centre for Drugs & Drug Addiction, 2020a). It provides a snapshot of the burden of acute drug-related health harms across the participating sentinel sites throughout Europe but cannot be considered as representative.

The data that are available does suggest that emergency visits due to heroin are quite common. Considering all 27 centres reporting data in 2018, heroin was the 3rd most frequent drug (involved in 1,535 cases) behind cannabis (2,154) and cocaine (1,941 cases). Methadone, second most common opioid reported in 2018, was involved in 259 presentations. Meanwhile, 337 cases involved an 'unknown' opioid in 2018. Trends in the most common substances seen in the 15 centres reporting data for all 5 years from 2014 to 2018 showed that reports of heroin declined until 2017, before increasing from 1,033 in 2017 to 1,270 in 2018 (Figure 2). Of 24 hospitals surveyed about the changes in the number of heroin cases from 2017 to 2018, 10 reported an increase, 7 reported a stable number and 7 reported a decrease. The European situation did appear quite heterogeneous, however, with heroin more commonly reported in hospitals in the north and west of Europe: for example, a third of all cases were associated with heroin in Oslo (Norway) and Dublin (Ireland). An important caveat to the interpretation of these data is that it is not necessarily representative of the national picture and not all European countries participate in the exercise.

3.4 | Monitoring of entrants to specialist drug treatment centres

Data from specialist drug treatment centres provides probably the most complete and long-term window on trends in heroin use and show a decline in heroin related presentations over the last decade. As opioid users often enter treatment multiple times over multiple years a distinction is made in the data between new treatment demands (those entering for the first time) and those who have a history of previous treatments for problems with the drug in question. The number of those entering treatment for the first time is considered to be a better indicator of incident cases.

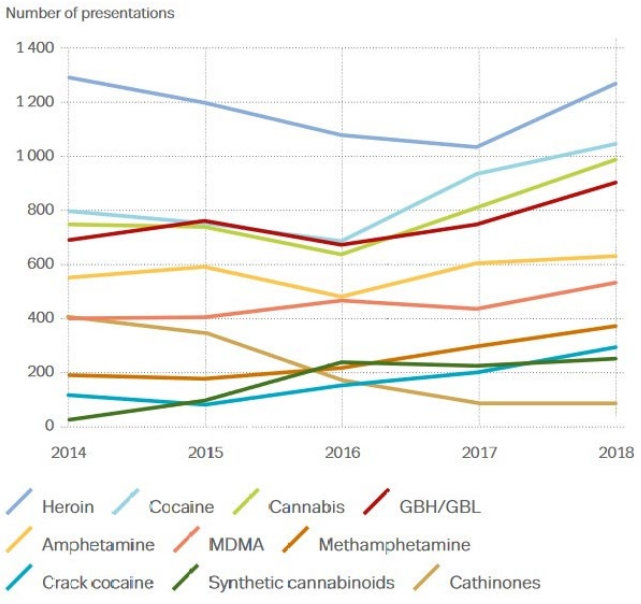

FIGURE 2 Trends in drug related emergency presentations from sentinel study of 14 European hospitals, 2014–2018 (source: EMCDDA and European Drug Emergencies Network (Euro-DEN Plus))

In 2018, 143,000 patients entering specialized treatment in the EU, Norway and Turkey reported opioids as their primary drug. Of these patients, 83.6% reported heroin as their primary drugs, 5% methadone, 4% buprenorphine, 0.4% fentanyl and 7% other opioids. This latter category can include prescription opioids (other than methadone and buprenorphine), but no further breakdown is available. Primary heroin users accounted for 77% of first-time primary opioid users entering treatment (27,000), a drop of 10% compared with 2017. According to the available trend data, the number of first-time heroin clients has fallen by more than half from a peak observed in 2007 (Figure 3). Between 2017 and 2018, the number of first-time treatment entrants for primary heroin use decreased in 18 countries of the 29 with available data. Among first-time clients entering specialized drug treatment in 2018 with heroin as their primary drug, 24% reported injecting as their main route of administration, down from 43% in 2006. The mean age at first treatment entry for heroin users increased from 31 in 2007 to 35 in 2018.

3.5 | Data on drug seizures

Supply side information has been used to assess opioid availability and as an indicator of use, however, it is important to note that these data are also influenced by policing practices. Heroin remains the most commonly seized opioid in Europe (both in terms of number of seizures by the police and in terms of quantity seized). Heroin seizures have been far higher in the past and peaked around 2007 reflecting the heroin epidemic affecting much of Europe at this time. They have never returned to the levels seen in during this period. In addition, an acute and dramatic reduction in heroin availability was observed in a number of European countries around 2010/11, accompanied by a drop in both numbers of seizures and quantities of heroin seized. Since then, seizures in the European Union have largely stabilized, with 37,000 seizures amounting to 5.4 tonnes reported in 2017. Turkey continues to seize more heroin than all EU countries combined, 17.4 tonnes in 2017, the largest quantity for a decade. A significant share of heroin seized in Turkey is thought to be originally destined for the European market. Following a sharp decrease between 2009 and 2011, heroin purity then increased significantly before stabilizing in recent years, but still at levels below that seen in 2007. Overall, the retail price of heroin declined slightly over the last decade. This information together with the observation of some exceptionally large seizures made recently within the EU and increases seen in production estimates in Afghanistan suggest that availability remains potentially high for this drug within the EU.

In addition to heroin, other opioid products are seized in European countries. Although these represent a small fraction of total opioid seizures, they increased markedly in 2017. The other opioids most commonly seized include the medicinal opioids tramadol, buprenorphine and methadone. In 2017, for the second year running, increases were

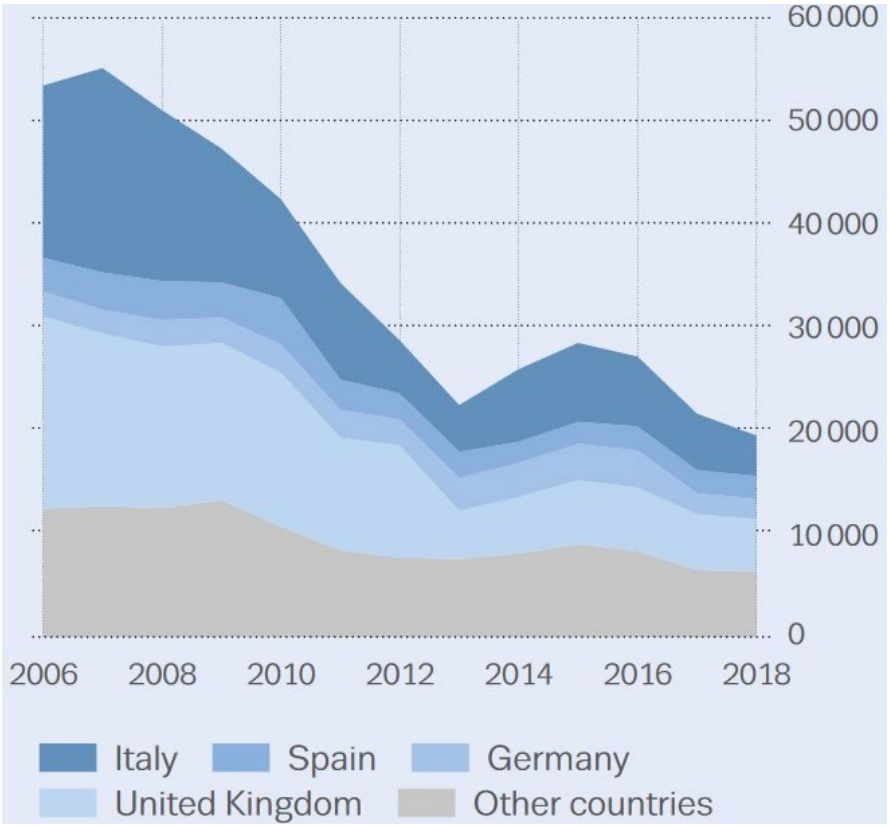

FIGURE 3 First-time treatment entrants with heroin as primary drug in the EU, Norway and Turkey, 2006–2018 (source: EMCDDA). Data for Germany are for entrants with 'opioids' as primary drug. Trends in first-time entrants are based on 24 countries. Only countries with data for at least 11 of the 13 years are included in the trends graph. Missing values are interpolated from adjacent years. Due to changes in the flow of data at national level, data since 2014 for Italy are not comparable with earlier years. United Kingdom data for 2018 do not include Northern Ireland

reported in the quantities seized of tramadol and fentanyl derivatives (European Monitoring Centre for Drugs and Drug Addiction & European Union Agency for Law Enforcement Cooperation, 2019). That year, approximately 1,300 seizures of opioids were also reported to the EU Early Warning System. Most of these cases (70%) were fentanyl derivatives although in the most recent data (2019) other more novel opioids were reported (Figure 4). This may be explained by increased international regulatory efforts targeting fentanyl that has resulted in increased interest in other groups of not controlled opioids.

3.6 | Indirect prevalence estimation of opioid use

Methodological difficulties and the stigmatized and low prevalence nature of opioid use mean that population-based surveys are not generally considered a useful indicator of prevalence in this area. To compensate for this, a number of indirect statistical methods have been developed based on extrapolations from data set in which opioid users are present (drug-related treatment, police and/or death data) to provide an estimate of the total number of heroin users present within a given population. For the EU as a whole, it is estimated that there were 1.3 million high-risk opioid users in 2018 (0.4% if the EU population aged 14–64 years). At national level, prevalence estimates of high-risk opioid use range from less than 1 to more than 8 cases per 1 000 population aged 15–64. For countries with trends, the prevalence has been relatively stable over the last 10 years, however, questions exist to the extent to which these estimates are sensitive to changes over time.

3.7 | Data from syringe residues

Some new data sources have been explored recently that can provide some further insight on opioid patterns of use. Traditionally heroin has been associated with injecting as a route of administration. Whilst data from treatment attendees suggest that overall injecting drug use is declining in the European Union (European Monitoring Centre for Drugs & Drug Addiction, 2020b), mortality and morbidity associated with this mode of administration remain high. From 2017 onwards data are now available from a sentinel network of European Cities (ESCAPE) that provides information on injected substances by chemically analysing the residual content of used syringes (European Monitoring Centre for Drugs & Drug Addiction, 2019a). Syringes were collected from the bins of street automatic injection kit dispensers and at harm-reduction services in eight European cities in 2019. This

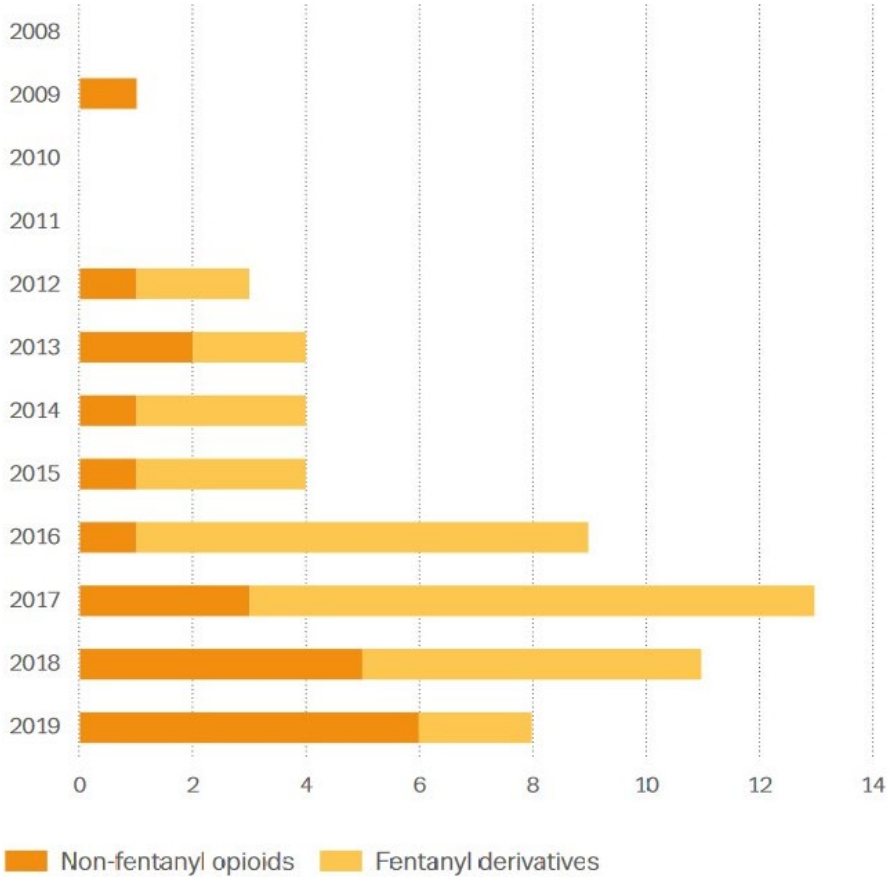

FIGURE 4 Number of new synthetic opioids reported to the EU early warning system for the first time, 2008–19 (source: EMCDDA)

approach provides information on drugs that are injected by users who are not necessarily in contact with drug treatment or other services.

In 2019, the proportion of syringes containing heroin was higher than 25% in half of the participating cities (Amsterdam, Budapest, Cologne, Oslo). Injection of opioid substitution medications, such as buprenorphine and methadone, was common in Helsinki, Vilnius and Lausanne. In 2019, carfentanil was detected in a third of syringes from Vilnius. The other sites reporting fentanyl or fentanyl derivatives in 2019 were Cologne, Oslo and Paris, where they were found in only 1% of used syringes. Other opioids (tramadol and U-47,700) were found in around 1% of syringes analysed from Paris. Traces of stimulants (cocaine, amphetamines and synthetic cathinones) were found in more than a third of the syringes tested in all but one city (European Monitoring Centre for Drugs & Drug Addiction, 2020b).

4 | DISCUSSION

Opioid use is a stigmatized, illegal and a low prevalence behaviour and therefore it is challenging to monitor. All indicators reported here are imperfect in various ways and need to be considered in combination. The extent to which the data provide a representative picture of the national situation is a particular problem for some of the data sets. Furthermore, reporting capacity and coverage has developed considerably over the last 20 years within Europe, meaning that historical comparisons must be made with caution. In addition, the heroin epidemic that began to impact on Europe from the 1980's onwards took a different time course across different countries with for example countries of the former soviet bloc being affected later. Despite these limitations, taken together the available evidence do not suggest that Europe is similar to the United States in respect to current trends in opioid use. At worst, the data suggest that levels of opioid use over the last decade have been relatively stable; at best they may arguably be indicative of a slight decline. Overall, the European drug problem does not appear to be as characterized by injecting heroin use as it was a decade or so ago. The availability of opioid substitution treatment has increased considerably during this period and is estimated that over 50% of dependent opioid users are now in contact with treatment services. This population appears to be ageing and there is little current evidence to suggest that drug services are seeing an increase in the number of young or new users. A similar picture in respect to age emerges from the data on drug-related deaths, with recent rises in the number of reported opioid deaths probably explained by a combination of factors: increasing vulnerability in an ageing cohort; changes in polydrug use patterns; the availability of higher potency or purity opioids; and finally improvements in the capacity of reporting systems.

This does not mean that we should be complacent. There is a concern that monitoring systems may be insensitive to changes occurring in young populations that may not be visible in treatment entries or other data sets used for indirect estimates of opioid drug use. At present there is little evidence that this is the case. But this has to be understood in the context that there is generally a time lag of several years between the initiation of opioid use and the development of problems that cause a person using opioids to appear in one of the existing surveillance systems. Furthermore, supply side data suggest that overall the availability of opioids remains relatively high by historical standards. Given the tendency for opioid problems to be associated with periods of social disruption and economic deprivation, future risks in this area cannot be ignored. The impact of the current Covid-19 pandemic on mental health, together with the accompanying economic problems can only increase concerns further in this respect (Ahmad et al., 2020).

It is also important to note that the data sets reviewed here were mostly designed when heroin-related problems were the major focus for opioid surveillance work. As such they may not be particularly sensitive to important changes in patterns of use with regard to other opioids. There is some evidence to suggest that this might be the case and whilst smaller in scale we may be seeing some important developments in respect to the availability and use of synthetic opioids.

Importantly, in respect to deaths, most overdose deaths involve multiple substances although this is often not evident in the statistical summary information. A recent review of overdose deaths in five north European countries showed that the median number of detected drugs per case varied from 4 to 6. Opioids were the main cause of death but as well as heroin/morphine, included methadone, buprenorphine and fentanyl analogues (Simonsen et al., 2020). Similarly, the analysis of a Finnish national post-mortem toxicology database showed that there were no death cases with buprenorphine as the only toxicological finding, with concomitant benzodiazepines commonly detected (Mariottini et al., 2020).

The current situation in Europe stands in contrast to that found in North America. First, drug-related mortality is much lower in Europe. Second, synthetic opioids of the fentanyl group play a much smaller role in drug-related deaths reported in Europe. After heroin, opioids commonly linked to harmful use and deaths in Europe are drugs used for opioid substitution treatment such as methadone or buprenorphine. Illicitly produced fentanyl and fentanyl derivatives are currently a significant problem in only a small number of Baltic countries. However, outbreaks of deaths have been linked to fentanyl and other often novel opioids that have appeared first as uncontrolled new psychoactive substances. Some of these are extremely potent and can even present a risk through

accidental environmental exposure. Currently fentanyl, and other less well-known synthetic opioids, are available in Europe, and result in both morbidity and mortality but overall they still play a minor role in terms of their contribution to overall opioid problems. However, given the relative ease by which these substances can be obtained through online sources, or even synthesized, the potential large financial gain that can accrue from their supply and the risks related to the high potency and novel form these drugs may appear in, they are a current cause for concern and wider future problems in this area cannot be ruled out.

There is also a worry that the available data on drug-related deaths in Europe may not provide a good window in respect to trends in the non-therapeutic use of opioids intended for pain relief. Tramadol is a drug in question here, but overall current monitoring approaches tend to be insensitive to trends in the misuse of medicinal substances when used as recreational drugs. A recent comment on this topic concluded that: *While the magnitude and patterns may vary, opioid analgesic abuse via high-risk routes of administration was reported in multiple surveillance programs in United Kingdom, Germany, France, Italy and Spain. Ongoing surveillance of this public health issue is warranted to inform prevention and intervention strategies* (Green, 2017).

5 | CONCLUSIONS

Data limitations mean that it is difficult at the European level to identify robust empirical evidence to provide a detailed answer to the question of whether Europe is facing an opioid epidemic. However, a summary of the available evidence would suggest that while opioid-related deaths in Europe represent a large preventable health burden with differences across EU countries, Europe as a whole is not facing an opioid crisis of the size and nature seen in the United States. Opioid-related deaths in Europe were higher during earlier periods in the last 20 years when European countries were experiencing major heroin epidemics. Over the last decade opioid deaths have remained relatively high and somewhat stable with heroin still as the major cause. Finally, while heroin still predominates, it is playing a slightly less important role overall, as other synthetic opioids have become more evident in the data, particularly those drugs used for opioid substitution treatment.

A number of caveats are important to note here. While heroin continues to be the substance generally considered to be associated with the greatest share of health cost in respect to illicit drug use, the situation at the national level is more heterogenous. Importantly, contemporary patterns of problem drug use are more complex than they once were and harder to define by any single substance. Drug problems today are characterized by the consumption of, and the availability of, multiple substances with individual consumption patterns being often dynamic and complex. Opioids of different types may therefore be used by drug users along with stimulants, new psychoactive substances (NPS) and various medicinal products. This complexity is challenging to monitor, and it may be that important trends in respect to the non-therapeutic use of synthetic opioids, especially novel opioids or opioids used for pain relief may be going unobserved. Trends in analgesic consumption and adverse effects from medicinal products are monitored by national medicine agencies (Hider-Mlynarz et al., 2018). However, the data on the use of pain medications for non-therapeutic purposes is not currently well-understood at the European level. Currently the EMCDDA does not systematically monitor the misuse of prescription drugs but has noted this is an area in which investment is required. Currently the EMCDDA is working to improve the sensitivity of existing monitoring tools to be better able to capture some aspects of the harmful use of prescription opioids, for example by improving the toxicological analysis and more detailed reporting of the role of prescription opioids in data on drug related deaths. However, we would argue an important weakness of the current European drug monitoring system is that it is not sufficiently sensitive to detecting important trends in the misuse of medicinal products. Given the US experience in this area, this presents us with urgent need to improve our surveillance capacity to identified at a more granular level any potential threats in this area.

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CONFLICT OF INTEREST

The authors have no conflict of interests to declare.

AUTHOR CONTRIBUTIONS

All the authors read and approved the manuscript. All authors were involved in conceiving the study design, in data acquisition, interpreting the data and in preparing the initial version of the manuscript and in its revision.

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