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OPIOIDS IN EUROPE: PREPARING FOR A THIRD WAVE

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Executive summary

While synthetic opioids have brought historically high levels of drug-related death to North America, Europe's drug landscape is shaped by different cultural, political, and geographical factors that have—so far—limited harms. The opioid-related death rate in the United States is more than 10 times higher than in the European Union.

European approaches to drug policy include a role for law enforcement, but they have historically opted more than the USA for medical and harm reduction strategies than punitive measures. For example, Europe was quicker to adopt opioid agonist therapy (using methadone, buprenorphine, and—less frequently—heroin/diamorphine itself to treat opioid use disorders). However, concerning signs are emerging of a new wave of synthetic opioid deaths. The curbing of Afghan heroin supply may bring dramatic changes to European drug markets.

This paper seeks to:

- Suggest that there have been two waves of opioids in Europe; first heroin, and then its substitutes.
- Consider the general patterns of opioid use and harms in Europe, with a particular focus on the experience of northern European countries, which indicates that we may see a third wave involving synthetic opioids.
- Show how Europe's social and policy contexts for the use of and response to opioids are characterized by stronger social protection and socialized health care, with less economic inequality and homelessness, and implications for opioid-related harms.
- Summarize what we know about the effects of European responses to opioid use. These include:
    - Law enforcement for supply reduction.
    - Opioid surveillance.
    - Treatment, including opioid agonist therapy.
    - Harm reduction, including overdose prevention centers, drug checking, and new developments in wearable technologies.
    - Decriminalization of drug possession.

The paper closes with recommendations for European countries, including:

- Monitor emerging synthetic opioids: Increase vigilance and data collection on the availability and use of potent synthetic opioids like fentanyls and nitazenes.
- Target law enforcement on synthetic opioids: It is more important to prevent the development of supply networks for potent synthetic opioids than to capture large numbers of dealers of other drugs.
- Expand and enhance treatment and harm reduction services: Get more people into opioid agonist therapy in countries that have lower coverage and expand services like overdose prevention centers and drug checking where they are needed.

For the United States, the paper suggests some learning from the European experience:

- Promote medical treatment of opioids: increase the coverage of opioid agonist therapy.
- Invest in public health initiatives that focus on prevention, treatment, and harm reduction.
- For the longer term, address the social determinants of health: Invest in reducing poverty, inequality, and homelessness, which are strongly linked to problematic drug use.

There is a real danger of a third wave of opioids in Europe, but their harms are preventable, on both sides of the Atlantic.

Introduction

Europe is not the United States. We need to start with this statement of the obvious to dispel any notion that the North American opioid poisoning crisis offers a directly transferable model for understanding what is happening on the other side of the Atlantic. The great majority of European countries do not have a problem with opioids anywhere near the scale of Canada and the United States.[1]

The biological mechanisms that kill so many people who consume potent opioids may be the same across humanity. However, the social, economic, and policy contexts that mediate the death rate are not. Within the continent of Europe, there are also geographical, cultural, and political differences that have led to varying patterns of opioid use and different responses to the threat posed by the increased availability of synthetic opioids.

The health burden of opioid use disorders was already higher in North America in 1990, but it is now dramatically so.[2] The U.S. opioid-related death rate is over 10 times higher than that of the European Union (EU).[3] It has been suggested that there have been at least three waves of the U.S. opioid crisis.[4] The over-prescription of opioid analgesics, it is argued, was followed by a turn to heroin that was accelerated when that supply was cut by restrictions on prescribing. The third wave was the arrival of fentanyls and their eventual domination of the illicit opioid market. The huge opioid death toll has more recently been supplemented by a "fourth wave" of deaths involving stimulants (largely methamphetamine).[5]

The story in Europe is very different. Patterns of use diverge within Europe, but even more from the American model. The social context is generally one of more generous welfare states and lower levels of inequality, poverty, incarceration, and homelessness, those common companions of problematic drug use.[6] Drug policies in both the United States and Europe place much faith (and financial investment) in law enforcement's capacity to restrict the size of the illicit drug market, but European states have been less enthusiastic fighters of the "war on drugs." The first wave of illicit opioid use across most of Europe was the heroin that arrived in the 1980s and 1990s in the aftermath of the Iranian revolution, the Soviet invasion of Afghanistan, and the major shifts in heroin production and export that these events brought,[7] coinciding with the mass unemployment triggered by European industrial decline, especially in the U.K.[8]

Reflecting a divergence in approach that dates back to the early days of drug control, in the first half of the 20th century,[9] in most European countries, the response was primarily medical rather than penal. This historical difference was compounded by the coincidental epidemic of HIV/AIDS and the spread of harm reduction practices from Rotterdam and Merseyside, whereas the United States resisted the introduction of such methods.[10] The uptake of opioid agonist therapy (OAT) was swifter in most of Europe than in the United States, where Robert Dole and Marie Nyswander first demonstrated that methadone maintenance was effective in reducing patients' use of street heroin in New York City.[11] Buprenorphine is also more widely prescribed in Europe than in the United States. Therefore, it could be argued that Europe has had two waves of opioid consumption: first heroin and then its substitutes. The question is, will there be a third wave driven by more potent synthetic opioids, and what are European countries doing to mitigate this risk?

In some EU countries, methadone is now associated with more deaths than heroin, although at much lower levels than fentanyl deaths in North America and heroin-related deaths in the United Kingdom.[12] The average age of these deaths—and people in treatment—is rising across Europe. The cohort of people who started using heroin in the 1980s and 1990s is not yet being replaced by a new, sizeable generation of opiate users.

f course, it is possible that all this could change with the arrival of more potent synthetic opioids. We have seen some concerning signs of this in some European countries in the last few years. This paper will attempt to do some justice to this variegated phenomenon across the European continent, starting with an overview of the European social and policy contexts for drug-related harms. It will discuss general trends in Europe, with a particular focus on concerning developments in northwestern Europe, the Baltic region, and Scandinavia. It will then explore the responses that European countries are deploying to limit the harms related to the illicit use of opioids, including potent synthetic opioids. It will focus on the treatment and harm reduction responses to opioid use. This is not because these are the most financially favored approaches. In the majority of European countries, a larger proportion of public expenditure on drug policy goes to supply reduction than to either demand or harm reduction.[13] Controlling supply is a core feature of both the EU and U.K. drug strategies.[14] But there is relatively little peer-reviewed evidence on the effects of law enforcement measures—such as arresting distributors and seizing drugs—on the levels and types of drug-related harm, and what exists is inconclusive on these effects.[15]

The continent of Europe is normally thought of as everything west of the Ural Mountains and the Bosphorus Strait, and everything north of Africa. Russia is not included in this chapter. It has a much different experience with and attitude toward drugs and is currently involved in an illegal invasion of its European neighbor.

The paper makes extensive use of reports to and by the European Monitoring Centre on Drugs and Drug Addiction (EMCDDA, which recently changed its name to become the European Union Drugs Agency, EUDA). This is the central repository for data on illicit drugs in the European Union and its associated members, Norway and Turkey. Reports from Correlations (the European Harm Reduction Network) have also proved useful. For the participating countries (Belgium, Germany, Estonia, Finland, and the Netherlands), the report of the SO-PREP project on countries' preparedness for synthetic opioids was also a helpful source.[16]

This paper will focus on illicit opioid use. Large variations between countries in the licit provision of opioids for pain management (including codeine, fentanyl, hydrocodone, hydromorphone, oxycodone, morphine, and diacetylmorphine/heroin) exist, but these are not determinative of drug-related harms. For example, countries with the highest levels of licit opioid consumption include the United States, Germany, Canada, Austria, and Switzerland, but—of this group—only the United States and Canada have high rates of overdose deaths.[17] It should be noted that heroin is used as a prescribed medicine—including in the treatment of opioid use disorders—in several European countries but not in the United States.[18] Methadone and buprenorphine are widely used in the treatment of opioid use disorders in Europe.[19] Technically, these are synthetic and semi-synthetic opioids, but that term is usually used, in European reports and research, to refer to more potent synthetic opioids, including fentanyls and nitazenes.

In reading the data from European countries, a note of caution is necessary. The EMCDDA/EUDA has made strenuous efforts to encourage countries to harmonize their reporting of drug-related indicators, but large gaps remain. Notably, there are differences between European countries in how they investigate and record drug-related deaths. This makes a comparison between them more complicated but does not outweigh the general picture that deaths related to synthetic opioids are far rarer in Europe than in North America.[20]

The European social and policy context

Before looking more specifically at the drug situation in Europe, it is worth considering the social and policy environments in which it takes place. There is a strong association between social disadvantage and drug-related death, at the level of both individuals and geography.[21] For example, a study from Luxembourg found that people who use drugs were more likely to die if they were unemployed and had little education.[22] In the U.K. and Spain, at least, drug-related deaths are heavily concentrated in the poorest areas.[23] It is not primarily for this reason that some European countries have adopted strong systems of social protection, but they might well have had the effect of limiting problems related to opioids. The legacies of socialist and social democratic policies to provide financial transfers, universal health care, and social housing to the poorest groups mean that European countries tend to have lower income inequality, less homelessness, and a more comprehensive approach to public and individual health care than the United States.[24] European countries also have much lower rates of imprisonment.[25] Incarceration may reduce illicit opioid use while inside the prison, but it also increases the risk of overdose death upon release.[26]

The idea that there is a coherent pattern of deaths from multiple causes (e.g., suicide, alcohol, and other drugs) that can be labeled "deaths of despair" has been challenged by research in the United States, Canada, and the constituent countries of the U.K., which shows different patterns across these causes of death over time.[27] Relatively high rates of drug-related deaths in Sweden and Finland challenge the notion that strong social protection is a guarantee against drug-related mortality. Nevertheless, it is notable that the countries that have what Gøsta Esping-Andersen calls a corporatist model of welfare capitalism—which includes France, Germany, Belgium, and the Netherlands[28]—have relatively low rates of such deaths.[29] Loïc Wacquant has shown different trajectories of "urban marginality" in the United States and France, with the European example not producing inner city "ghettoes" of extreme poverty, homelessness, and state abandonment.[30]

It is difficult to draw a direct link between social policy and levels of problematic drug use. The United States has the highest estimated rate of illicit drug use in the world, with Canada following closely behind, but this is primarily cannabis.[31] It is notoriously difficult to estimate levels of illicit opioid use. However, the prevalence of opioid dependence is believed to be much higher in the United States and Canada (where the estimated population rate was 1,348 per 100,00 population in 2017) than in Western Europe (where this figure was 263).[32] As Louisa Degenhardt and her colleagues also demonstrate, this is not a simple function of opioid consumption. Germany and Austria appear alongside Canada and the United States in the list of countries with the highest per capita consumption of opioids but have much lower rates of opioid dependence and drug-related death.[33]

The link between countries' "socioeconomic characteristics and drug use disorders" is explored in a fascinating booklet by the United Nations Office on Drugs and Crime (UNODC).[34] It notes a report by British epidemiologists that the prevalence of illicit drug use is associated with income inequality among high-income countries.[35] It refers to research that shows the social gradient of the development of substance use disorders in France, with low-income groups being more prone than middle-income groups, which are in turn more prone than high-income groups.[36] And it cites Swedish and Spanish research on the strong association between socioeconomic disadvantage and substance use disorders and overdose mortality.[37] This pattern may partly be explained by another Swedish study on how children living in disadvantaged areas face higher exposure to adverse childhood experi-

ences, including parental death and assault.[38] The UNODC booklet does not draw policy implications from these findings, but they seem clear enough. If countries wish to protect themselves from high rates of drug-related morbidity and mortality and prevent other "afflictions of inequality," they will need to look to the level of social protection provided to their citizens.[39]

As the executive body of the international drug control system, the UNODC also reports on law enforcement activity across countries. In 2022, the United States reported seizing 4,140 kg of heroin and 16,123 kg of fentanyl. The equivalent figures for Western and Central Europe were 9,132 kg and 0.7 kg.[40] This suggests that law enforcement agencies are busy seizing drugs in both regions and that the presence of fentanyl in the drug market is far greater in the United States than in Europe.

Heroin and synthetic opioids in Europe

GENERAL EUROPEAN TRENDS

The general European story is that there was an increase in illicit drug use, including heroin, from the 1960s to the 1990s. This increased use of heroin was influenced by international developments, including changes in opium supply in the Far and Middle East, increases in international trade flows, Western European deindustrialization, and the collapse of authoritarian regimes in the Iberian Peninsula and the Soviet bloc. There were also more local influences, such as post-colonial migration (e.g., from Suriname to the Netherlands),[41] and changes to the prescribing of heroin (e.g., the 1960s clampdown in the U.K. following overprescribing by a small number of doctors),[42] which led to shifts in patterns of opioid use and related harms.

In the 1980s, increases in drug-related deaths were reported in countries including the U.K., Austria, Denmark, Finland, Norway, and Sweden, most often associated with heroin use.[43] In the 1990s and early 2000s, drug-related deaths fell in Spain, Germany, and Italy, but increased in the U.K. and Ireland.[44] The British rise was the fastest in the most socio-economically deprived places.[45] By the late 1990s, deaths associated with heroin use were a substantial source of concern, including in Amsterdam, Barcelona, Denmark, Dublin, Lisbon, London, Rome, and Vienna.[46]

In 2015, the EMCDDA sounded the alarm about the potential for an increase in fentanyl-related deaths, following several years of rising mortality in Estonia and reports of fentanyls in the illicit drug supply in Bulgaria, Slovenia, Germany, Finland, and the U.K.[47] However, in 2021, a survey of European pain specialists concluded that "Europe as a whole is not facing an opioid crisis." This study reported disparate patterns across Europe, in both opioid prescribing and indicators of opioid-related harms but found that "fentanyl derivatives do not yet appear to be a major driver of opioid use disorder across Europe."[48]

By the time of the EMCDDA's annual report in 2023, the organization was able to state that synthetic opioids were not widely used in Europe, although it raised concerns for a few countries in northern Europe and the Baltic region in particular. The EMCDDA also reported a shift away from use of heroin by injection toward a greater use of other opioids (e.g., methadone) and a general aging of the cohort of people who use heroin, as indicated by a shrinking proportion of people under 35 seeking treatment for heroin problems—compared with an increase for those in the age range of 35 and above—between 2010 and 2021.[49] The European agency also named China, India, and, to a lesser extent, Russia as the locations where the synthetic opioids used in Europe were primarily produced.[50] It found little evidence of production inside the European Union.[51]

The Correlations network is coordinating civil society monitoring of new drug trends in Europe.[52] This network has reported the presence of synthetic opioids (including fentanyls and nitazenes) in the U.K., northern Italy, Poland, Estonia, Malta, and Montenegro. However, the numbers were very small, and the pattern of use is different from that observed in North America. There are, for example, few reports of people who use drugs actively seeking these synthetic opioids. The contamination of heroin with synthetic opioids was reported as a concern for people who use drugs, even in countries—such as Ireland—where there have been few actual cases of synthetic opioid seizures or deaths. In Athens, some people are known to be using an unknown substance they call "Thai," which has similar properties to known synthetic opioids. Correlations also reported on rumors of reduced supply following the Taliban's crackdown on Afghan opium production, but no actual shortages of heroin were observed.[53] These reports that synthetic opioids are not very prevalent in European drug markets are backed up by the reports that Correlations collected from drug-checking services in Western Europe: no synthetic opioids were found in samples sold as heroin, although there was a small number of tested samples that contained nitazenes.[54]

CONCERNS IN NORTHERN EUROPE

Concerns over potent opioids in Europe currently seem to be highest in the U.K. and Ireland and in the Baltic states and Scandinavia. The U.K. and Ireland are among the countries that were worst affected by the first wave of heroin in Europe in the 1980s and 1990s. These are the only European countries where Mimi Pierce and colleagues' 2021 review found problems related to opioids that were anywhere near the scale of those found in North America.[55] With a reported rate of 22.7 opioid-related deaths per 100,000 population (aged over 15), Scotland even exceeded the U.S. rate of 14.6 in 2018. Concerns about synthetic opioids have been reported in both Scotland and the United States. In Ireland, the presence of synthetic opioids seems very low. Fewer than five people in Ireland reported fentanyl as their main problem drug in 2022, and there were also very few reports of it being their secondary problem, although there was a concerning cluster of overdoses related to heroin contaminated with nitazenes in November 2023.[56]

There is a greater presence of synthetic opioids in the U.K., where drug-related deaths are already at crisis levels.[57] The largest portion of drug-related deaths in the U.K. are linked to heroin in combination with alcohol and/or benzodiazepines.[58] Recent years, however, have seen outbreaks of deaths from fentanyls and—more recently—nitazenes.[59] A commentary in the Lancet Public Health journal in February 2024 suggested that the 54 deaths that had then been reported by the National Crime Agency (NCA) to have shown a post-mortem presence of nitazenes were likely the "tip of the iceberg."[60] Indeed, the most recent report from the NCA in August 2024 stated that nitazenes were identified in 230 deaths in the U.K. between June 2023 and May 2024.[61]

Developments in the Baltic region also show the potential for disparities between neighboring countries and for rapid change in markets for illicit opioids.[62] Lithuania still reports relatively low and diminishing levels of drug-related deaths, declining from 146 (51 per million population) in 2015 to 61 (22 per million) in 2020. Opiates are the most commonly reported drugs in deaths, but the most recent English-language report does not state the number that was related to synthetic opioids.[63]

The two countries to the north of Lithuania have been more affected by synthetic opioids. In Latvia, 38 of 130 drug-related deaths were reported in 2023 as involving nitazenes. In Estonia, these numbers were 56 out of 117.[64] Synthetic opioids entered the Estonian market in the aftermath of the previous Afghan opium ban of 2001-2002.[65] Fentanyl has become the biggest source of the country's drug-related deaths, which peaked at 176 in 2012. In Estonia, unlike

in other European countries, users know they are buying fentanyls. In 2017, there was disruption to the fentanyl market as law enforcement suppressed a major supply ring, and deaths fell in 2018.[66] But deaths have since climbed again, as other suppliers filled the gap, and other synthetic opioids entered the market.[67]

Even farther to the north, the countries of the Scandinavian Peninsula—and Sweden in particular—have relatively high rates of drug-related deaths by European standards, although they are lower than in Scotland. It should also be noted that high-quality forensic testing may mean that a greater proportion of such deaths are recorded in Sweden than in other countries.[68] Researchers from Karlstad University organized an online survey and found high levels of reluctance to call emergency services in situations where someone was experiencing a drug overdose; they speculated that this may partly explain Sweden's high drug-related death rate, and that this reluctance can be attributed to the country's "zero tolerance" approach to illicit drugs.[69] Sweden, alongside Estonia, is also one of the European countries most affected by fentanyl. The number of deaths associated with fentanyl overtook heroin-related deaths in 2015. Over the next two years, there were 369 deaths reported to be related to fentanyl, which was apparently bought on websites and distributed by post.[70] Sweden has taken repeated steps to ban the online sale of fentanyl and its analogs.[71]

Norway has been a more enthusiastic adopter of harm reduction approaches, including overdose prevention centers.[72] Fentanyl does not have a large presence in the Norwegian illicit drug market,[73] and there have been few reports of use of other synthetic opioids to date. For example, there has been one reported case of protonitazene poisoning in a user of a cannabis nasal spray in Oslo, which was treated successfully with naloxone.[74] Comparing Norway's situation to that in the United States, Thomas Clausen has argued that it is Norway's combination of relatively strong controls on the general availability of opioid analgesics, higher coverage of opioid agonist treatment, wider availability of harm reduction services (including take-home naloxone and overdose prevention centers), universal and free health care, and a stronger welfare system that makes the difference.[75] In collaboration with Ole Rogeberg and Daniel Bergsvik, Clausen compared the opioid overdose death rates of birth cohorts who had different exposures to OAT and showed that people who had less access to OAT had higher death rates. They estimated that the provision of OAT reduced opioid-related deaths by 27% in Norway in 2016.[76]

In Finland, by the mid-2000s, buprenorphine had replaced heroin as the most prominent illicit opioid. Supply largely stems from illegally imported products rather than diverted buprenorphine, which is prescribed for opioid use disorders in Finland (the prescribed form contains naloxone, thus making it unattractive to illicit users[77]). Until 2017, the use of synthetic opioids in Finland was reportedly "sporadic."[78] Deaths associated with fentanyl peaked at 20 in 2010.[79] Denmark has also seen minimal entry of synthetic opioids into its illicit drug market,81 although fentanyls were found in 10 toxicological autopsies that were carried out after fatal intoxications in Copenhagen, Odense, and Aarhus in 2017.[80]

It is these northern European countries that Jonathan Caulkins and colleagues use to illustrate the "diverse" and "idiosyncratic" responses different nations' drug markets had to the heroin supply shock caused by the Taliban's earlier ban on Afghan opium cultivation from 2001-2002. They report a switch to fentanyl in Estonia and to buprenorphine in Finland, and a return to heroin in Norway.[81]

A FADING PROBLEM, BUT WITH NEW DANGERS

Absent a new escalation, we might expect the opioid problem to fade in Europe due to the aging out of the cohort that was most affected by it. Recent years have seen declines across Europe in opioid-related deaths (especially among younger people),[82] in injecting drug use, and in

the share of treatment entrants that reports an opioid as its main substance.[83] In 2021, a team from the EMCDDA described the opioid situation in Europe as follows: "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."[84] More recent reports, however, suggest a more worrying possibility. By 2023, most European countries had reported the presence of the highly potent synthetic opioid class of nitazenes in their illicit drug supply.[85] If a new cohort of users becomes involved with such powerful substances, then deaths could rise rapidly.

European responses to illicit opioids

European countries have taken a number of steps to reduce problems associated with opioids. These include reducing supply, surveilling synthetic opioids, treating users, reducing harms, and decriminalizing possession.

SUPPLY REDUCTION

As signatories to the international drug conventions, all European countries are committed to reducing the trafficking of narcotic and psychotropic substances for non-medical purposes. The EU has also taken action via its own laws and institutions directed at reducing illicit drug supply. This is a major focus of Europol, a law enforcement agency dedicated to supporting EU member states' coordination in addressing international security threats, including drug trafficking.[86] Europol has reported some notable successes in recent years, including the 2020 takedown of the EncroChat encrypted communication network. This network was used by organized crime groups to coordinate the trafficking of drugs, guns, and people. Europol reports that its closure led to more than 6,000 arrests, the confiscation of over 900 million euros, and the seizure of more than 270 tons of drugs.[87] Whether this had any long-term effect on the size or shape of Europe's illicit drug market is not known.[88] This conforms to the general lack of detailed knowledge on the effects of efforts to reduce drug supply through law enforcement.[89] For example, a Dutch evaluation of the effects of decades of efforts to restrict the activities of drug traffickers in the Netherlands found little evidence that such efforts had reduced the scale of the illicit drug supply, with successes being described as "temporary at best."[90] Of course, we do not know how large the illicit drug supply would have become in the Netherlands in the absence of these efforts.

Repeated attempts have been made to restrict the supply of synthetic opioids in Europe by placing these opioids on national and international lists of proscribed substances. A recent example is the scheduling of such substances for control under the U.N. drug conventions at the March 2024 meeting of the Commission on Narcotic Drugs, which saw recommendations for control by the World Health Organization (WHO) and International Narcotics Control Board unanimously accepted.[91]

Speakers at that meeting also mentioned traffickers' ingenuity in evading such bans by producing new substances that offer similar effects. To get ahead in this game of "Whack-a-mole," of trying to ban each newly emerging substance by its specific molecular structure, several European countries have either introduced generic bans on whole classes of substances, blanket bans on all new psychoactive substances, or—as in the case of the U.K.—both. These were primarily targeted at the open sale of stimulant cathinones and synthetic cannabinoid receptor agonists rather than synthetic opioids.

In 2010, Poland and Ireland became the first countries to introduce blanket bans. Poland banned all drugs that could be considered substitutes for controlled narcotics and psychotropic substances.[92] Following what has been

described as a "moral panic," Ireland banned all substances that affected the central nervous system, with exceptions for food, medicines, and already controlled drugs.[93] The U.K. followed the Irish model in 2016.[94] In each case, these bans dramatically reduced the presence of shops selling these substances.[95] Yet the effect on public health has been less clear. In Ireland, a decline in use disorders related to the new substances was reported.[96] In the UK, it was predicted that the Psychoactive Substances Act of 2016 would concentrate harms on disadvantaged groups, such as people in prison and those experiencing homelessness.[97] This is what appears to have happened.[98] Deaths related to such substances were not reduced overall in the U.K. but did fall among younger people and in the most affluent areas.[99] A wider analysis of legal responses to such substances in 10 European countries suggests that they have had little effect on the substances' use or harms.[100] This seems to contrast with the findings of the review by Caulkins and colleagues that showed that scheduling substances for control does tend to reduce harms, but that review also showed the common occurrence of displacement to other substances.[101]

In other work, Caulkins has suggested that there are diminishing returns to investment in law enforcement but that it might be more effective in the early stages of the spread of a new substance.[102] This means that targeting the importers and distributors of new synthetic opioids might be more effective in limiting harms than repeated interventions in markets for more established drugs, such as heroin and cocaine.

OPIOID SURVEILLANCE

One of the problems European countries face in responding to the threat of synthetic opioids is that so little is known about their availability and the use of these substances. Sources of relevant data can include seizures, user reports, treatment demand, toxicological autopsies, and wastewater analysis, and triangulation between these methods can improve their reliability.[103] However, all of these data are limited by the difficulty in detecting novel substances, which only need to be present in tiny quantities to have dramatic effects. For example, a 2018 Croatian study was able to detect a variety of widely used opioids (including morphine, methadone, and tramadol) in waste and river water, but levels of fentanyl were below the method quantification limit.[104] This may be because there was no use of fentanyl or that there was use, but at concentrations too small to detect. Toxicological autopsies that detect novel synthetic opioids typically find them at very low concentrations, and many widely used screening tools would not detect them at all.[105]

The EU set up the European Early Warning System (EWS) on new psychoactive substances in 1997. This is intended to be a fast-track mechanism to place non-controlled substances that pose a risk to health under control at the EU level. It collates data provided by national early warning systems. It reports dates on the seizures of substances that are relatively new to the European market. For example, the EWS reported that European seizures of fentanyl derivatives peaked at 11.4 kg in 2017.[106] In 2020, the EWS sounded the alarm on isotonitazene, reporting its presence in Belgium, Estonia, Germany, Latvia, Sweden, and the U.K.[107]

The surveillance of emerging trends in drug supply and use has an important role to play in informing responses to synthetic opioids. The sharing of such information can help countries across Europe prepare for novel synthetic opioids. Even imperfect and incomplete knowledge can be useful. But knowing what is on the market is not enough to prevent harms related to these substances. Other actions must be taken.

TREATMENT

In response to problems with heroin, European countries provide various forms of treatment. Since at least 1967, this has included opioid agonist treatment. By 2022, at least 27 European countries provided it.[108]

As an example of the effect OAT can have in reducing deaths, Degenhardt and colleagues estimated that if OAT coverage were scaled up to 40% among people who inject drugs in the community and in prison, and the average duration of OAT were increased to two years, this would reduce deaths by 10.7% in Kyiv, Ukraine.[109] Such changes would have different effects in different countries. Several European countries already exceed the WHO recommended coverage threshold of 40% by significant margins. In France, Greece, Luxembourg, Malta, Norway, and Spain, coverage of OAT is estimated to be at least 80%.[110] In many other countries, large numbers of people use opioids who are not in OAT. The relatively small proportion of people who use opioids who are in OAT in the United States may be one of the reasons why the country's death rate is so high. Getting people who need OAT to begin treatment should be an effective way to reduce the risk of death from potent synthetic opioids.[111]

A particularly European form of OAT is the prescription of heroin to people who have become dependent on it through illicit use. The contemporary form of "new" heroin-assisted treatment (HAT) is different from the old British system of general physicians prescribing heroin to their patients.[112] This mostly ended in the 1960s after substantial overprescribing by a few doctors, although remnants remain in ongoing prescriptions for a small number of patients.[113] The modern version of HAT was pioneered in Switzerland in 1994 by the late Ambros Uchtenhagen and colleagues.[114] It involves patients visiting a clinic two or three times a day to use prescribed diacetylmorphine under medical supervision. It is generally targeted at people for whom other forms of OAT (e.g., methadone and buprenorphine) have not worked. HAT has spread to at least five other European countries, including Denmark, Germany, Luxembourg, the Netherlands, and the U.K.[115] Repeated clinical trials have shown it to be effective in reducing the use of street heroin.[116] For example, a randomized trial of HAT in three sites in England compared the effects of prescribing oral methadone or injectable heroin on patients' achievement of providing 50% or more negative specimens for street heroin in weekly urine tests. The proportion of the HAT treatment group that achieved this outcome was 72%, compared with 27% of those who received oral methadone.[117]

Given that many of the deaths related to synthetic opioids are from contaminated supplies of heroin, HAT holds particular promise in reducing such deaths in the population group that is most vulnerable to them. But it should be noted that HAT accounts for a very small proportion of people on OAT in Europe, and it is more expensive to provide (due to the need for more frequent use, close supervision of use, and the higher cost of diamorphine compared with methadone and buprenorphine). We should also note that the successes reported in using OAT to reduce harms related to heroin use may not be directly transferable to people who use synthetic opioids. Existing OAT services may struggle to meet the needs of people who have become dependent on such potent substances.

Other treatment modalities are also used in Europe. The EMCDDA reports some use of naltrexone to block the effects of opiates among people in treatment for opioid use disorders but also notes that more research is needed on naltrexone's effectiveness.[118] Residential treatment centers have also been set up in the U.K. and every country in the EU.[119] However, such services' effectiveness in reducing opioid deaths has been questioned, with a British study finding higher death rates for people who are in treatment for opioid use disorders if they are in abstinence-based residential treatment than if they are in OAT.[120] A Norwegian study showed high rates of death upon leaving drug-free treatment.[121]

If potent synthetic opioids gain a larger foothold in European markets, then treatment services will need to substantially grow and adapt their services. Treatment models that have previously worked for people who use heroin may not be as effective for users of potent synthetic opioids. We already know there is a gap in treatment

for people who use stimulants—for which there are no well-evaluated substitute medications. It is likely that synthetic opioids will be used alongside a range of other substances. This will present an enormous challenge to European treatment systems—as it has in the United States. Investment in the research and development of effective services is crucial.

HARM REDUCTION

Harm reduction refers to practices whose purpose is "minimising the harms that drug users might do to themselves or others," even as they continue to use drugs.[122] Such services were originally developed in the context of the HIV/AIDS epidemics among people who were injecting heroin. It is also relevant to the reduction of harms associated with synthetic opioids. Long-standing harm reduction interventions that reduce the transmission of HIV include OAT and the provision of sterile needles and syringes.[123] More recent developments in harm reduction include the provision of naloxone, the establishment of overdose prevention centers (OPCs, also known as drug consumption rooms), and drug-checking services. These are more commonly provided in the wealthier countries of Western Europe. Exceptions to this pattern include Lithuania and Estonia, which provide take-home naloxone, and the Netherlands and Belgium, which do not.[124] Some countries are also experimenting with wearable technologies that might save the lives of people who are vulnerable to overdose. Such technologies are in the early stages of development but include devices that monitor the wearer's respiration or oxygen level and automatically call for assistance, or administer naloxone, if either drops too low.[125]

Naloxone is a medicine that reverses opioid overdose. David McDonald and John Strang have used the Bradford Hill criteria to assess the causal effect of naloxone and have shown it does save lives.[126] A study suggesting naloxone is associated with an increase in deaths in some parts of the United States through the mechanism of "moral hazard"[127] has been countered by a critique of its methods[128] and a systematic review of studies on naloxone, which found no such effect.[129]

Naloxone has few side effects, other than precipitating opiate withdrawal symptoms, and is generally safe for administration with minimal training. Over the past few years, it has gone from being a prescription-only medicine to being more liberally supplied in many countries, including the U.K. The SO-PREP collaboration reports that there is provision of take-home naloxone in Germany and Estonia. But peer-to-peer distribution is not allowed.[130] In Belgium, Finland, and the Netherlands, naloxone is still only available if prescribed by medical staff.[131] An informant to the SO-PREP project reported that take-home naloxone is not considered necessary in the Netherlands, because of the strong coverage of ambulance services, which reach 95% of calls within 15 minutes.[132] Recent responses to clusters of potent opioid poisonings in the U.K. have included the urgent distribution of naloxone, to get it into the hands and homes of as many at-risk users as possible, in line with government guidance.[133]

However, another note of caution is needed here. The evidence on the use of naloxone to reverse overdoses largely stems from its use with people who have used less potent opioids than fentanyls and nitazenes. These substances have a longer half-life, and so repeated doses of naloxone may be required. Naloxone can also have unintended consequences, such as the abrupt onset of withdrawal symptoms, which are unpleasant for the patient and can provoke negative reactions (including anger) for the person who administered the naloxone.

Several European countries have also established overdose prevention centers as part of the effort to reduce drug-related deaths among people who would otherwise be using in public and unsafe spaces. OPCs provide a safe environment in which to use these substances. A recent realist review—a method for summarizing knowledge on complex interventions—found that

they work by triggering mechanisms of safety, trust, and social inclusion.[134] This includes emergency response to overdose by administering oxygen and—if necessary—naloxone. But for this to occur, OPCs have to attract and engage people who may need a wider range of services than just overdose management. OPCs were first developed in Switzerland and the Netherlands in the 1990s, before spreading to other parts of the world, including Australia, Canada, and—finally—the United States. OPCs are now operating in Portugal, Spain, France, Belgium, Luxembourg, the Netherlands, Germany, Greece, and Switzerland.[135] OPCs are also planned to open in Ireland (in Dublin) and the U.K. (in Glasgow). The latter follows the operation of an unsanctioned OPC in the city in 2020/2021.[136]

In the United States, there has been substantial local and political resistance to the establishment of such centers. This has also slowed the establishment of the Irish OPC, and there has also been local controversy around the OPC in Paris. There has been relatively less controversy around establishing OPCs at numerous sites in Switzerland, Germany, and the Netherlands. Local residents in the most badly affected neighborhood in Copenhagen, Denmark, actively campaigned for there to be a formally sanctioned OPC in Vesterbro.[137] Local police have joined the effort to reduce harms by establishing a "non-enforcement zone" around the OPC in which drug possession was effectively decriminalized. This enabled the police to shift from prosecuting people who use drugs to protecting their health.[138]

It is difficult to carry out rigorous research on the effects of OPCs. For example, it is nearly impossible to randomize access to them. The studies that have been done are generally supportive, with some evidence from both Vancouver and Toronto that they produce reductions in drug-related deaths in the neighborhoods where they operate.[139] Similar studies have not been carried out in Europe, although there has been a quasi-experimental study in France that showed reductions in abscesses and emergency department visits along with the reported sharing of injecting equipment from the OPCs in Paris and Strasbourg.[140] The mechanisms by which OPCs can save lives apply even more strongly to potent synthetic opioids, so OPCs may form an important part of European preparations for synthetic opioids in some cities.[141]

Drug-checking services aim to improve the safety of people who use drugs by informing them of the content of the substances they might consume. There are at least 20 drug-checking services in 12 Western European countries.[142] This includes the WEDINOS service in Wales and the services provided by a charity called The Loop in England. WEDINOS is a postal service to which people (from anywhere) can anonymously send in samples of drugs. WEDINOS then posts the results of a sample's chemical analysis on its website.[143] The Loop was originally set up by Professor Fiona Measham to provide drug-checking services at music festivals,[144] and it is now providing drug checking from a site in Bristol once a month.[145] These services have benefitted from the original development of drug-checking services in the Netherlands and Switzerland, where they have been provided since the 1980s and 1990s.[146] However, the proportion of people who use drugs in Europe who have access to local drug-checking services—or who use postal checking services—is still very small.

A 2022 systematic review found evidence that drug-checking services affect the intentions and behaviors of people who use drugs, especially when unexpected contents are found.[147] For example, two-thirds of those who used The Loop's festival drug testing service and were told that the substance was not what they thought they had bought subsequently disposed of the remaining substance.[148] A realist review examined the contexts and mechanisms by which people engage in drug-checking services by focusing on the varying legal contexts, drug markets, service integration, involvement of peers in service provision, accessibility of the service, the testing process used, and the experiences of service users.[149] The review's findings point the

way to engaging more people who use drugs in such services. It is notable that the majority of U.S. drug-checking services included in the 2022 systematic review were using the cheaper and less reliable fentanyl testing strips, whereas most of the European services were using more expensive, more reliable methods involving spectrometry or chromatography.[150]

Under the administration of George W. Bush, U.S. opposition to harm reduction was so severe that federal officials were barred from even uttering the phrase. In the face of the ongoing opioid poisoning crisis, the situation has changed. In March 2024, the United States was the lead sponsor of a resolution on overdose prevention at the U.N. Commission on Narcotic Drugs (CND). It was the first CND resolution to endorse harm reduction explicitly.[151] But it is not just the United States that has changed its position. Sweden used to be Europe's staunchest opponent of the harm reduction approach.[152] Its recent official committee of inquiry into drug deaths went as far as to recommend that the country consider changing the objective of its drug policy from creating a "drug-free society" to "a society with reduced harm from drugs."[153] In neighboring Norway, the combination of harm reduction services with strong social protections and comprehensive health care has been credited with reducing Norway's opioid death rate after the country experienced a spike during the restrictions used to limit the COVID-19 pandemic (in contrast to the United States, where there has been no reduction since the pandemic increase).[154] In Finland, the Expert Group for Preventing Drug-related Deaths has recommended the adoption of several harm reduction measures, including the expansion of OAT, needle and syringe exchanges, the establishment of OPCs, take-home naloxone, wearable technology, drug-checking services, and the decriminalization of drug use.[155] Greece is also adopting harm reduction approaches, including opening a new OPC in Athens. Across Europe, from the Arctic Sea to the Eastern Mediterranean, harm reduction is a central component of national responses to the challenges synthetic opioids present.

European harm reduction services will also face challenges if synthetic opioids comprise a larger part of the drug market. Fentanyl has overwhelmed the capacity of harm reduction services in British Columbia to reduce deaths, despite earlier successes in reducing heroin-related harms.[156] New approaches, including the "safer supply" of opioids, are being tested in this context but are not yet proven to reduce the death rate.[157] New and expanded harm reduction services will need to be developed and will have to form part of a comprehensive approach to preventing and responding to harms related to synthetic opioids.

DECRIMINALIZATION OF DRUG USE AND POSSESSION

Portugal is the most well-known example of a European country that has included decriminalization in its response to drug problems, but it is not the only one to have done so. Portugal decriminalized possession of less than a 10-day supply of drugs in 2001. This was part of a comprehensive approach to the social inclusion of people who use drugs and entailed simultaneous expansions in drug treatment (mostly OAT), social housing, employment support, and a guaranteed minimum income.[158] This was followed by dramatic reductions in drug-related HIV infections and deaths. Deaths have since risen again, partly attributed to cuts in social support and treatment services along with the aging of the cohort of people who use heroin in Portugal (who are not being replaced by younger users).

A peculiar feature of the Portuguese model is that it uses administrative—rather than criminal—law to direct people who are found in possession of drugs to appear before "commissions for the dissuasion of addiction," which assess whether the person is dependent on drugs. If so, the commissions will not sanction the person but instead encourage (not force) them to access treatment. If they do not seek treatment, then fines and other minor punishments (not imprisonment) can be used for repeat offenders. The

majority of cases end in suspension of proceedings, with no penalty for the user. That police have retained the power to interfere in the lives of people who use drugs has led the International Network of People Who Use Drugs to argue that Portugal's model leaves them vulnerable to violence and harassment, and therefore Portugal should legalize the supply of drugs.[159]

Other European countries that have decriminalized the possession of small quantities of all drugs include Italy, Spain, the Czech Republic, Latvia, Estonia, Croatia, Slovenia, and Germany. In these countries, police retain powers to seize illicit substances, but there are lower rates of homelessness than in those parts of North America that have decriminalized drug possession. These factors may partly explain why the European model of decriminalization has resulted in less open concern about public drug use than the American model.

In all of these countries, decriminalization has not been associated with an increase in use or harms.[160] When the Czech Republic tightened its drug laws in 1999, this proved to increase the costs and harms of criminalization without reducing drug use, and the law was subsequently re-relaxed.[161] The apparent success of decriminalization in Europe has led U.N. agencies and the Office of the High Commissioner on Human Rights to recommend that other countries consider adopting this approach.[162]

The causal mechanisms by which decriminalization of possession might limit harms from synthetic opioids are neither direct nor obvious. The simple removal of criminal penalties for the possession of these substances is unlikely to have major effects on use patterns. Rather, it is argued, decriminalization results in indirect benefits by reducing the stigmatization of people who use drugs and therefore reducing barriers to people seeking treatment. It also enables police to focus their efforts on other crimes and on organized drug trafficking, as was seen in the early years of Portuguese decriminalization, where the number of seizures fell but the total weight of drugs seized increased.[163] But as the Portuguese example shows, decriminalization should form part of a comprehensive package of measures to address drug-related harms, rather than being seen as a solution in and of itself to the risks of increases in the supply of synthetic opioids.

Future possibilities and responses

So far, this paper has relied on the unavoidably limited approach of looking at past experiences and hoping we can extrapolate from them to the future. This risks minimizing the possibility of future developments that might overwhelm European countries' relative success in limiting the harms of synthetic opioids.

It is possible, for example, that as the North American market for potent synthetic opioids becomes saturated, and large numbers of consumers die, traffickers will turn their attention to Europe. There is, in fact, historical precedent for this in the cocaine market. The rising prevalence of use gradually diminished in the 1990s and 2000s, perhaps in response to federal restrictions on precursors and changing patterns of demand.[164] Cocaine traffickers responded by opening up new routes to and markets in Europe, where use continued to increase, especially in Spain and the United Kingdom. This also triggered a greater presence of crack cocaine and its related problems. For years, warnings were made that Europe would face similar problems with crack as the United States had in the 1980s, but this did not occur. But then—in some places, in some European countries—it did. For example, crack is now one of the major drugs of concern in England, and the injection of powder cocaine is increasingly observed in Scotland.[165]

This shows the potential for rapid and unpredictable changes in drug markets. Large incentives exist for drug traffickers to switch to providing synthetic opioids. These include the ease of

production and transport and the enormous profit margins involved along with the restrictions on the opium supply from Afghanistan. Just because synthetic opioids' presence and harms have been limited to a relatively small number of cases in Western Europe does not preclude larger outbreaks or epidemics of synthetic opioid supply, use, and harms.

In response to these risks, European countries might need to build and sharpen their range of responses. Law enforcement may wish to adopt a model of harm reduction policing.[166] This would involve a careful assessment of which drug supply operations are likely to cause the most harm and then targeting them for enforcement activity rather than seeking to maximize the number of dealers arrested or the weight of drugs seized. It would also involve the police working closely with drug treatment and harm reduction agencies to reduce barriers to entering treatment and providing services—such as overdose prevention centers—that may save lives. Currently, policing and restrictive laws often limit the provision of such services and so reduce their capacity to respond to rapidly emerging threats.[167] Treatment services will need to adapt to the needs of service users and patients who may no longer fit the model of middle-aged heroin users, who have been their main client group for the past decade.

At the policy level, European states will need to adjust their assumptions and preferences, as has been seen in the U.S. response to the opioid poisoning crisis. Remarkably, the U.S. delegation to the U.N. Commission on Narcotic Drugs in March 2024 reversed its previous opposition to the inclusion of harm reduction in the international repertoire of responses to drug problems.[168] European states supported this U.S. volte-face but may need to go further in speeding up their response to synthetic opioids, to create a more responsive, coordinated, and comprehensive approach.

For the United States, there may be lessons to be learned from the relative success of a more comprehensive approach to problematic drug use that balances law enforcement with both treatment and harm reduction. Some harm reduction practices, including the provision of overdose prevention centers, have already spread westward across the Atlantic. Heroin/diamorphine is not licensed for medical use in the United States, so it may be necessary to offer injectable hydromorphone instead. This has been shown to have equivalent results to those of HAT in at least one Canadian study.[169]

Internal U.S. politics, and the United States' closer adherence to what Esping-Andersen called the "liberal" form of capitalism, make it harder to implement European ideas on the wider benefits of strong social protection.[170] This is compounded by the deep scars that racism and slavery have left on the American psyche.[171] In drug policy, this reality expresses itself in the differential delivery of drug treatment, with Black people being more frequently exposed to forms of treatment that are experienced as controlling and demeaning rather than empowering.[172] Short-term responses to synthetic opioids need to be accompanied by longer-term efforts to change the social conditions that are conducive to problematic drug use.[173]

Conclusion

It is highly possible that we are "missing the signs" of a third wave of opioids in Europe.[174] Potent synthetic opioids can be hard to detect, as so little is required to kill, and they are often used alongside other substances that are more commonly included in toxicological analysis. There are warning signs of impending trouble related to potent synthetic opioids based on the hold they have taken of illicit markets in Estonia and Sweden, and from recent clusters of overdoses in Ireland and the United Kingdom. Nevertheless, little evidence exists to suggest that Europe already has a synthetic opioid problem on anything like the scale we have seen in North America.

The explanation of why Europe has thus far been spared a full-scale crisis of potent synthetic opioids is complex and has not yet been rigorously analyzed. The data presented in this paper, combined with previous research on the social determinants of drug-related harms, give us some clues about where to look for that explanation. It is likely that states with more supportive welfare systems and more comprehensive coverage of publicly funded health care are less vulnerable to the kinds of substance use disorders that often accompany poverty and homelessness. Health care and drug regulation systems that place tighter controls on prescription and advertising are less likely to lead to the widespread over-prescription of opioid analgesics. Cultures in which OAT and other harm reduction measures are broadly accepted as valid public health approaches, rather than criticized as "enabling" drug use, are more likely to adopt comprehensive approaches to prevent and reduce drug-related harms, including decriminalization.

In particular, this paper argues that some specific features of the European response to the first wave of heroin use—and especially the second wave of OAT—might have reduced the size of the vulnerable population and the demand for potent synthetic opioids. This might have made it less likely that a third wave will sweep across the continent.

The concerns that have been triggered by what is occurring in North America, and the warning signs from northern Europe, are deepened by the possibility that synthetic opioids will fill the gap left by the reduced production of opium in Afghanistan. Much will depend on how the illicit opioid market responds to this shock, and how big and long-lasting it ultimately turns out to be. This paper's argument is not that there is no need for alarm in Europe. Rather, it is that the prevalence of and deaths from potent synthetic opioids are likely to remain substantially lower in Europe than in North America due to a combination of lower economic inequality, stronger social protections, and a more comprehensive provision of health care, drug treatment, and harm reduction services.

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