

Is Europe also facing an opioid crisis?—A survey of European Pain Federation chapters

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Abstract

Background: There is considerable public interest in whether Europe is facing an opioid crisis comparable to the one in the United States and the contribution of opioid prescriptions for pain to a potential opioid crisis.

Methods: A task force of the European Pain Federation (EFIC) conducted a survey with its national chapter representatives on trends of opioid prescriptions and of drug-related emergency departments and substance use disorder treatment admissions and of deaths as proxies of opioid-related harms over the last 20 years.

Results: Data from 25 European countries were received. In most European countries opioid prescriptions increased from 2004 to 2016. The levels of opioid consumption and their increase differed between countries. Some Eastern European countries still

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have a low opioid consumption. Opioids are mainly prescribed for acute pain and chronic noncancer pain in some Western and Northern European countries. There was a parallel increase in opioid prescriptions and some proxies of opioid-related harms in France, Finland and the Netherlands, but not in Germany, Spain and Norway. In United Kingdom, opioid overdose deaths, but not opioid prescriptions increased between 2016 and 2018. There are no robust data available on whether prescribed opioids for pain patients contributed to opioid-related harms.

Conclusions: There are marked differences between European countries in trends of opioid prescribing and of proxies for opioid-related harms. Europe as a whole is not facing an opioid crisis. Discussions on the potential harms of opioids should not obstruct their prescription for cancer pain and palliative care.

Significance: Europe as a whole is not facing an opioid crisis. Some Eastern European countries have limited access to opioid medicines. Discussions on the potential harms of opioid medicines for noncancer pain should not obstruct opioid therapy for cancer therapy and palliative care.

1 | INTRODUCTION

Over the past 20 years, increasing opioid prescribing for chronic pain has been reported in the United States and Canada, coinciding with an increase in illicit use of prescribed opioids and opioid-related morbidity and mortality, the so-called ‘opioid crisis’. This crisis has been described as a ‘triple wave epidemic’ of deaths, arising from overlapping increases in mortality attributable to three classes of opioids: prescription opioids, heroin and novel synthetic illicit opioids (Ciccarone, 2019; deWeerd, 2019).

In 2019, the Organisation for Economic Co-operation and Development (OECD) published a report ‘Addressing Problematic Opioid Use in OECD Countries’. The OECD report did not include all European countries. The report stated, that other OECD countries such as Australia and some European countries, have also begun to experience raising trends of opioid medicines consumption and overdose deaths (Organisation for Economic Co-operation & Development OECD, 2019). The report prompted a discussion about whether Europe would also be facing an opioid epidemic (Alho et al., 2020; Verhamme & Bohnen, 2019).

A recent review considering on whether Europe is facing an opioid crisis comparable to the US analysed data from four European countries (France, Germany, Netherlands and United Kingdom) (van Amsterdam et al., 2020) and concluded there is no evidence of a current or emerging opioid crisis in these European countries although high rates of opioid-related harms were reported in Scotland. A survey on the availability of cannabis-based medicines reported a great variability in the availability and prescription of cannabis-based medicines for pain in Europe (Krcovski-Skvarc et al., 2018). Therefore, data from all European countries are

warranted to assess if there is has been an increase in opioid prescriptions all over Europe.

In addition, an increase in opioid prescribing might represent satisfied unmet needs, e.g. in cancer pain management and palliative care. The OECD report did not provide data on the indications (e.g. acute pain, chronic noncancer pain, cancer pain) of opioid prescribing. Therefore, we need to know, for which indications opioids are prescribed in European countries.

Opioid overprescribing is considered one of the most important root causes of the first wave of the opioid crisis in North America (Ciccarone, 2019; deWeerd, 2019). It is estimated that 8%-12% of patients in the United States who are prescribed opioids for acute pain management will develop an opioid use disorder (National Institute of Drug Abuse, 2020). Of those who currently use illicit heroin, 80% have initially used prescription opioid analgesics for non-medical purposes (National Institute of Drug Abuse, 2020). In addition, an increase in hospital admissions for opioids overdose, either by people prescribed these medicines for medical reasons or by people using prescription opioids illegally has been reported in the United States (deWeerd, 2019). To determine the potential role of opioid prescribing for opioid-related harms, we need to know the proportion of patients with chronic pain with prescribed opioids in opioid-related morbidity and mortality.

Because of the considerable public interest in the question, whether Europe is facing an opioid crisis, the European Pain Federation EFIC conducted a survey. In the survey, experts from European countries were asked if there is an opioid crisis in their country and—if yes—prescribing of opioids for pain contributed to the crisis. In addition, a narrative review was performed in order to better address this issue.

2 | METHODS

The European Pain Federation (EFIC) is a multidisciplinary professional organization in the field of pain research and medicine, consisting of the 37 chapters of the International Association for the Study of Pain (IASP). The Federation's constituent chapters consist of Pain Societies from 37 predominantly European countries, each represented by a councillor. The Executive Board of EFIC formed a task force in May 2020 to explore a potential opioid crisis in European countries. The task force members were recruited from EFIC's task force to update its position paper on appropriate use of opioids for chronic noncancer pain (CNCP; for details see Häuser et al., 2021). The task force developed a questionnaire containing the questions outlined below.

Has there been a quantifiable increase in opioid prescriptions over the past 20 years (2000–2020)?

For which indications (e.g. acute pain therapy, cancer and palliative care, CNCP) were opioids prescribed?

How many people among the general population are on long-term prescribed opioid therapy for chronic noncancer pain (CNCP)?

Has there been an increase in the number of emergency visits and of deaths associated with opioids over the past 20 years (2000–2020)?

Has there been an increase in the number of deaths associated with opioids (all, including legally prescribed and illegally obtained, and both pharmaceutical and 'street drugs') over the past 20 years (2000–2020)?

Has there been an increase in people (both with and without chronic pain) misusing prescription opioids referred to addiction care services over the past 20 years (2000–2020)?

The Federation office in Brussels sent out the questionnaire to each of its 37 councillors on 6 June 2020. In addition, they received a link to the questionnaire by Survey Monkey. The councillors could reply by email and/or the link within 3 weeks. Based on our experiences with a survey on cannabis-based medicines we did not send out a second request and did not contact a vice councillor in case of non-response. The members of the task force asked a pain specialist from some countries whom they knew personally to complete the survey, too. Councillors and other contacted pain specialists were asked to provide references (publications in peer reviewed journals and/or national databases) for their answers. In case of discrepancy of answers obtained by councillors and pain specialists of the same country, we preferred answers based on publications in peer-reviewed journals and/or national databases over personal impressions.

Data from the European Monitoring Centre for Drugs and Drug Addiction are reported in a separate paper (Seyler et al., 2021). In the Section 3, we report data which are not included in the European Drug Report 2019 (European Monitoring Centre for Drugs & Drug Addiction, 2019).

We assumed a relevant increase/decrease in the outcome if there was a >10% change per time period analysed.

We will use the following terms in the Section 3:

Drug consumption can be expressed in cost, number of units, number of prescriptions or by the physical quantity of drugs. However, these variables can vary between regions and countries over time. This limits comparisons of drug consumption at an international level. To address this, a technical unit of measurement, the defined daily dose (DDD) was created. DDD is defined as the assumed average maintenance dose per day for a drug used for its main indication in adults. DDDs are only assigned for medicines given an Anatomical Therapeutic Chemical (ATC) Classification System codes. The DDDs are allocated to drugs by the WHO Collaborating Centre in Oslo (World Health Organisation, no year).

Definitions of long-term opioid therapy vary widely. Most studies define long term as ≥ 90 days of opioid use, but the threshold ranges from 1 week to 1 year. Definitions also vary in terms of frequency of use (consistent daily dosing vs. intermittent use) and if use is self-reported or based on dispensing records. Other definitions consider the dose as well as duration (Abdel Shaheed et al., 2019).

3 | RESULTS

Replies were received from 18 councillors (Bosnia-Herzegovina, Croatia, Denmark, Estonia, Hungary, Italy, Kosovo, Latvia, Portugal, Republic of Ireland, Russia, Serbia, Slovenia, Slovakia, Spain, Sweden, Switzerland and United Kingdom) and from eight collaborators (Belgium, Czech Republic, Finland, France, Moldova, Norway, Slovenia and Ukraine) resulting in data from 25 European countries were received.

3.1 | Trends in opioid prescriptions

Bosetti et al., (2019) analysed data provided by International Narcotics Control Boards (INCB) on the consumption of prescribed fentanyl, oxycodone, morphine, hydromorphone and pethidine from 1990 to 2016 in 22 selected European countries. These data provide a comparable overview on the trends of prescriptions of strong opioids in Europe within one time period from 1990 to 2016. Therefore, we do not report on data provided by the councillors and collaborators for the period between 2000 and 2020, because these data used different opioids and time periods.

In most European countries except Estonia, Finland, Luxembourg and Ukraine, consumption of strong opioids increased to a great extent between 2004–2006 and 2014–2016; it rose from 6,477 to 8,967 s-DDD (Consumption in defined

daily doses for statistical purposes; +38.4%) in the EU. The increase in opioid use was continuous since 2004 and it slowed down after the mid- to late 2000s in most European countries (see Table 1; Bosetti et al., 2019).

Data from the 2019 report by the International Narcotics Control Board show that the United States is the number one consumer of controlled substances, with 35, 140 DDDs of strong opioids per million inhabitants per day. In second place is Germany with 27, 419, followed by Canada with 22, 402. The Netherlands is in 7th, Denmark is in 8th, Norway in 17th and Sweden in 21th place in the world (International Narcotics Control Board, 2020).

Twelve countries in our survey provided data on opioid consumption since 2016. Four countries reported an increase: Estonia from 2014 to 2019; Portugal from 2009 to 2019; Russia from 2014 to 2019 and Spain from 2017 to 2019. Six countries reported a stable opioid consumption: Lithuania and Slovakia from 2016 to 2019; Slovenia between 2017 and 2018; Belgium and Ireland between 2017 and 2019 and United Kingdom from 2016 to 2017. Two countries reported a decrease: Denmark from 2016 to 2019 and Finland from 2009 to 2019 (see electronic Supplementary Material 1).

3.2 | Indications for opioid therapy

Data from 10 countries were found. Seventy-five per cent to 94% of opioids were prescribed for acute pain and chronic noncancer pain and 6% to 25% were prescribed for cancer pain. These are the data in detail for the percentages of opioid prescriptions for acute pain and /or CNCP (years of assessment in brackets): Belgium (2017): 92%; Denmark (2017): 92%; Estonia (2011–2017): 86%; France (2017): 78%; Germany (2010): 77%; Italy (2013): 82%; Netherlands (2017): 75%; Norway (2010): Ca. 90%; Switzerland (2006–2010): 94%; United Kingdom (2000–2010): 84% (see electronic Supplementary Material 2).

3.3 | Long-term opioid therapy

Data from six countries were found. Different definitions for long-term opioid therapy (LTOT) and reference population (all patients with chronic pain vs. patient with chronic noncancer pain) were used. The percentage of people with LTOT in the general population ranged from 0.2% to 3.5%. These are the data in detail (years of assessment in brackets): Belgium (2017): 3%; Denmark (2013, 2017): 3%, 2.7%; Germany (2012, 2014): 1.3%, 0.8%; Netherlands (2017): Ca. 2.5% to 3.5%; Spain (2015–2018): 0.2%; United Kingdom (2015–2018): 3% (see electronic Supplementary Material 3).

TABLE 1 Total opioid consumption in European countries, the European Union and the United States in 2004–2006 and 2014–2016, and corresponding percent change (Bosetti et al., 2019)

	s-DDD per 1,000,000 inhabitants/day		
	2004–06	2014–16	% change 2004-06/2014-16 ^a
Albania	58	268	359.8
Andorra	1,281	3,217	151.1
Austria	9,361	20,180	115.6
Belarus	36	337	839.9
Belgium	12,450	14,892	19.6
Bosnia and Herzegovina	27	718	2,547.1
Bulgaria	354	532	50.4
Croatia	1,396	1,815	30.0
Cyprus	429	1,885	339.8
Czech Republic	1,654	4,614	179.0
Denmark	9,915	12,166	22.7
Estonia	813	803	−1.3
Finland	6,458	5,591	−13.4
France	4,815	6,877	42.8
Germany	11,168	21,346	91.1
Gibraltar	2,403	14,698	511.6
Greece	2,184	7,892	261.4
Hungary	2,091	4,281	104.7
Iceland	4,576	8,162	78.3
Ireland	3,248	5,389	65.9
Italy	1,407	4,359	209.8
Latvia	675	1,652	144.7
Lithuania	686	1,360	98.2
Luxembourg	4,819	4,584	−4.9
Malta	317	492	55.5
Montenegro	0	1,706	—
Netherlands	4,635	12,198	163.2
Norway	5,469	9,658	76.6
Poland	1,357	1,840	35.6
Portugal	1,701	3,596	111.4
Romania	39	692	1662.3
Russian Federation	53	135	154.9
Serbia	776	1,312	69.1
Slovakia	1,439	5,306	268.7
Slovenia	2,842	5,701	100.6
Spain	5,022	10,789	114.8
Sweden	5,408	9,084	68.0
Switzerland	5,899	11,850	100.9

(Continues)

TABLE 1 (Continued)

	s-DDD per 1,000,000 inhabitants/day		
	2004–06	2014–16	% change 2004-06/2014-16 ^a
Ukraine	93	66	–29.7
United Kingdom	3,021	8,214	171.9
European Union	6,477	8,967	38.4
United States of America	14,598	16,491	13.0

Abbreviation: s-DDD, defined daily doses for statistical purposes.

^aPercent change was calculated on the real s-DDD values before rounding them for presentation.

3.4 | Opioid-related emergency room visits due to intoxications with opioids

We found data of five European countries of which all reported an increase: Denmark from 2017 to 2018: 7.8%; Finland from 2009 to 2018: 318%; France from 2000 to 2017: 167%; Netherlands (two studies): 2013 to 2017: 70.2% and 2008 to 2017: 320%; United Kingdom from 2018 to 2019: 6%. The increase in Denmark and United Kingdom did not meet the predefined criteria for a substantial increase. The French study included only prescription opioids. In England and Wales, 53% of hospital admissions were due to prescription opioids. The remaining studies did not report on the percentage of prescription opioids. None of the studies reported the percentage of fatal intoxications. No study provided data on the percentage of people with chronic pain and prescribed opioids with hospital admissions (see electronic Supplementary Material 4).

3.5 | Opioid-related deaths

We found data on opioid-related deaths for 13 countries. Austria (2003 to 2016), Estonia (2012 to 2017), Ireland (2006 to 2017), Serbia (2012 to 2015) reported a decrease. Croatia (2015 to 2017) and Germany (2017 to 2019) reported a stable number of opioid-related deaths. Finland (2000 to 2018), France (2000 to 2015), Netherlands (2000 to 2014), Spain (2008 to 2017) and United Kingdom (2017 to 2018) reported an increase. Norway reported a decline in heroin-associated deaths, a variable/stable tendency for methadone, but an increase for other opioids from 2008 to 2018. No statements were possible based on the Slovenian data.

The opioids which were most frequently detected on post-mortem evaluation differed by country (e.g. Estonia: fentanyl; Finland: buprenorphine and oxycodone; Scotland: heroin and methadone). There were large differences in opioid-related deaths per million inhabitants ranging from 1.5 in Finland, 3.2

in France, up to 12 in the Netherlands and up to 234 in United Kingdom. We did not find data on the percentage of people with chronic pain and prescribed opioids in the numbers of opioid-related deaths (see electronic Supplementary Material 5).

3.6 | People referred to substance abuse disorder care services due to opioid use

Here, we report data which were not included in the European Drug Report 2019 (European Monitoring Centre for Drugs & Drug Addiction, 2019). We found data for six countries (see electronic Supplementary Material 6).

In England, the proportion of people starting treatment who reported heroin as their primary drug has decreased over the past decade, from 53% in 2009 to 45% in 2018. This decline was even more prominent among those who had never been treated before. Among people in continuous treatment, the proportion reporting primary heroin use has remained stable, between 75% and 78% over the past decade.

In Finland, there was an increase in problematic opioid use from 32% to 74% from 2000 to 2018.

In France, there was an increase from 2.8% to 4.6% of patients with prescription opioids from 2006 to 2017.

In Germany, the number of people with opioid use disorder in contact with the German drug help system has remained constant for the last 20 years.

In the Netherlands, the number of patients in dependence care for opioid use disorders other than heroin increased from 3.1 to 5.6 per 100,000 inhabitants from 2008 to 2017.

We did not find data on the percentage of people with chronic pain and prescribed opioids in the numbers of people referred to substance use disorder care services.

4 | DISCUSSION

4.1 | Summary of main results

We found a great variety in the quantity and quality of data available on prescription opioid use and a great imbalance of prescribed opioid consumption in 25 European countries. We found a parallel increase in opioid prescriptions and some proxies of opioid-related harms in France, Finland and the Netherlands but not in Germany, Norway and Spain. In the United Kingdom, opioid overdose deaths, but not opioid prescriptions increased between 2016 and 2018. There are no robust data to confirm or refuse the assumption that the prescription of opioids for medical reasons has contributed to opioid-related morbidity and mortality in Europe.

4.2 | Trends of opioid consumption in Europe

Opioid prescriptions have increased in nearly all European countries from 2006 to 2016. However, starting and end-points of s-DDD are very different. s-DDD per 1,000,000 inhabitants/day was 215-fold higher in Belgium than in Albania in 2004 to 2006 and 56-fold higher in 2014 to 2016.

Data available for the years 2017 to 2019 give a heterogeneous picture. A decrease in prescriptions has been described in some countries with rather high consumption in the past such as Denmark and Finland. Opioid consumption has increased in some countries with a previous low consumption such as Estonia, Portugal and Russia and well as in some countries with a previous high consumption such as Spain. It is important to note that there are regional inequalities of opioid prescribing, e.g. in different regions in Italy (Musazzi et al., 2018) and the United Kingdom (Curtis et al., 2019).

ATOME (Access To Opioid Medication in Europe), a project funded under the European Union's 7th Framework Programme and conducted between 2009 and 2014, found that in the 11 European countries with evidence of very low per capita morphine medicines consumption (Estonia, Latvia, Lithuania, Poland, Slovakia, Hungary, Slovenia, Serbia, Bulgaria, Greece and Cyprus) strict regulations and inappropriate policies had a negative impact on adequate access to opioid medicines (Radbruch et al., 2014). INCB data demonstrate an increase in opioid prescriptions in all of these countries (Bosetti et al., 2019). However, ATOME did not include some European countries with the lowest opioid medicines consumption. The comments from two collaborators highlight disparities in access to opioid medicines in Europe:

‘The opioid crisis in Moldova is rather due by “under-prescription” of opioid analgesics for cancer pain relief and noncancer (chronic) pain relief’ (Adrian Belei, personal communication).

‘Some opioids are registered in Kosovo which can be used with a doctor's prescription. This list was approved in January 2020, and in February it started to be implemented, but due to the state of pandemics and the dysfunctional health information system, we do not have accurate data on the description and use of all of them’. (Adem J. Bytyqi, pers. comm.).

4.3 | Indications for opioid therapy

The data available indicate that opioid analgesics are mainly prescribed for acute pain and CNCP in Western and Northern European countries. Long-term opioid treatment

for CNCP is under debate globally because of the opioid epidemic in the United States (Chou et al., 2020). In European guidelines, opioids remain a treatment option in carefully selected and supervised patients with CNCP for whom established non-pharmacological therapies and non-opioid analgesics have failed or have not been tolerated (Häuser et al., 2021; Petzke et al., 2020). The health claims data which have been used to find the indication for opioid prescriptions do not allow to draw conclusions if the indication was appropriate.

4.4 | Opioid-related morbidity and mortality

In 2017, specialist treatment services in Europe reported that 78% of all opioid clients presented for problems primarily with heroin (European Monitoring Centre for Drugs & Drug Addiction, 2019). Scholten (2017) concluded from the European Drug Report 2017 that out of all people who seek treatment for opioid use disorder roughly 6% were on prescription opioids. He found no evidence in the European Drug Survey 2017 that opioids prescribed to patients with pain are problematic in Europe. There is some suggestion that methadone and buprenorphine on the illicit markets originate from patients in opioid agonist therapy (Scholten, 2017).

In contrast to the United States, fentanyl derivatives do not yet appear to be a major driver of opioid use disorder across Europe. Only 0.5% people registering with drug treatment services cite fentanyl and its derivatives as their primary drug, although country-specific variations exist, with fentanyl reported as the primary drug for the majority of entrants in Estonia (European Monitoring Centre for Drugs & Drug Addiction, 2019). Accordingly, the number of fentanyl-related fatal overdoses appears significantly lower in Europe compared with the United States (Ciccarone, 2019; Schifano et al., 2019). However, fentanyl-related mortality is increasing in some countries: In England and Wales, there were 75 fentanyl-related deaths were reported in 2017 and 74 deaths in 2018, a 29% increase from 2016 (Office for National Statistics, 2019).

This survey did not find data on the extent to which illicit use of opioids (without prescriptions), so-called prescription opioids and use of opioids prescribed for medical reasons but used by patients for unintended purposes (so-called prescribed opioids; Scholten, 2017) contribute to opioid-related morbidity and mortality. It is important to note that prescribed opioids did not substantially contribute to fatal overdose in people prescribed with them in the United States. Only 1.3% of opioid-related overdose decedents in Massachusetts during 2013–2015, had an active prescription for each opioid detected in toxicology reports on the date of death (Walley et al., 2019).

4.5 | Is Europe facing an Opioid crisis?

Jarlbaek analysed data on dispensed opioid prescriptions (ATC; N02A, and R05DA04) of three Scandinavian countries (Denmark, Norway and Sweden) during 2006–2014, using public assessable prescription data. From 2006 to 2014 the numbers of users/1,000 inhabitants increased from 98 to 105 in Norway, from 66 to 75 in Denmark and from 78 to 79 in Sweden, respectively. Within each country, the overall picture of opioid consumption appeared rather stable. The author concluded, there does not appear to be the emergence of an opioid epidemic in Denmark, Sweden or Norway judged by the statistics used in this study (Jarlbaek, 2019).

One study each conducted in France (Chenaf et al., 2019), Netherlands (Kalkman et al., 2019) and Spain (Salazar et al., 2020) found an increase in opioid prescription to 2017 with several proxies for opioid-related morbidity showing a parallel increasing trend. All authors concluded that their country is far from the (prescription) opioid epidemic faced by the United States.

Rosner and colleagues conducted a systematic review of the epidemiology of opioid prescriptions in Germany and identified 18 studies from 1995 to 2016. The authors concluded that the number of opioid prescriptions overall as well as the number of people receiving opioid treatment have increased over time. Even though patterns of opioid prescription follow trends observed in other developed countries, there are no signs of an opioid epidemic in Germany (Rosner et al., 2019).

Van Amsterdam studied recent trends in opioid prescription rates, prevalence rates of fatal and non-fatal incidents and dependence care treatment were used as proxies of opioid-related harm in Germany, France and the Netherlands by a systematic search in different databases until April 2020. Considering that the use of prescription opioids has been declining rather than increasing in Europe, the authors concluded that an opioid crisis is not anticipated yet in Europe (van Amsterdam et al., 2020).

Scotland has the highest rates of opioid-related emergency visits deaths. Compared to France, Germany and the Netherlands, the rate of opioid-related overdoses is more than four times higher while the opioid use disorder treatments are three times lower (van Amsterdam et al., 2020). Opioid-related deaths per million inhabitants in the United Kingdom in 2019 were comparable to the ones in the United States in 2018 with 206 opioid-related deaths per million inhabitants (Heedegard et al., 2020). UK authors have stated that the rising opioid-related deaths in England and Scotland have to be recognized as a public health crisis (Kimber et al., 2019). However, most of the increase in mortality in the United Kingdom relate to illicit heroin and methadone and not to opioids prescribed for pain. It is less certain if the number of

ED attendances and overdose are related more to prescribed opioids.

The OECD concluded that higher rates of opioids prescribed for medical reasons are not necessarily correlated with higher overdose death rates, for instance, in Germany, Austria, Belgium, Denmark and the Netherlands. This suggests that an appropriate use and regulatory environment for prescription opioids can be compatible with having a higher availability of these medications for medical use (Organisation for Economic Co-operation & Development OECD, 2019).

4.6 | Limitations

We might have missed available data for some countries by our survey.

We have considered an increase in opioid use when a change >10% was observed in the time period analysed. During the same period (20 years) the population characteristics may have changed and this 10% consumption increase may reflect it. We did not consider changes in population size when considering changes in the proxies of an opioid epidemic.

The comparability of the data on opioid consumption and opioid-related morbidity and mortality in European countries is limited because partially different opioids were included into analysis and different data sources were used.

INCB data are not based on surveys using prescriptions by pharmacies, wholesale and insurance companies, but on reports of the governments which use different data collection and reporting methods (International Narcotics Control Board, 2020). Tramadol, an opioid with an additional mode of action, and which is frequently prescribed in some European countries (e.g. Denmark, France, Germany, Norway, Poland and Sweden) and buprenorphine are not included in INCB statistics (van Amsterdam & van den Brink, 2015).

Data on emergency visits, substance disorder treatment admissions and drug-related deaths frequently include all drugs. If separate data for opioids are given, nearly all European data do not distinguish between prescribed, over-the-counter and illicitly obtained medicines and not between opioids prescribed for pain and substance use disorder management.

Our data do not provide insight in the content of illicit substances abused (e.g. fentanyl may be sold as heroin).

Available data only report on substances ‘mentioned’ on death certificates. It is unable to distinguish deaths caused by the substance or substances and those where the substance is present but did not contribute to the death, and does not identify whether the substance was legitimately obtained on prescription or over-the-counter or obtained illicitly.

Data from substance dependence treatment services do not contain information about the start of the opioid use disorder (OUD). Therefore, no conclusion is possible that OUD started with a prescription for a medical opioid (Kalkman et al., 2019). Longitudinal data from five US commercial health plans between 2000 and 2005 demonstrated that patients with CNCP prescribed with opioids had significantly higher rates of OUD compared with those not prescribed with opioids. OR was 14.9 with chronic low dose use, OR 28.7 with medium chronic dose use and OR 122.4 with chronic high dose. The absolute numbers of OUD were as follows: 0.7% for chronic low dose (1–36 MEQ/d), 1.3% for medium chronic dose (36 to 120 MEQ/d) and 6.1% for high chronic low dose (>120 MEQ/d; Edlund et al., 2014).

5 | CONCLUSIONS

Based on the findings of this survey there is no clear indication that Europe is facing an opioid crisis to the extent as described in the United States. Recent data on rising opioid-related deaths in England and Scotland comparable to the United States have to be kept in mind. However, most of the increase in mortality in the United Kingdom relate to illicit heroin and methadone and not for opioids prescribed for pain.

When discussing an opioid crisis associated with opioids designed for medical use, a clear distinction should be made between *prescription* opioids and *prescribed* opioids (Scholten, 2017). There are no robust data to confirm or refuse the assumption, that the prescription of opioids for medical reasons has contributed to opioid-related morbidity and mortality in Europe. Studies are necessary to assess if patients with opioids prescribed for chronic pain play a relevant role in the diversion of illicitly used prescribed opioids.

The relatively common lack of formal national data on use and non-medical use of opioids, emergency room admissions and number of patients on opioids in the general population in several European countries requires a better standardization in Europe.

Some of the existing criteria for substance dependence (ICD 10, ICD 11, Diagnostic and Statistical Manual for Psychiatric Diseases [DSM] 5) and opioid use disorder are inappropriate for patients prescribed with opioids for chronic pain: They make no distinction between pain-related and non-pain-related symptoms and thus overestimate the prevalence of opioid dependence (Elander et al., 2003) and opioid use disorder. New criteria have to be designed in the collaboration of psychiatry and pain medicine.

European health and regulatory authorities should be aware that discussions on the European opioid crisis do not increase the obstacles to opioid medication for cancer therapy and palliative care in some Eastern Europe countries (Scholten & Henningfield, 2016).

Countries should take actions to reach and maintain an appropriate balance to cover the real needs for pain relief without exposing patients to the threat of opioid use disorder development (Organisation for Economic Co-operation & Development OECD, 2019). Education of patients and health care professionals on appropriate use of opioids for acute, cancer and noncancer pain should be provided by medical associations and training courses. EFIC has published clinical practice recommendations on the (limited) role of opioids for and their appropriate use in CNCP (Häuser et al., 2021; Krcevski-Škvarc et al. 2021).

The most popular narrative about the US opioid crisis claims that it started by prescribing of opioids to patients with chronic pain by unscrupulous and mercenary physicians influenced by pharmaceutical companies. Although uncritical prescription of opioids was a key factor in the first period of the US crisis, it was fundamentally fuelled by economic and social problems. Opioids were prescribed as a shelter from physical and psychological trauma and social discriminations (Dasgupta et al., 2018; deWeerd, 2019). Europe as a whole is prompted to counterbalance socioeconomic disparities as much as possible.

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CONFLICT OF INTEREST

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AUTHOR CONTRIBUTIONS

Bart Morlion and Winfried Häuser designed the study. All authors contributed to the acquisition of data, discussed the results, commented on the manuscript and gave a final approval of the version to be published. Bart Morlion and Winfried Häuser take responsibility for the integrity of the work as a whole, from inception to published article.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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