



Monitoring drug-related mortality in Europe: a key epidemiological indicator for action

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Introduction

A substantial proportion of the mortality of young adults in Europe can be attributed to the use of illicit drugs, mainly opioids. In some urban areas, opioid use is responsible for more than 20 % of deaths among 15- to 49-year-olds (1).

Drug overdoses account for a high proportion of drug-related mortality, and in some countries they are the major cause of deaths related to drug use (other causes include HIV-AIDS acquired through injection, accidents, violence, suicide, etc.).

This poster presents an overview of numbers and recent trends in drug-induced deaths across countries.

Methods

The epidemiological indicator has two components:

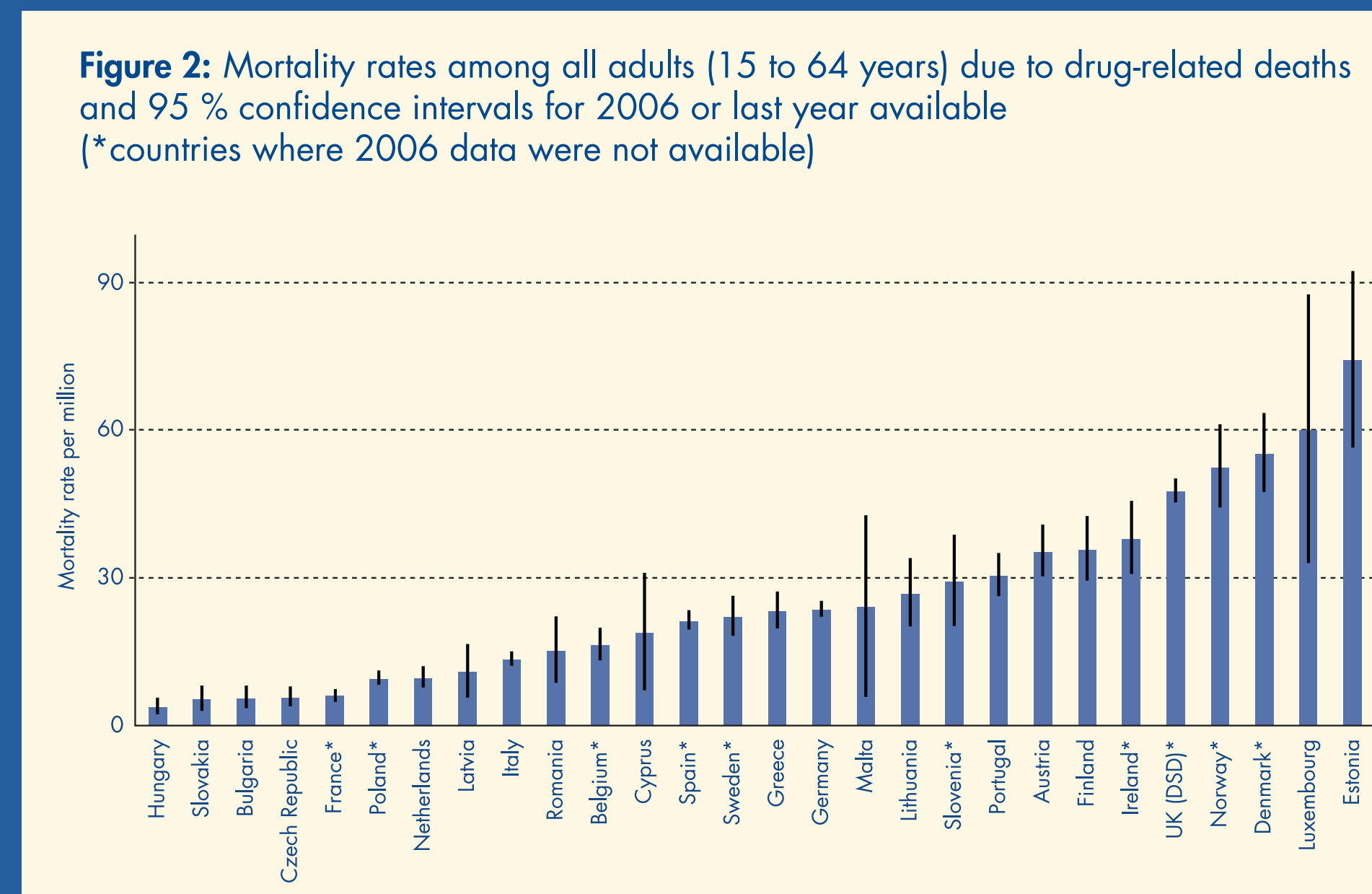
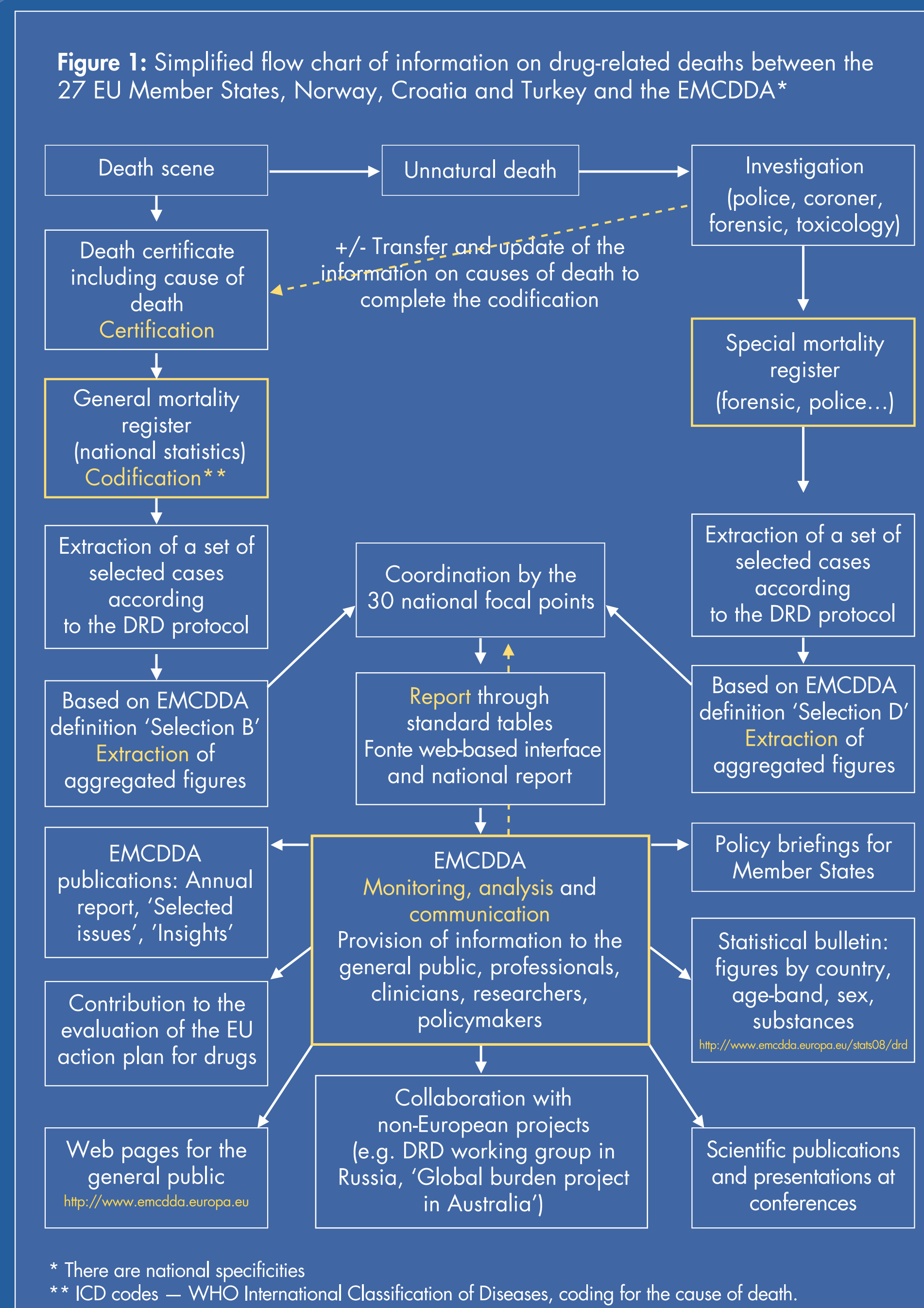
- Drug-induced deaths — those directly caused by drugs.
- Mortality rates among drug users — counting also deaths due to other causes.

Data on drug-induced deaths:

- Sources: from general mortality registries, or special mortality registries based on forensic and police sources (Table 1, Figure 1)
- Case definition (2)
 - A death caused directly by the consumption of one or more illicit psychoactive drugs.
- Data collected: number of cases, age group, gender, substances found.

Results

- In 2007, 18 out of 28 countries reported the number of drug-induced deaths for 2006. Croatia and Turkey started reporting data in 2008.
- Since 1990, 6 300 to 8 500 cases have been reported in Europe each year.
- The population mortality rate due to drug-induced death was on average 21 per million European inhabitants aged 15–64 years (range 4 to 74 deaths per million inhabitants) (Figure 2).
- 8 out of 10 fatalities were males (81 %).
- Mean age was 36 years, varying across countries (range 21 to 48 years).
- Opioids (heroin, mainly) were present in four fifths of reported drug-induced deaths (in eight countries : > 85 %).
- Recent rebound of overdose deaths in some countries (Figures 3 and 4).



Set of underlying causes of death and corresponding codes defining 'drug-related deaths' for European monitoring by the EMCDDA

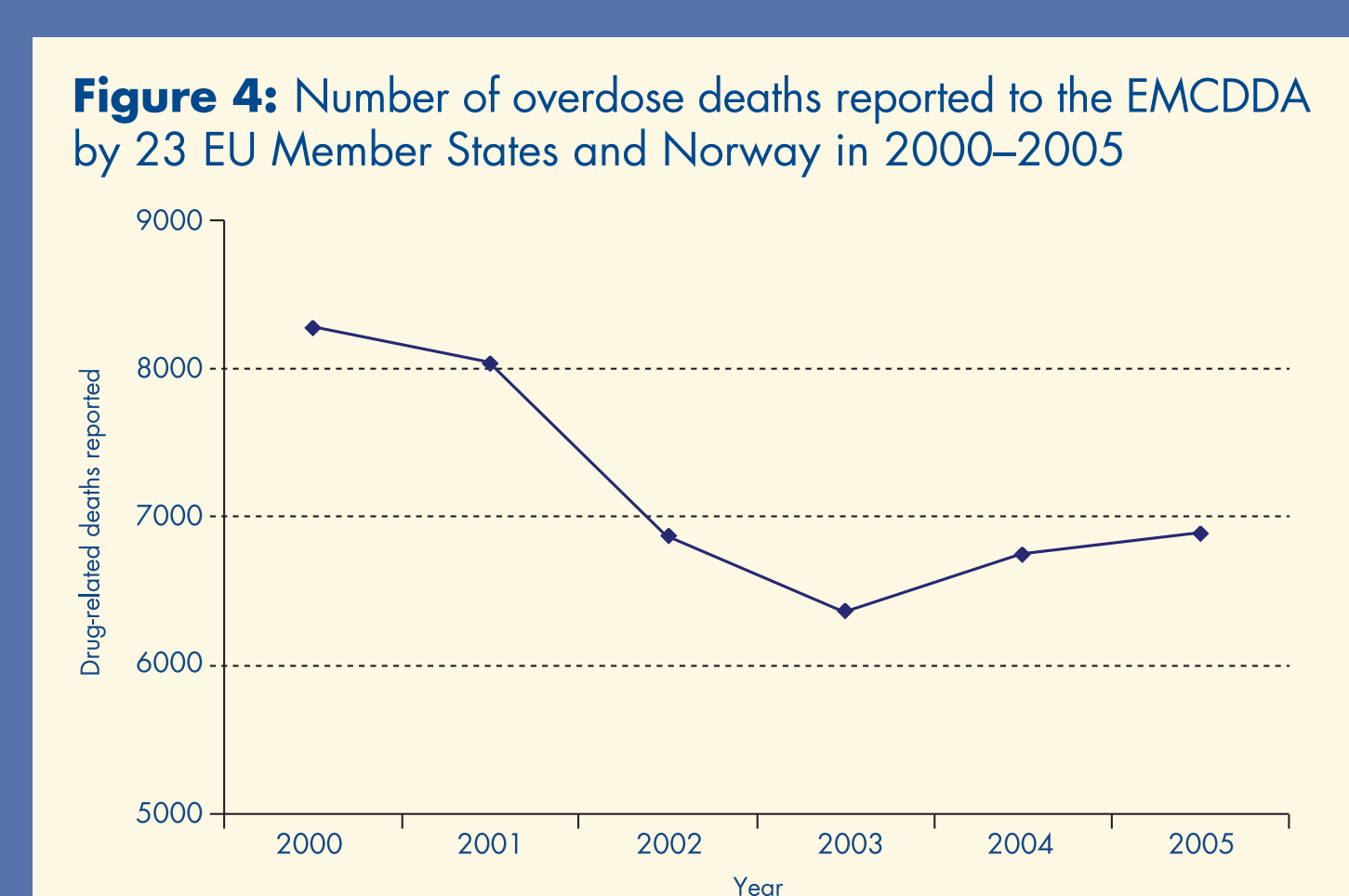
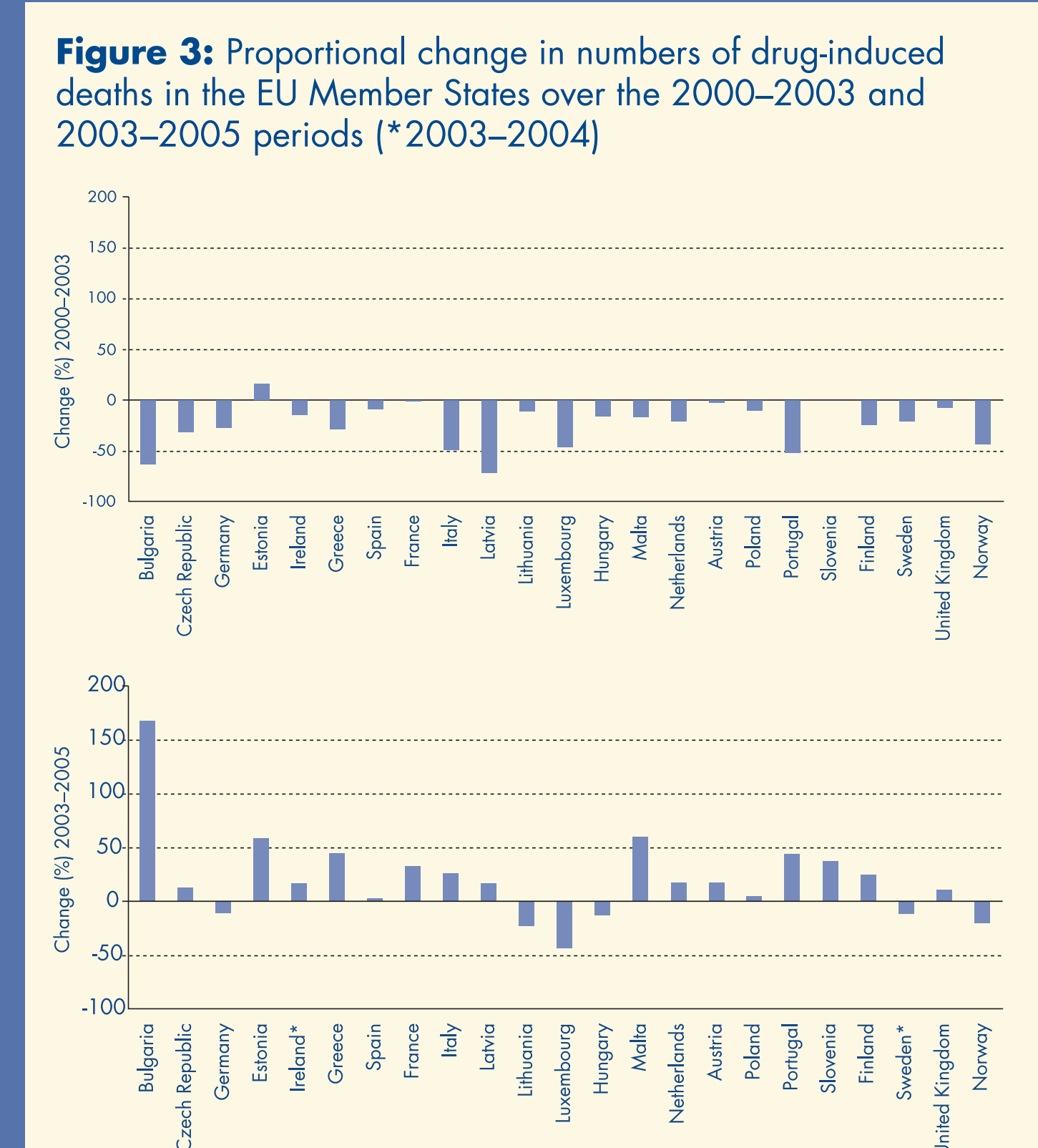
Table 1: Extraction from General mortality registers

Underlying cause of death	ICD-10 code(s)	Selection of substances in cause
Disorders	F11-F12, F14-F16, and F19	Opioids (F11); cannabinoids (F12); cocaine (F14); other stimulants (F15); hallucinogens (F16); multiple drug use (F19)
Accidental poisoning	X42 ⁽¹⁾ , X41 ⁽²⁾	Opium (T40.0); heroin (T40.1); other opioids (T40.2); methadone (T40.3); other synthetic narcotics (T40.4); cocaine (T40.5); other and unspecified narcotics (T40.6); cannabis (T40.7); lysergide (T40.8); other and unspecified psychodysleptics (T40.9); psychostimulants (T43.6)
Intentional poisoning	X62 ⁽¹⁾ , X61 ⁽²⁾	
Poisoning undetermined intent	Y12 ⁽¹⁾ , Y11 ⁽²⁾	

⁽¹⁾ In combination with the T-codes: T40.0 to T40.9.
⁽²⁾ In combination with the T-code: T43.6.

Table 2: Extraction from Special mortality registers

Underlying cause of death	Further breakdown: substance found
Poisoning by: accident; suicide; homicide; undetermined intent.	opioids; methadone (only); poly-substances including opioids; poly-substances excluding opioids; unspecified substances.



Some key points

- Major improvements have been made in the standardisation, availability and quality of the data across Europe over the last 12 years, but there is still substantial work to be done.
- Marked differences are observed across countries in levels and trends of drug-induced deaths.
- Worrying changes are evident since 2000 in many countries. Improvements in reporting are unlikely to explain this (3).
- Monitoring of drug-induced deaths provides background figures and trends which must be completed by data from other studies: toxicological studies; mortality cohort studies, studies on the impact of risk factors (e.g. release from prison (4)), and of protective factors (e.g. drug treatment, including its quality and accessibility).
- More in-depth and timely monitoring of drug-induced deaths is needed across European countries.

Acknowledgements

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(1) Bargali, A.M., Hickman, M., Davali, M., Perucci, C.A., Schifano, P., Buster, M. et al. (2006). 'Drug-related mortality and its impact on adult mortality in eight European countries', *European Journal of Public Health*, Volume 16(2), pp. 198–202.
 (2) European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), Standard protocol for the EU Member States to collect data and report figures for the key indicator 'Drug-related death'. <http://www.emcdda.europa.eu/themes/key-indicators/drd/>
 (3) Vicente, J., Giraudon, I., Matias, J., Hedrich, D., Wiessing, L. (2009), 'Rebound of overdose mortality in the European Union 2003–2005; findings from the 2008 EMCDDA Annual report', *Eurosurveillance*, Volume 14, Issue 2, pii = 19088. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19088/>
 (4) Farrell, M., Marsden, J. (2008). 'Acute risk of drug-related death among newly released prisoners in England and Wales', *Addiction*, February, Volume 103(2), pp. 251–5.