



European Monitoring Centre
for Drugs and Drug Addiction

Drug-related deaths due to misuse of pharmaceutical opioids in Europe

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Drug-related deaths and mortality of drug users

- One the 5 epidemiological indicators
- 2 components
- 1) Overdoses
 - How many die? Who are they? What are the trends? What substances are in cause?
- 2) Mortality among drug users
 - Cohort studies: EMCDDA recommendations



Epidemiology of drug-induced deaths: sources

- 30 National Reitox Focal Points, DRD experts
- Cases extracted from 'General' and 'Special' mortality registers (police, forensic services..)



Case definition

- ‘Deaths happening shortly after consumption of one or more illicit psychoactive drugs, and directly related to this consumption, although they often may happen in combination with other substances such as alcohol or psychoactive medicines’

DRD EMCDDA protocol

<http://www.emcdda.europa.eu/html.cfm/index107404EN.html>



ICD codes

- Case definition translated into a selection of ICD codes (underlying cause of death)
 - Disorders F11-F12, F14-F16, and F19
 - Accidental poisoning X42*, X41**
 - Intentional poisoning X62*, X61**
 - Poisoning of undetermined intent Y12*, Y11**
- In combination with the T-codes: T40.0-9, **In combination with the T-code: T43.6.

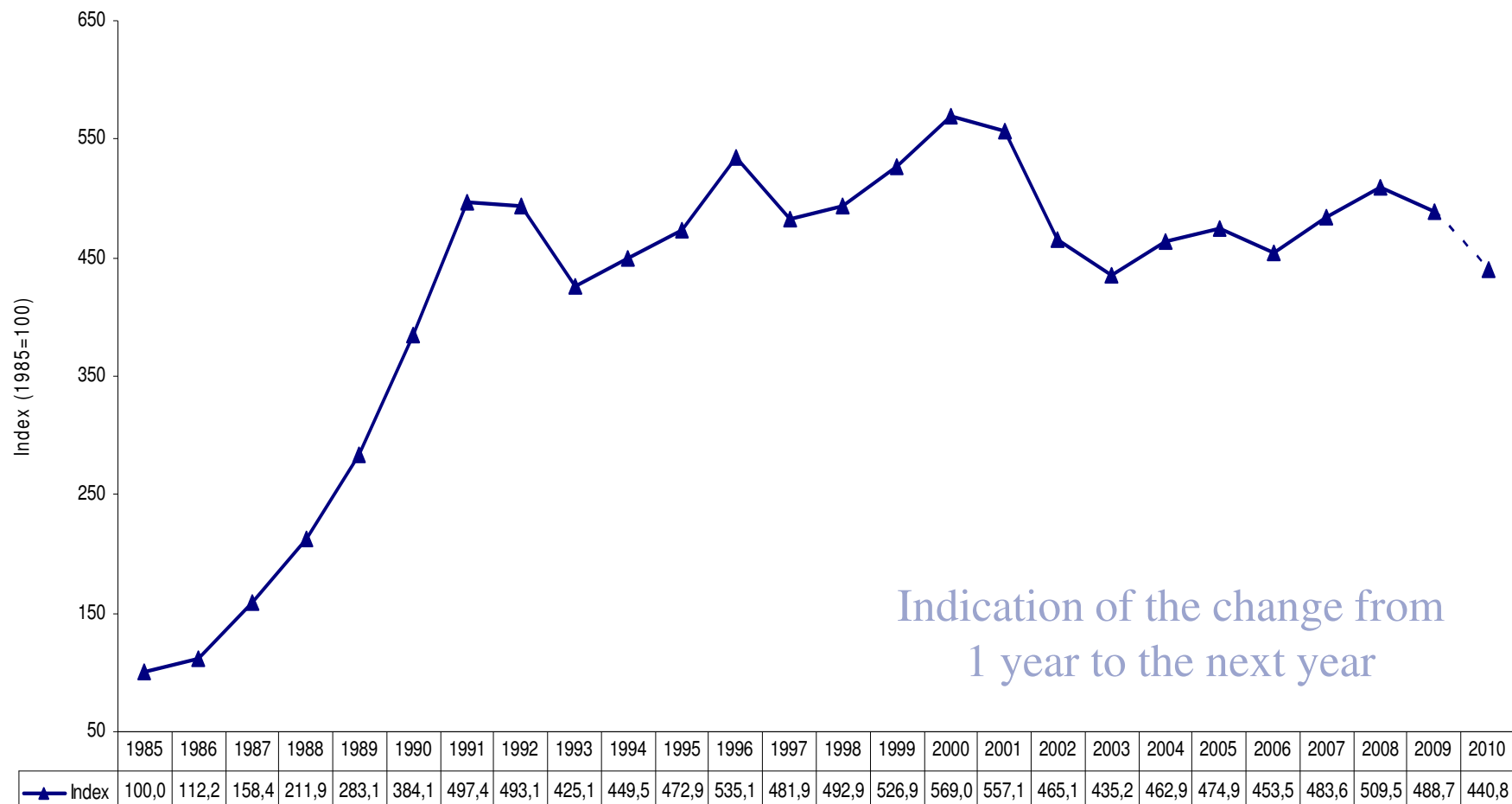


Overdoses reported

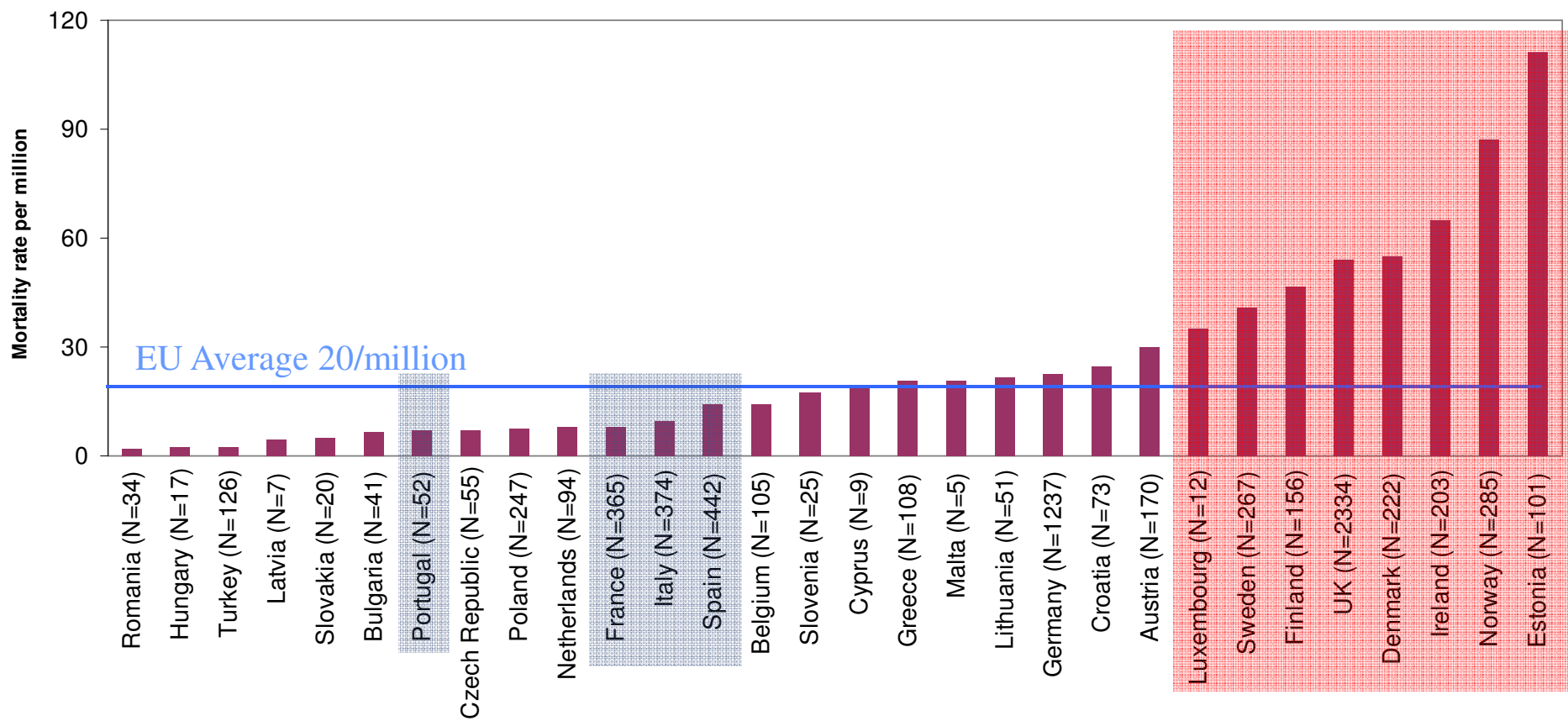
- ~ 7 000 fatal overdoses in 2010
 - Mainly opioids - heroin
 - In half of the countries where information is available opioids account for > 85% of the cases
 - ~80 % males
 - Mostly 'polydrug' overdoses with alcohol
 - E.g. Finland, 5 different drugs found in average
 - E.g. Denmark: 3 to 4 drugs in average



Indexed long-term trend in drug-induced deaths in the EU-15 Member States and Norway, 1985–2010



Mortality due to drug-induced deaths among adults (15–64 years) in most recent year reported



Deaths related to prescription opioid

- Some more details about deaths related to
 - Methadone
 - Buprenorphine
 - Fentanyl



Methadone: key points to bear in mind before talking about methadone-related overdoses

- Methadone OST is more effective than opioid withdrawal followed by placebo in
 - increasing retention in treatment (RR 3.05, 95%CI 1.75 to 5.35);
 - reducing illicit opioid use (RR 0.32, 95%CI 0.23 to 0.44)

(WHO, 2009)*
- OST reduces the risk of mortality and the survival benefit is increasing with cumulative exposure to OST *(Kimber, 2011, Cornish, 2010)*

*[WHO \(2009\), 'The WHO Guidelines for the Psychosocially Assisted Pharmacological Treatment of Opioid Dependence', World Health Organization.](#) More available from the EMCDDA 'Best Practice Portal'/treatment options for opioid users



- Most methadone-related deaths occur in persons out of methadone treatment
 - Germany (Hamburg): 2/3 of those who died of methadone overdose had no history of methadone treatment (*Heinemann, 2000*)
 - United Kingdom: same - 2/3 (*Ghodse, 2009*)
 - Norway: 8/10 (Clausen 2012, personal communication)
 - Sweden 8/10 had not obtained their methadone from a 'legal' source, methadone programme, pain relief treatment (AR 2011, Swedish prescription register)



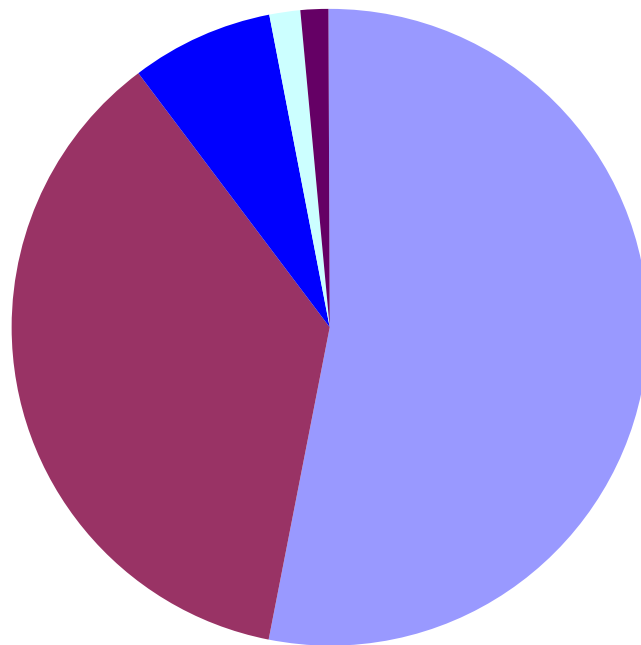
Methadone

- Is found in a significant % of reported OD
 - e.g. 16% in the UK and Austria; 13% in Finland
- Rarely the only substance identified in post mortem
 - Mainly with other opioids, illicit drugs, alcohol, and medicine



Polydrug use: Methadone.. and other substances

Overdoses with mention of methadone: other substances identified in post-mortem. Ireland, 2011 report (n=68)

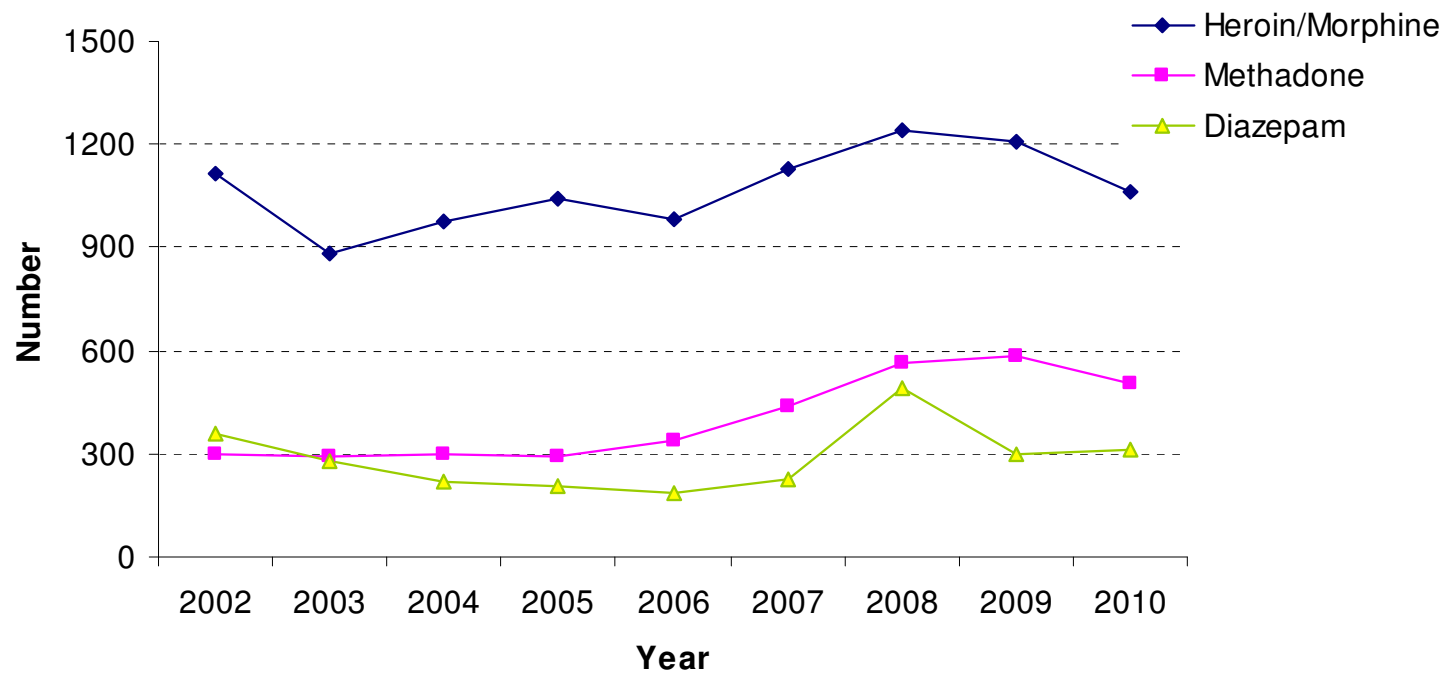


- with other opioid and other substances
- with drugs of abuse and psychoactive medicines
- with drugs of abuse only
- with other opioid only (with or without alcohol)
- with alcohol only



Methadone

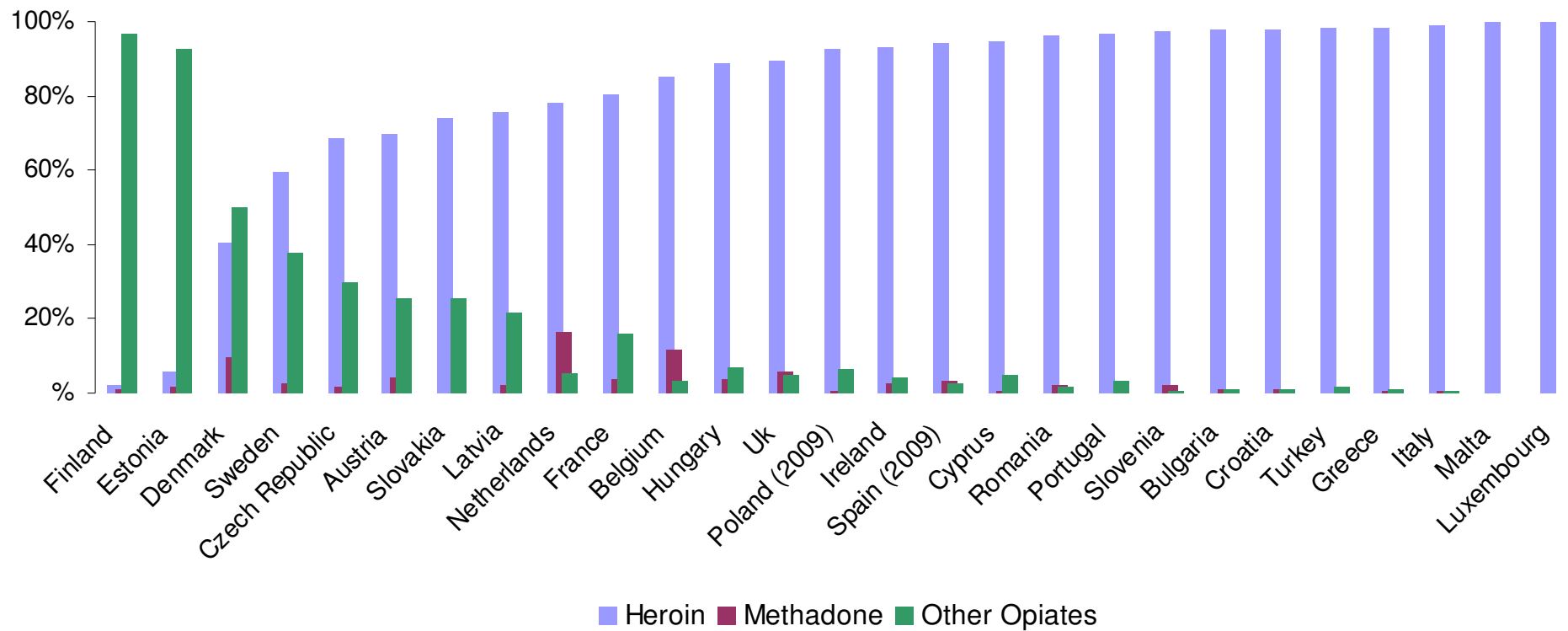
Drug mentions on death certificates in the United Kingdom



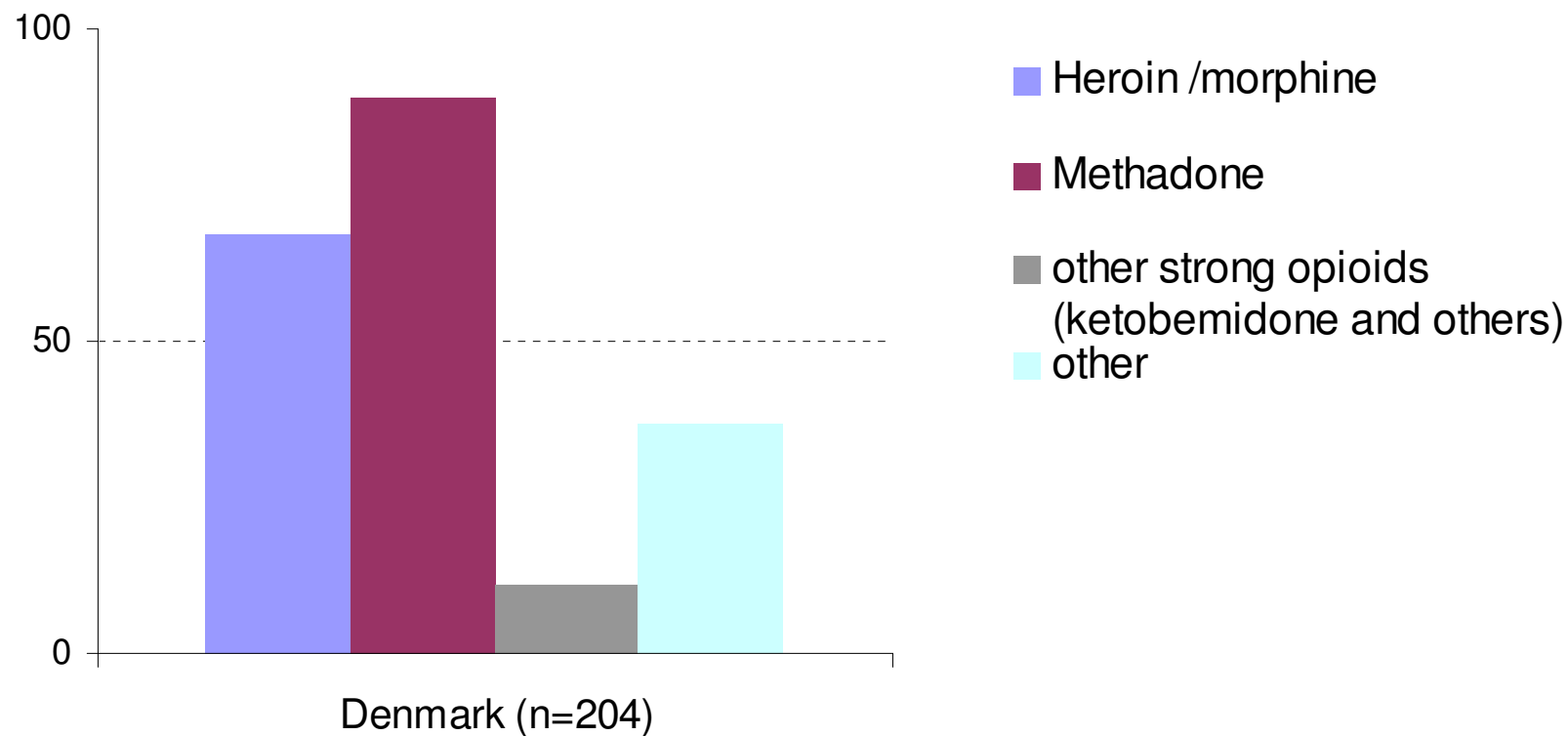
Source. UK National Report 2011. GROS 2011;NISRA 2011;ONS 2011



All clients entering treatment for opioids, by type of opioid misused and country - 2010

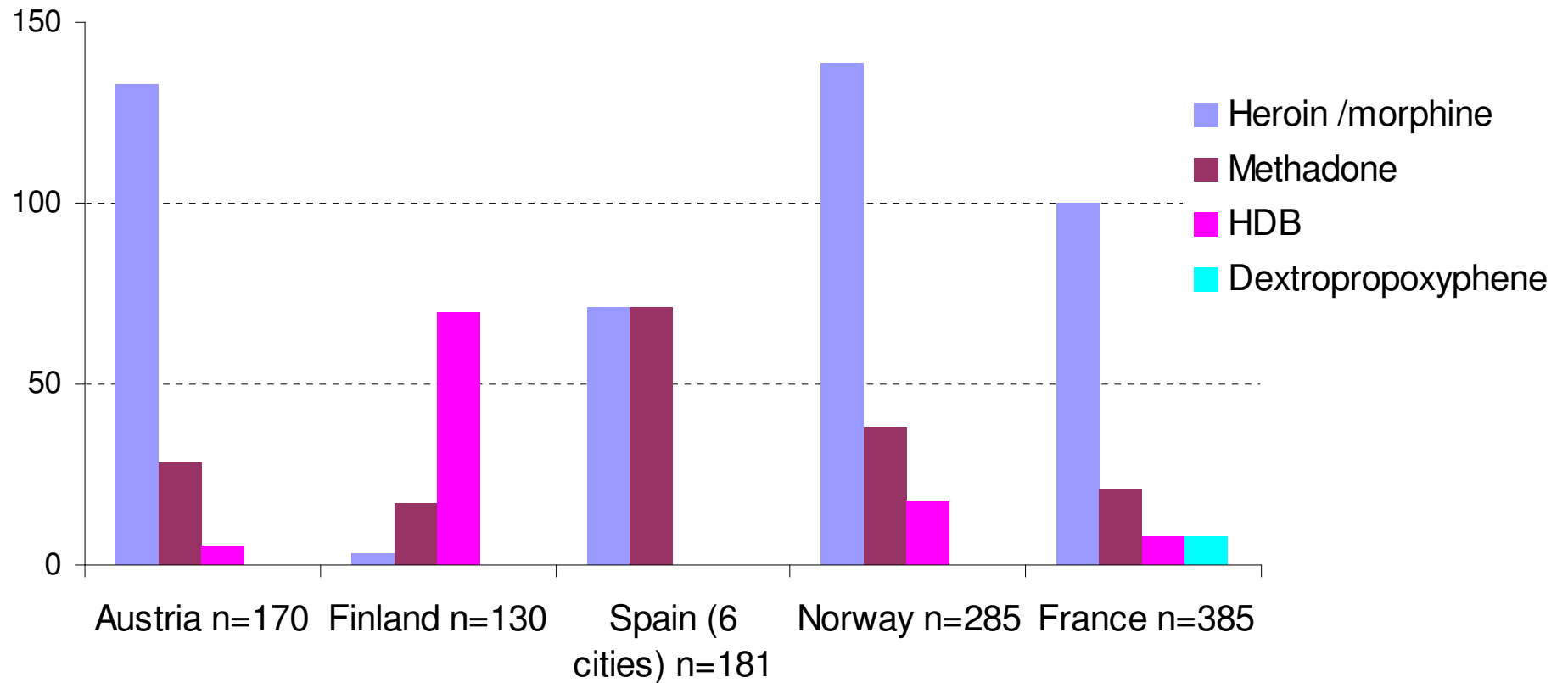


Assumed main cause of death in poisoning cases among drug users, Denmark, 2010 (source: national report 2011 - national commissioner of Police)



Buprenorphine

Substances mentioned in OD post mortem



Fentanyl

- Estonia: Illicit fentanyl
- Prescribed transdermal patches mainly, in some countries: DE, HL, FI, IT
 - Several patches on the skin
 - Diluted and injected
 - in the mouth



Fentanyl related overdoses: 2 examples

- UK
 - 50 cases since 2001, ~half prescribed; 30 males;
 - younger victims more likely to have unprescribed fentanyl and to be males
 - 26 cases have 2,3 or 4 substances found in post mortem
- Germany
 - 51 cases in 2009-10 (34 in 2002-08)
 - 85% males
 - 61% <40 years
 - 94% polydrug



Other prescription opioids

- Rare reports with tramadol, oxycodone, hydrocodone, dextropropoxyphene
 - Except in Sweden, ~95 cases of OD deaths with mention of dextropropoxyphen (2009 data) – total OD reported 267
- Limited post mortem information available in some countries - possible underestimation



Conclusions

- Concerns in some countries in particular
- The level of non medical use and deaths related to prescription opioid is reportedly much lower than in the USA
- General context of polydrug use, including other medicines, in particular BZD, alcohol
- Need to pay attention to this issue in Europe



- Thank you for your attention
- Questions?
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