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## SUMMARY — SELECTED ISSUE Mortality related to drug use in Europe: public health implications

### European Monitoring Centre for Drugs and Drug Addiction

*Annual report 2011: the state of the drugs problem in Europe*

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#### Introduction

This Selected issue focuses on mortality among drug users due to all causes, of which drug-induced deaths (overdoses) is only a component, albeit the one most well-documented. The publication begins with an introduction to mortality cohort studies and then reviews the findings on overall mortality rates in Europe. The available sources of data are examined to explore the main causes of deaths among drug users and the latest information on risk and protective factors. The Selected issue finishes with a discussion of the public health implications of drug-related mortality and the options available for prevention and intervention.

#### Data sources and participating countries

- This Selected issue is based on a special data collection carried out in 12 EU Member States, Croatia and Norway, supplemented by other data collected by the EMCDDA and results from the scientific literature.
- The information analysed is mainly derived from longitudinal follow-up studies of groups — 'cohorts' — of problem drug users, which systematically identify the causes of all deaths among the cohort.

#### Key findings from recent mortality cohorts in Europe

- Participants in the cohort studies are predominantly males (about 80%), mostly heroin users engaged in treatment for opioid dependence at the time of their enrolment. The mean age of those dying is in the early to mid-thirties.
- Most cohort studies show mortality rates in the range of 1–2% per year among problem drug users. After 10 years, up to 20% of the participants in a study may have died.
- Mortality for drug users is roughly 10 to 20 times that of the general population of the same age and gender.
- Based on the available data, an estimated 10 000 and 20 000 problem opioid users die every year in Europe. Many of these deaths could be prevented.

#### What are the major causes of death among problem drug users?

- Four broad categories of causes of deaths among drug users have been identified: overdoses, diseases, suicide and trauma.
- Roughly, between one-third and half of deaths among drug users are due to overdose, while between one-fifth and two-fifths are due to suicide and trauma, and less than a tenth are due to HIV/AIDS.

#### Overdoses

- Opioids, particularly heroin, are by far the drugs most often implicated in overdoses. Alcohol and benzodiazepines are frequently associated with opioids in overdoses. In recent years, despite a small decline in the most recent data, cocaine has been detected in an increasing number of drug-induced deaths.
- Overdose victims are predominantly in their early to mid-thirties, and often have a long history of drug use.

- Drug users older than 40 represent an increasing proportion of the 7 000 to 8 000 drug-induced deaths reported every year, particularly in the north of Europe and in the pre-2004 EU Member States.

### **Diseases**

- It is estimated that there were more than 2 000 HIV/AIDS-related deaths in Europe attributable to injecting drug use in 2008.
- The high prevalence of hepatitis C virus among injecting drug users, many of whom are unaware of being infected, is likely to cause significant morbidity and mortality over time.
- Other chronic health problems such as liver disease, cardiovascular and pulmonary conditions, cancer and infections, account for a significant share of mortality among problem drug users.

### **Trauma**

- Deaths from trauma (including traffic accidents, falls, drowning, injuries, assault, homicide) are more frequent among illicit drug users than among the general population. Violent deaths may be more closely related to social exclusion, mental health problems and the life circumstances of problem drug users, than to drug use itself.
- Women with drug problems are at particular risk of a trauma-related death, including assault and murder.

### **Suicide**

- Suicide presents a major clinical challenge for those treating problem drug users. Depression is a key risk factor for suicide, and the prevalence of depressive disorders among problem drug users is high.
- Studies found that, compared to the general population, problem drug users are much more likely to attempt suicide.

### **Risk factors for mortality**

- Heroin is the drug most strongly associated with elevated mortality risk, and injecting is the most risky form of administration.
- Risk of death is increased by older age, long-term use of drugs (in particular, heroin), history of overdose, attempted suicide, polydrug use, somatic and psychiatric co-morbidity, and not being enrolled in drug treatment.
- The periods following release from prison and dropping out of opioid substitution treatment are times of particularly high overdose mortality risk for drug users.

### **Public health perspectives and implications**

- Being in treatment, particularly opioid substitution treatment, is a protective factor against mortality.
- Overdose prevention measures undertaken in many European countries include education of drug users on the risks associated with polydrug use and on recognising and managing overdose. To prevent fatal overdoses, drug agencies in some countries provide take-home naloxone to heroin users, their peers and family.
- Reduced levels of opioid tolerance significantly increase the risk of overdose and death for drug users leaving prison, and the World Health Organisation recommends a close linkage of prison health with community drug services in order to ensure continuity of care.
- Understanding the role and risk factors for deaths from trauma represents a significant research priority.
- Most cohort studies focus on persons in contact with drug treatment, and it might be difficult to transfer their results to populations of drug users not in contact with drug treatment. These drug users should be a priority for new studies, as they are likely to be more disadvantaged, and to warrant priority interventions.