

# Findings of the review of studies on overall mortality and revision of ST18

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Expert meeting on Drug-Related Deaths (DRD)

Gesundheit Österreich  
GmbH 

# Background

**Consultant study on cohort studies** among people who are using drugs in the EU and the EMCDDA affiliates Norway and Turkey

- Commissioned by the EMCDDA
- Carried out in 2020-2022 by Martin Busch and Tanja Schwarz (Austrian National Public Health Institute)

Two work packages:

- (1) Review and mapping of recent mortality cohort studies among PWUD
- (2) Revision of Standard Table 18 (ST18)

**Overall aim:** to enhance comparability of results across Europe, to support the implementation of mortality cohort studies, and inform policy making

# Methods

## (1) Review and mapping (2020-2021)

- Literature search, contributions via questionnaires from national specialists and REITOX Focal Points + information provided in the standard annual reporting to the EMCDDA
  - Not aimed to be a systematic literature review (some cohort studies, grey literature, might have been missed!)

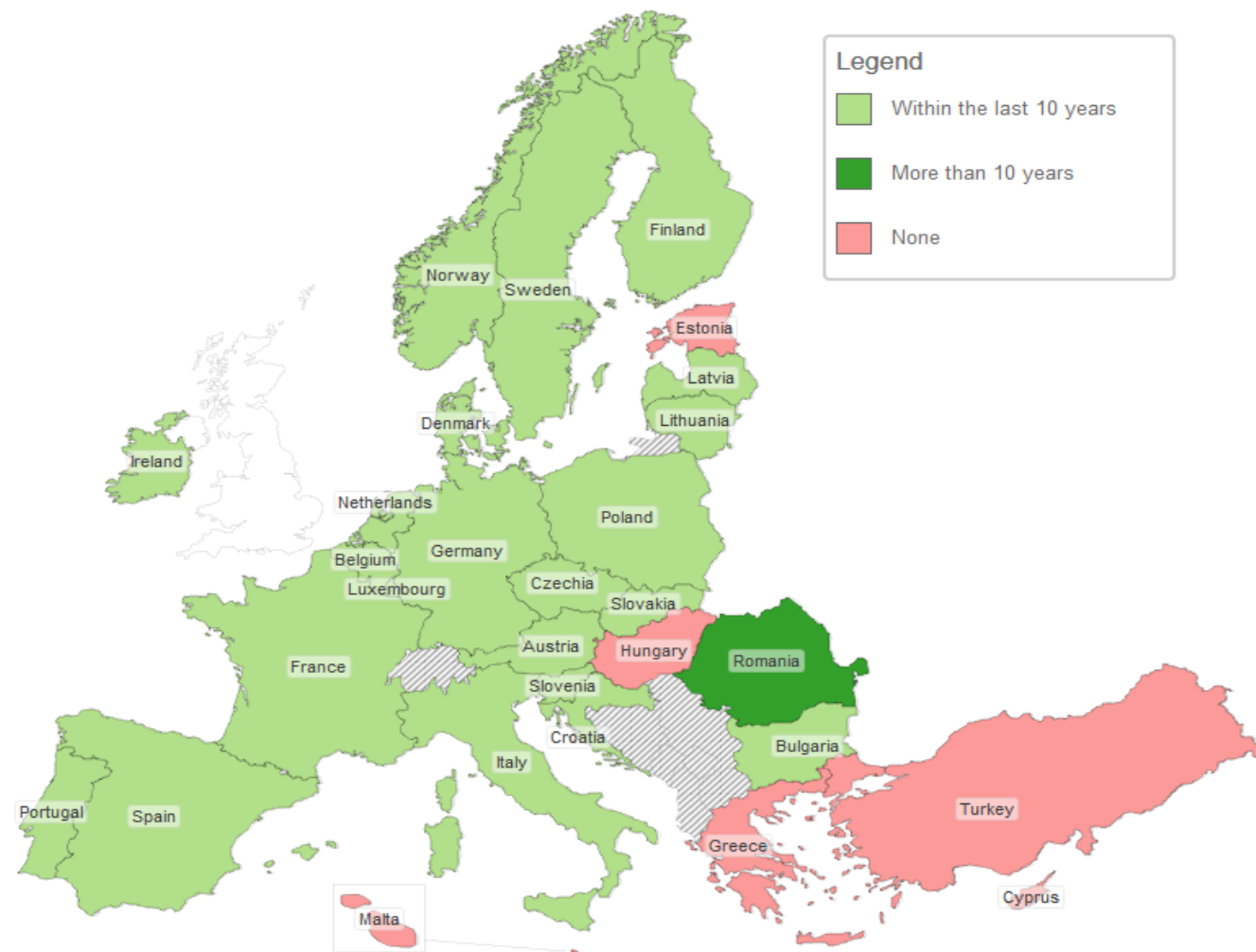
## (2) Revision of ST18 (2022)

- Collection of core items in the course of the review and mapping exercise
- Pilot testing with countries (feedback received from Croatia and Lithuania)
  - Proposed core items are being evaluated regarding whether and how they should be implemented for a harmonised collection and analysis of data at European level

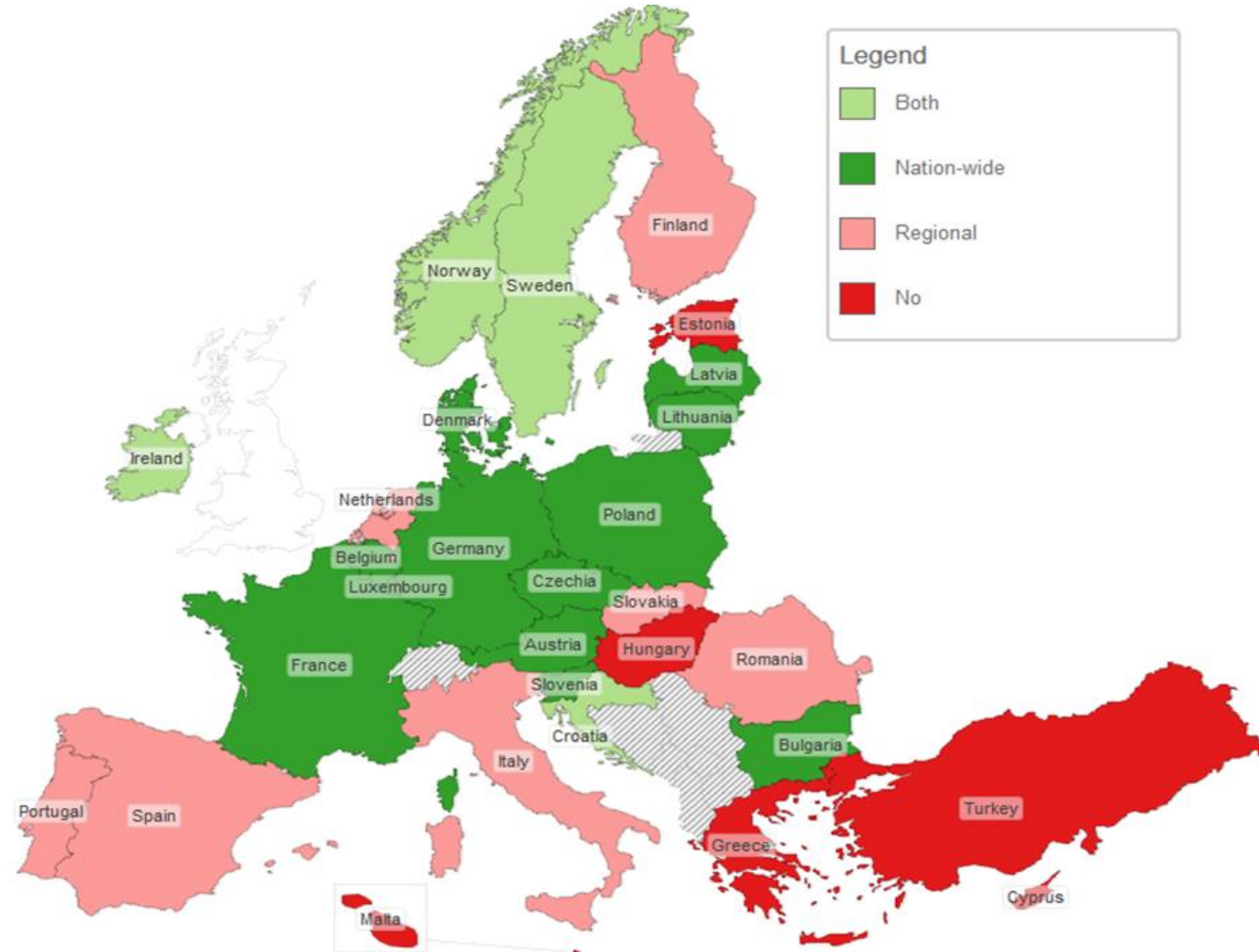
# Results: **Review and mapping**

- 25 countries responded, of which 22 reported published and unpublished studies conducted within the last ten years
- Six **running cohort studies** and one large multisite study in the Czech Republic, Norway and Denmark
- Four countries report concrete plans for **new cohort studies**
- **Heterogeneity of studies** in extent of follow-up, included populations, sample sizes, person-years (PY) and other variables
  - Crude mortality rates ranged from 2.3 per 1,000 PY (95% CI 1.2-4.4) in Spain to 28.8 per 1,000 PY (95% CI n.a.) in Latvia
  - Standard mortality ratios ranged from 3.4 (95% CI 3.3-3.5) in psychiatric patients in Poland to 39.4 (95% CI 0.2-220.8) in street-recruited female IDUs in Norway
  - Main causes of deaths included overdose, HIV/AIDS, other infections, cancer and cardiovascular disease

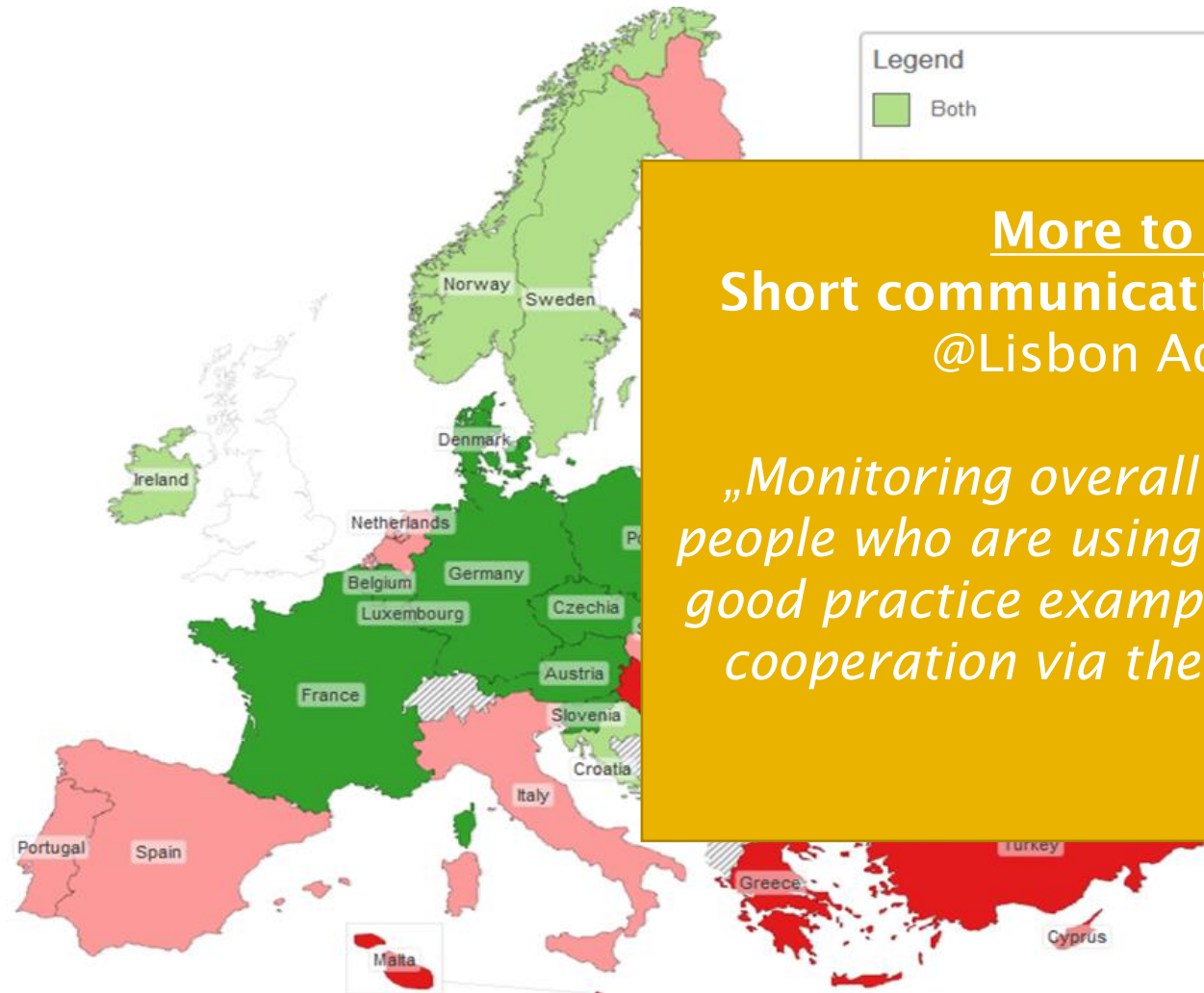
Mortality cohort studies among people using drugs in Europe: countries with studies conducted within the last 10 years or earlier. June 2021



## Coverage of national and regional mortality cohort studies. June 2021



Coverage of national and regional mortality cohort studies. June 2021



**More to come:**  
**Short communication presentation**  
**@Lisbon Addictions**

*„Monitoring overall mortality among people who are using drugs in Europe: A good practice example for international cooperation via the REITOX network”*

# Results: Revision of ST18

- The ST18 was restructured into two sections:
  - 1 Standard Table 18
  - 2 Overview (nationally)
- Section 1 - Revised ST18 allows the reporting of **one individual study only**
  - Core items were adapted to facilitate a clearer comparison between studies and among countries and support combined analysis at a European level in future
  - To be filled out by the study authors themselves or the NFPs/DRDs experts
- Section 2 - “Overall picture of the study situation in Country XY”
  - Choose the appropriate information from a selection of pre-formulated multiple-choice answer options, e.g., way forward, risk factors, protective factors, recommendations, ...
  - To inform policy makers and to make their implications for public health more comprehensible
  - To be filled out by the NFPs/DRDs experts





### Standard Table 18:

## Overall mortality and causes of death among cohorts of drug users recruited in treatment services - version 1/2021

#### + 1. - Introduction

#### - 2. - Methods

##### 2.1. - Basic description of cohort enrolled

###### 2.1.1 - Country \*

###### 2.1.2 - EMCDDA data collection year \*

###### 2.1.3 - **Study site (geographical coverage)**

e.g. Vienna, Denmark...

###### 2.1.4 - **Setting of enrolment**

e.g. Outpatient treatment centres, inpatient treatment centres...

###### 2.1.5 - **Study population**

e.g. Opiate users admitted to outpatient treatment centres...

## Study Factsheet (1)

Please provide the following information for each identified study individually

<b>Title</b>	Title of the study, take from publication or enter a clearly identifiable title
<b>ID</b>	Each study is assigned its own ID by the EMCDDA
<b>Study site (geographical coverage)</b>	<input type="radio"/> National <input type="radio"/> Regional <input type="radio"/> single region <input type="radio"/> more than one region <input type="radio"/> Local <input type="radio"/> single city <input type="radio"/> more than one city <input type="radio"/> NA  If study site is not national, please specify cities or regions: .....
<b>Enrolment period</b>	..... to ..... (please use format DD.MM.YYYY)
<b>End of observation period</b>	.....(please use format DD.MM.YYYY)
<b>Setting(s) of enrolment</b>	<input type="checkbox"/> Outpatient treatment centre(s) <input type="checkbox"/> Inpatient treatment centre(s) <input type="checkbox"/> Low-threshold service(s) <input type="checkbox"/> Prison(s), law enforcement <input type="checkbox"/> After prison release <input type="checkbox"/> Hospital(s) including emergency service(s) <input type="checkbox"/> Other setting  If Other, please specify: .....
<b>Study population</b>	<input type="checkbox"/> Opioid users in (opioid agonist) treatment <input type="checkbox"/> Opioid users not in (opioid agonist) treatment <input type="checkbox"/> Cocaine users in treatment <input type="checkbox"/> Cocaine users not in treatment <input type="checkbox"/> Amphetamine users in treatment <input type="checkbox"/> Amphetamine users not in treatment <input type="checkbox"/> Other stimulant users in treatment <input type="checkbox"/> Other stimulant users not in treatment <input type="checkbox"/> Cannabis users in treatment <input type="checkbox"/> Cannabis users not in treatment <input type="checkbox"/> Synthetic cannabinoid users in treatment <input type="checkbox"/> Synthetic cannabinoid users not in treatment <input type="checkbox"/> Other users <u>not</u> in treatment <input type="checkbox"/> Other  If Other users <i>not in treatment</i> , please specify: .....  If <i>Other</i> , please specify:

<b>Inclusion criteria</b>	..... (e.g., min/max age, gender/sex, geographic restrictions, nationality, citizenship, ...)
<b>Study type</b>	<input type="radio"/> Register-based study (e.g., treatment data, health insurance, law enforcement, ...) <input type="radio"/> Prospective study <input type="radio"/> Retrospective study <input type="radio"/> Survey-based data <input type="radio"/> Other If <i>Other</i> , please specify: .....
<b>(Additional) data collected</b>	<input type="checkbox"/> Personal information (i.e., gender/sex, date and/or place of birth, nationality, ...) <input type="checkbox"/> Substances used <input type="checkbox"/> Modes of substance use (injecting drug use, high-risk drug use, etc.) <input type="checkbox"/> Health data (e.g., diagnosed mental or psychiatric disorders) <input type="checkbox"/> Infectious diseases data <input type="checkbox"/> Risk factors (needle-sharing, using drugs alone, homelessness, unprotected sex, ...) <input type="checkbox"/> Opioid Agonist Treatment <input type="checkbox"/> ... <input type="checkbox"/> Other If <i>Other</i> , please specify: .....
<b>Ascertainment of vital status and data linkage</b>	Vital status was ascertained through <input type="radio"/> Linkage of the cases dataset with the general mortality register <input type="radio"/> Linkage with other register/registries <input type="radio"/> No linkage (only local data) <input type="radio"/> Other If <i>Other</i> , please specify: .....
<b>Data protection</b>	How was data protection ensured? <input type="radio"/> Fully-anonymised data <input type="radio"/> Pseudonymized data <input type="radio"/> Other If <i>Other</i> , please specify: .....

Core items		Female	Male	Total
	Size of the cohort (i.e. vital status verified)			
	Person-years (PY) of observation			
	Mean age of enrolment of subjects followed up			
	Mean age at death of subjects followed up			
	Death cases at the end of follow-up			
	Crude mortality rate (CMR) per 1 000 PY (95% CI)			
	Mortality rate in the reference population			
	Standard mortality ratio, SMR (95% CI)			
	<p>Are causes of death available for analysis in this study?</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p><input type="radio"/> NA</p> <p>If yes:</p> <p><input type="radio"/> All codes (underlying and contributory)</p> <p><input type="radio"/> Only underlying cause code</p> <p><input type="radio"/> Do not know</p>			

Cause-specific mortality	Causes of death (ICD-10 code)	Number of deaths reported	Death cases/100 000 persons per year (cohort)	Death cases/100 000 persons per year (standard population)	Standard mortality ratio per cause of death (95% CI)
	<b>COMPULSORY: Underlying cause of death</b> (based on the EMCDDA definition <sup>1</sup> )				
	Harmful use, dependence, and other mental and behavioural disorders				
	Accidental poisoning				
	Intentional poisoning				
	Poisoning by undetermined intent				
	Exposure to other and unspecified drugs				
	All other (unknown) causes of which, ill-defined conditions				
	All codified cases <b>based on the EMCDDA definition</b>				
	Unknown causes				
<sup>1</sup> The <a href="#">EMCDDA DRD protocol</a> defines the operational criteria to select the 'overdose' or 'drug-induced deaths' cases, according to the common European definition. These cases are reported annually by the countries to the EMCDDA. The methods pages of the <a href="#">statistical bulletin</a> provides the list of the selected ICD codes. The summary table of this list is available in Annex 1.					
<b>OPTIONAL: Cause-specific deaths</b> based on the standardized definitions adopted from Santos et al. (2020, p. eTable 4)					
	<b>All injury and poisoning</b> (F11-F16, F19, F55, V00-X99, Y00-Y39, Y85-Y87, Y89)				
	<b>Drug-induced deaths</b> (F11- F16, F19, F55, X40- X44, X60-X64, X85, Y10-Y14)				

# Conclusions

- Many countries affiliated to the EMCDDA report insights from mortality cohort studies, but their use could be expanded to include the remaining countries
- The revised ST18 aims to serve as a basis for improving the comparability and utilisation of cohort studies in the EU29, Norway and Turkey
  - Harmonised and consistent definitions (depending on data linkage possibilities; data protection issues etc.) and to
- **Next steps**
  - Completion of pilot testing with other interested countries
  - Production of a short technical report (incl. the results of the discussions of pilot test)
  - Update of the review and mapping of cohort studies (2020-2021)
  - Support the development of a web-based resource based on the documents produced (EMCDDA evidence repository for policy makers and interested researchers)

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