



Euro-FoTox project

Objectives, process and preliminary findings

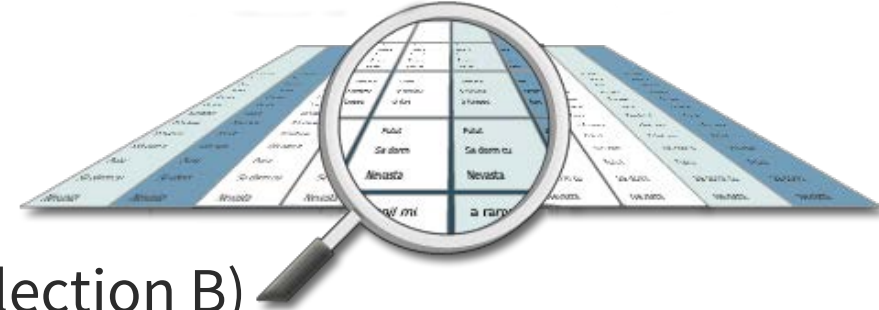
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Project

ICD-10



- Numbers for drug-related deaths are most often reported based on general mortality register data (selection B)
- In addition, some countries report from special registries (selection D)
- DRD data based on selection B is not particularly detailed
- Aggregated data is not available
- Some new phenomena may be missed
- Information on forensic toxicology practises is crucial in understanding how the DRD statistic are produced in different countries

Aims

- To better understand the characteristics of data reported through the established systems (Fonte)
- To investigate, whether a short, regular data collection from a toxicology network can provide useful information on the number of cases, findings and basic demographics
- To investigate, whether the network can be utilised in identifying clusters or new patterns of use



First step

- Mapping of all laboratories performing post-mortem toxicology analyses
 - 28 EU member states
 - Turkey, Norway, Switzerland and Iceland
- Mapping was based on the results of the project conducted by Axel Heinemann and Stephanie Iwersen-Bergmann in 2017
- Additional contacts through personal connections and professional associations
- The Heads of Focal points were contacted for additional information on laboratories
 - All but four EU countries provided the requested information

Extreme variability in structures and processes

- In some countries, just one laboratory handle all cases
- In most countries 4-30 laboratories are involved
- Example from Bulgaria (Vasil Atanasov):
 - Several laboratories
 - Three of them are equipped with GC-MS and they are able to confirm initial screening result
 - Other two labs perform limited number of tests (immunoassay, TLC)
 - When some suspicious case is available the samples are redirected to the first group of labs

Facility survey

1. Please give your name, laboratory, town and country

2. Postmortem toxicology in your country.

2.1. How many **postmortem toxicology cases** did your laboratory handle in 2018 (e.g. poisonings, accidents, violent deaths, suicides...)?

2.2. How many postmortem cases were considered a **poisoning** (by any substance)?

2.3. Of these, how many cases had at least one **illicit drug** contributing to the death ('EMCDDA definition*'), or an **opioid substitution medicine**, or **another opioid**?

**For the purpose of the EMCDDA regular national statistics, the definition of drug-related deaths is 'deaths happening shortly after consumption of one or more illicit psychoactive drugs and directly related to this consumption, although they may often happen when such substances are taken in combination with other substances, such as alcohol or psychoactive medicines'. These deaths are often referred to as 'drug-induced deaths' or also, poisonings or overdoses.*

The complete protocol can be found [here](#)

3. What was the most common **primary intoxicant** in these deaths ('EMCDDA definition') in your laboratory?

4. In how many cases did the **primary intoxicant** belong to the group of

opioids?

amphetamines?

cocaine?

new psychoactive substances (NPS)?

5. Did you participate in the previous survey published in 2018 on postmortem toxicology practices across Europe (summary and report can be found [here](#))

YES

NO

6. Would you like to receive a brief summary of the findings of this current European survey?

YES

NO

7. As far as you know, how many other laboratories handle fatal overdose cases in your country, and contribute to the national reporting?

(You may check [here](#) the total number of overdose deaths reported last year by your country.)

Facility survey

- Survey was sent to all identified contacts (213) and the Heads of focal points in the corresponding countries (29)
- Some addresses were outdated
- Some had trouble submitting the results due to technical reasons
- Some didn't have access to the 2018 data yet

- So far we have received 35 answers from 21 countries
- From 7 countries, all the toxicology contacts have responded

Facility survey - observations

“...the laboratory just determines psychoactive and other substances in autopsy material, but it does not evaluate (interpret) the findings. This is done by forensic medicine experts after the autopsy, and they establish the direct or indirect cause of death caused by the abused substances that have been determined by toxicologists.”

“Our unit performs toxicological analyses, the results of which are provided to forensics. However, we do not have access to the final reports from the autopsy and therefore, we do not have information on whether the substances found in the analyzed biological material are directly responsible for death.”

- Cause-of-death information is not always available for toxicologists
- Considerable delay in getting the cause-of-death information

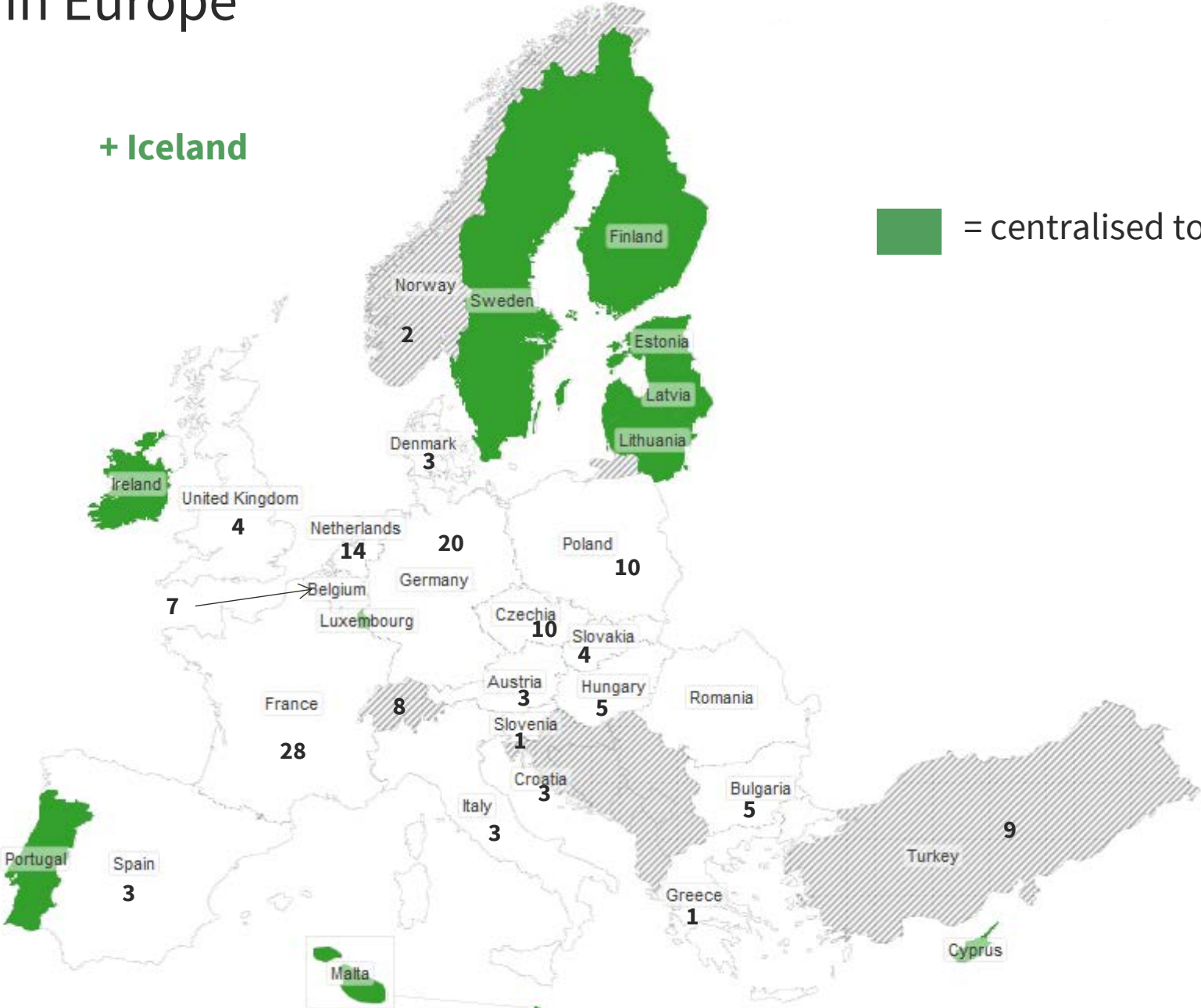
Facility survey - observations

- In some countries, it is difficult to find the information about how many laboratories handle PM toxicology analyses
- Question: “As far as you know, how many other laboratories handle fatal overdose cases in your country, and contribute to the national reporting?”
 - Two replies from Belgium: 5 and 7
 - Five replies from France: 8, 30, 28, 20 and 20-30
 - Three replies from Poland: 11, approximately 10 and approximately 25

PM toxicology in Europe

+ Iceland

 = centralised to one laboratory



Example 1: Sweden

- PM toxicology centralised to one laboratory in Linköping
- About 5200 autopsies per year (90 000 deaths in total)
- Autopsies are performed in 6 cities, samples are sent to Linköping
- Toxicology in nearly all autopsy cases

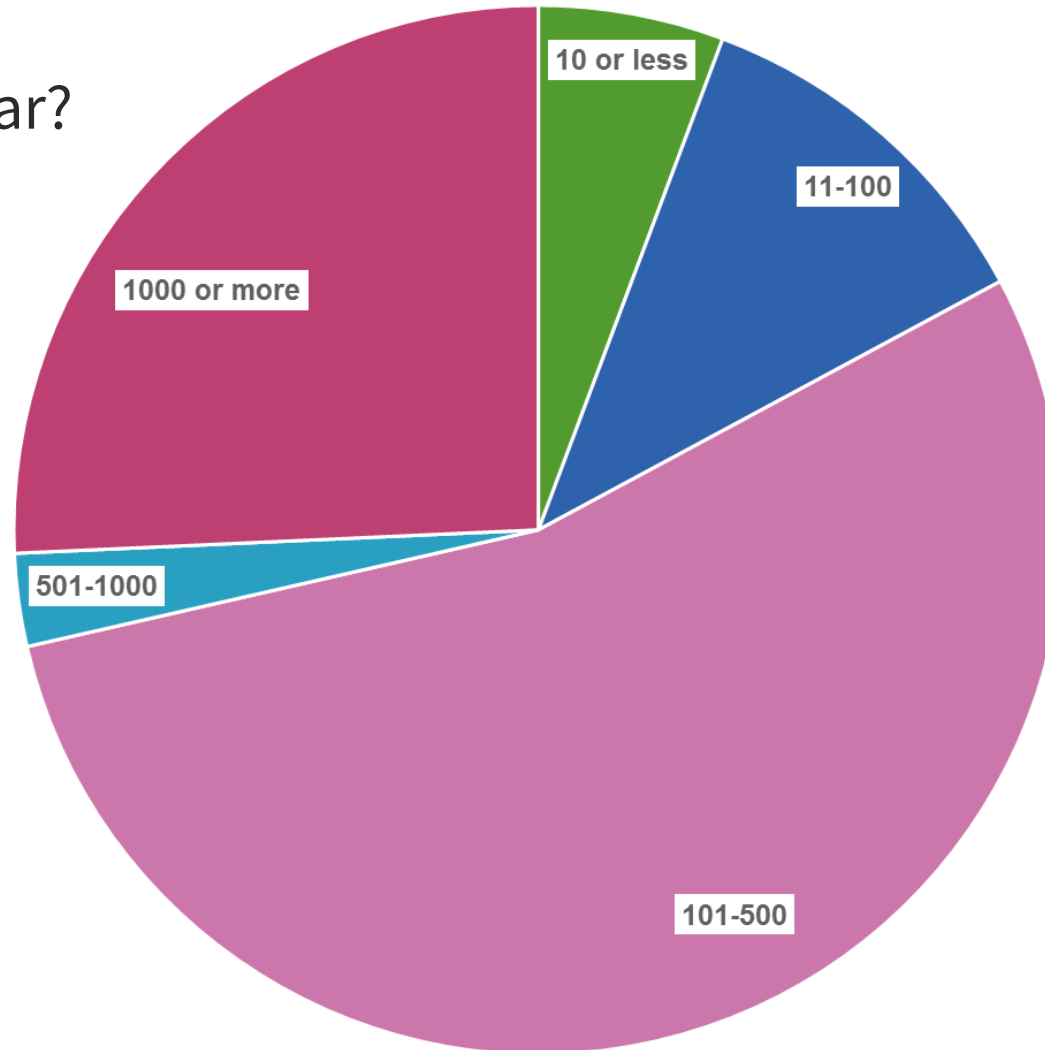
Source of the numbers: (Håkan Leifman, 2016)

Example 2: Czech republic

- PM toxicology performed in 10 laboratories
- Prague (4 labs), Ceske Budejovice, Pardubice, Brno, Ostrava, Olomouc, Pilsen
- All laboratories located in hospitals (mostly university hospitals)
- Institute of Forensic Medicine and Toxicology, Laboratory of Toxicology, General Teaching Hospital in Prague:
 - 111 samples in 2018, most important intoxicant METHAMPHETAMINE

Preliminary results: case load

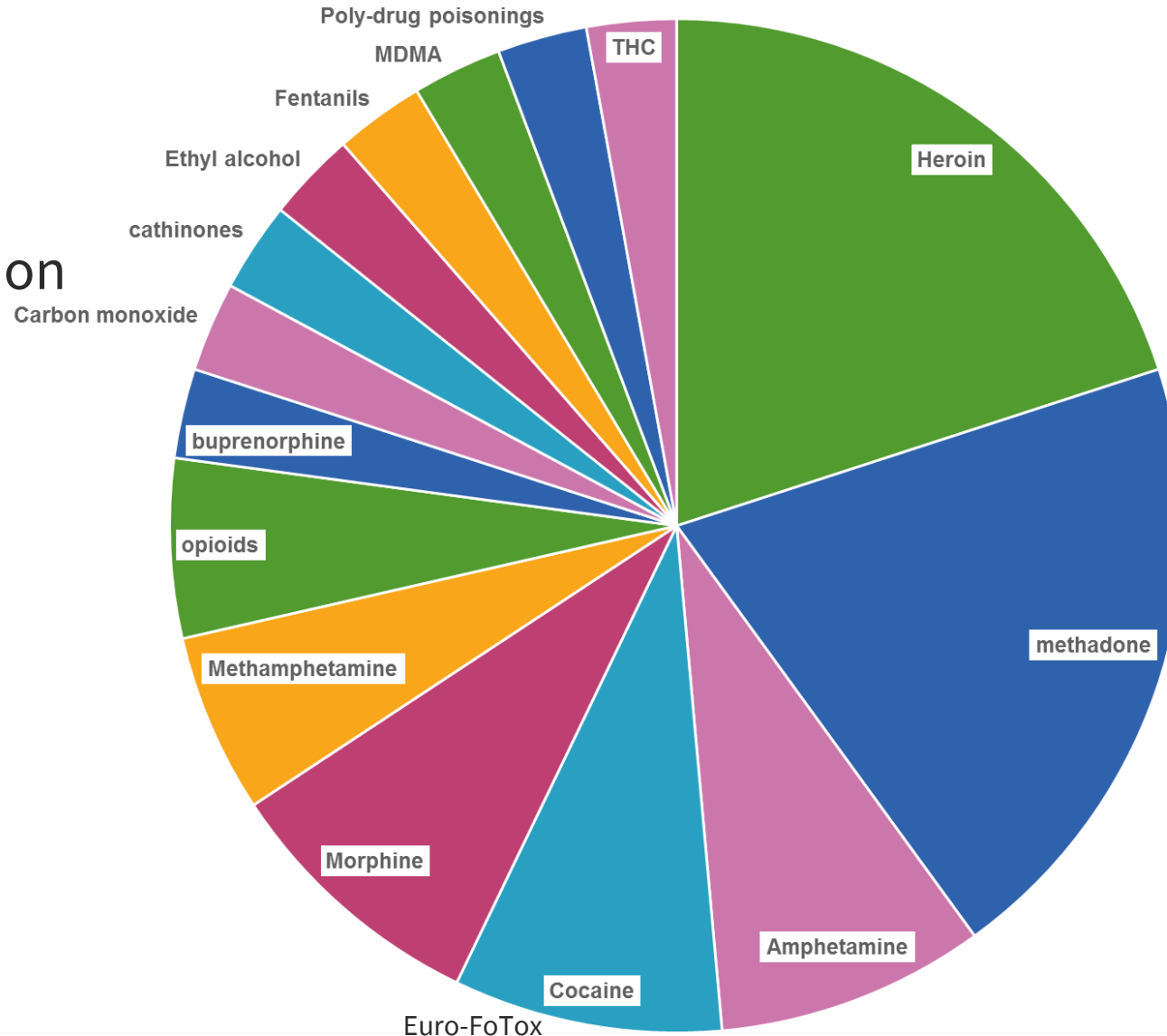
How many samples per year?



Mean: 1046
Median: 310

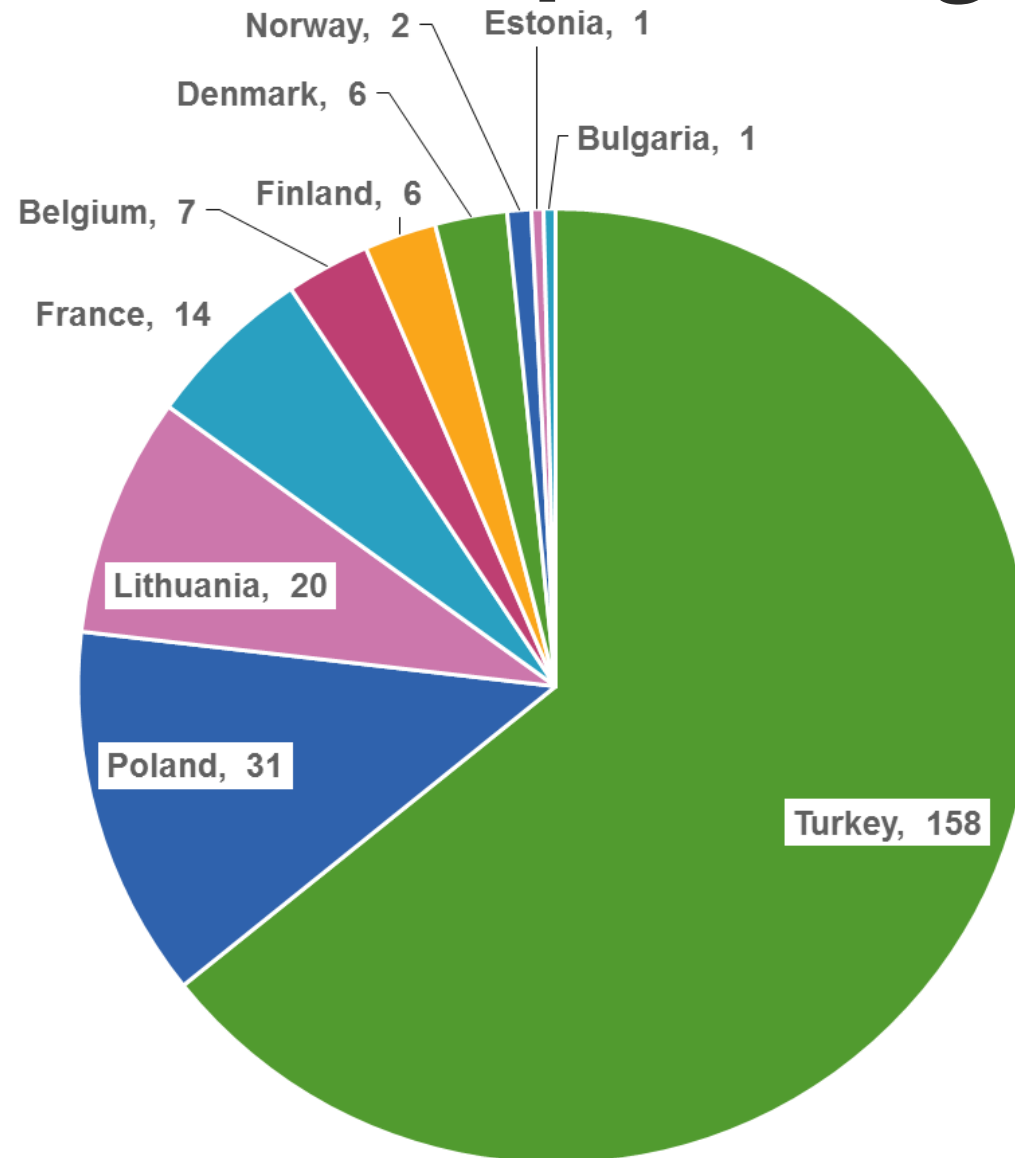
Preliminary results: primary intoxicant

“What was the most common primary intoxicant in the (DRD) cases in your laboratory”



Primary results: NPS in fatal poisonings

NPS as the primary intoxicant in a fatal poisoning (2018)



Next

- Collecting and reporting the results of the facility survey
- Finalising the toxicology network
- Piloting a standard form to report aggregated data from drug-related death cases
- Utilising the network in ad-hoc surveys

Remaining questions

- The role of the initial case selection for medico-legal investigations/ PM toxicology in DRD reporting
- Do toxicologists take part in determining the cause of death?
- Implications of the results of the project
 - In national level
 - For the EMCDDA