

# Session 5 – Workshop Improving DRD information Multi-indicator coherence analysis (Multi-country analysis)

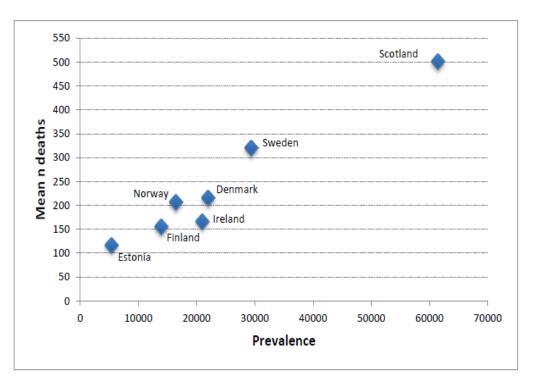
2019 EMCDDA annual meeting on Drug-related Deaths EMCDDA, Lisbon 21-22 October 2019

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## Building in previous work

- Selected issue 2011 -> estimation overall mortality in EU
- Work by two groups on mortality coordinated by EMCDDA
- Work of EMCDDA and Tim Millar in 2016

Figure 4: Mean annual number of opioid-related deaths (2009-2013) vs. best available estimates of problem opioid users (or a proxy thereof)





- Basic assumption
- All other factors being equal opioid overdoses will be related to number of HROU



#### Basic model

Country A Number of opioid users 100.000

Estimation methods (CrC, multiplicative...)

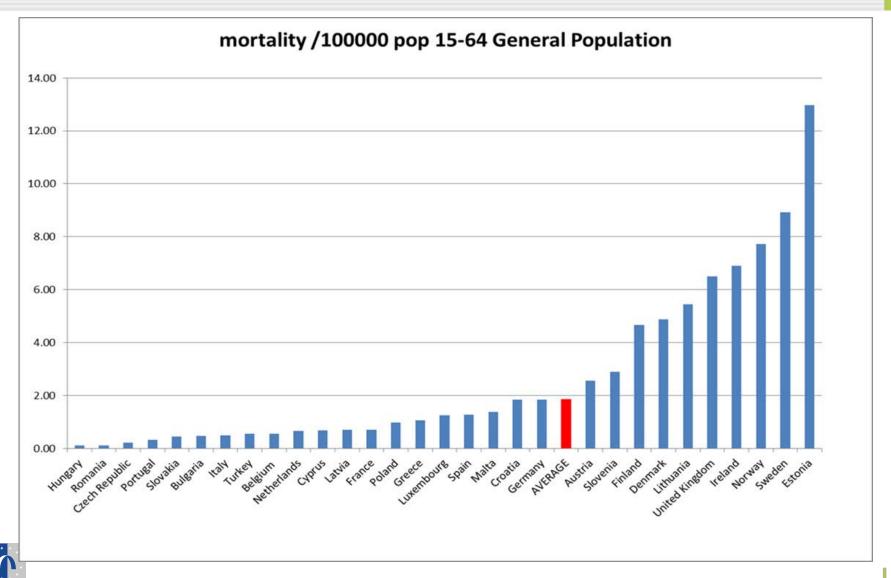
Estimated risk of death due to "opioid drug overdose"

1 per 100 users by year (1/100 py)

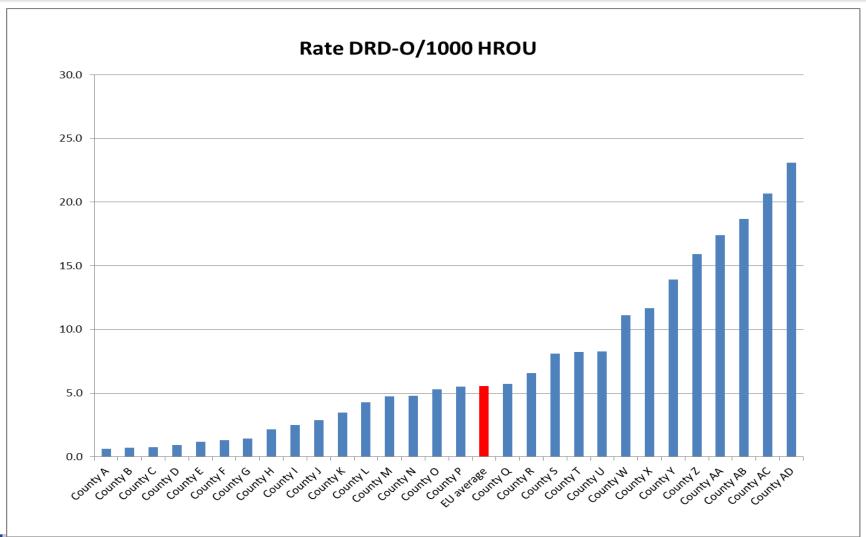
Expected DRD **1.000** 



#### E.g. similar to lung cancer deaths among the whole population of countries

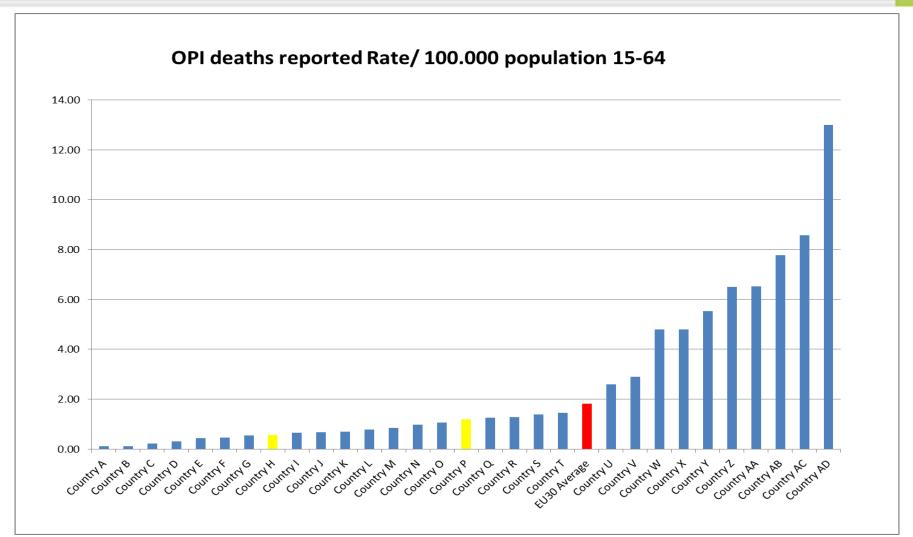


E.g. similar to **lung cance**r deaths among the <u>daily smokers</u> of countries – this is surprising





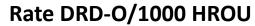
# Example of reasoning

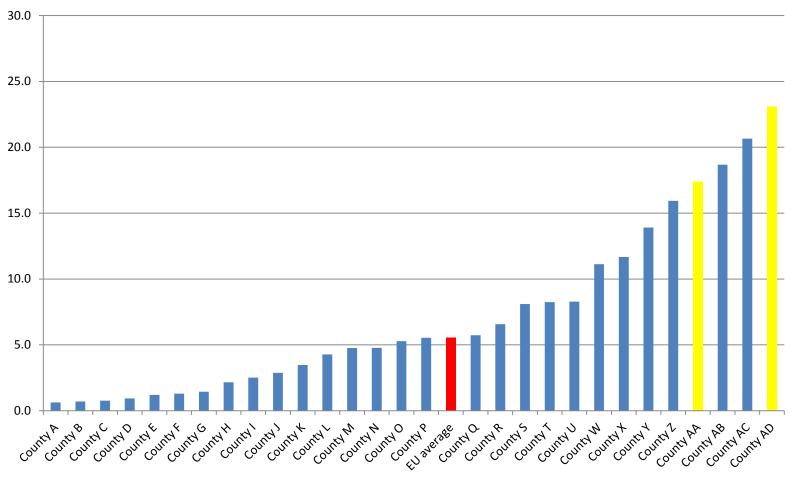




#### Example:

Estimated a normal/low DRD reporting (<u>numerator</u>) → the <u>denominator</u> should be small – yes, they have **very low** prevalence of HROU **[0.55/1000** and **0.26/1000** - EU30 average **3.38/1000** ] → **8-12 times** 







#### Basic model

Country A Number of opioid users 100.000

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Expected DRD 1.000



# Levels of risk

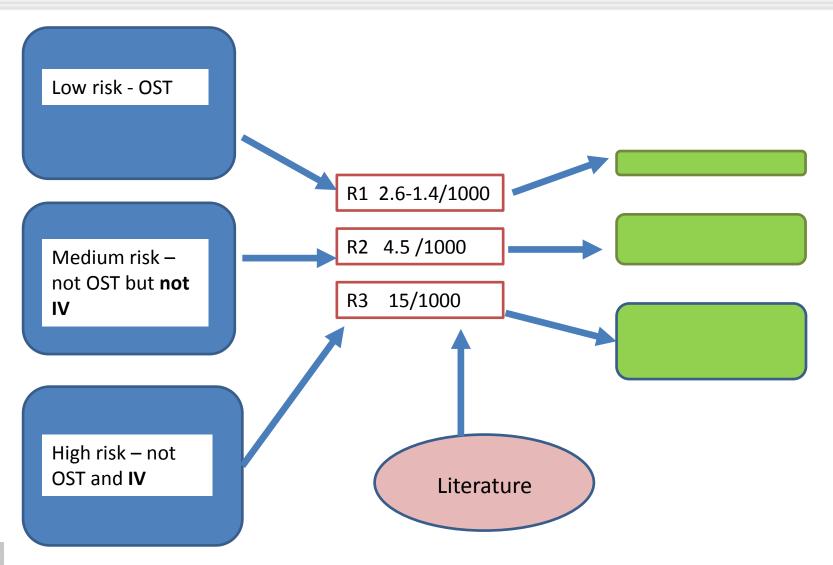
Low risk - OST

Medium risk – not OST but **not IV** 

High risk – not OST and IV

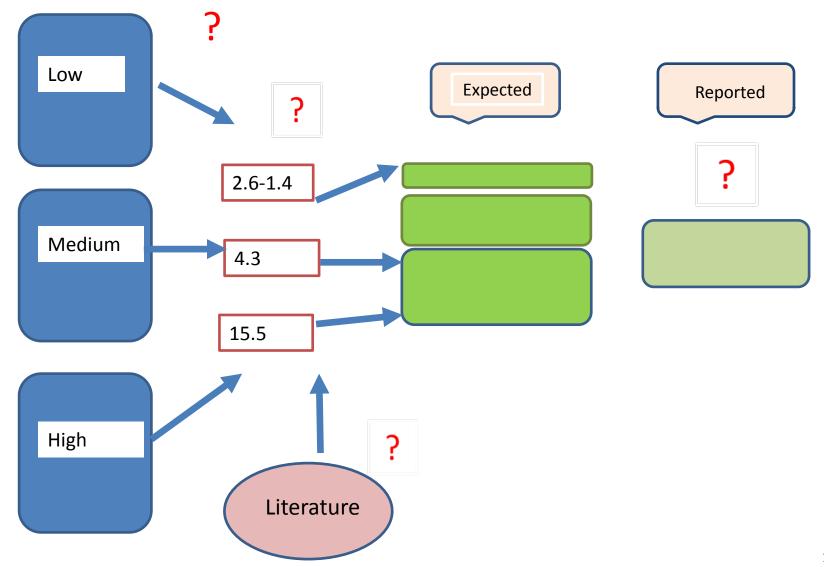


# Levels of risk – Mortality – Estimated DRD per level





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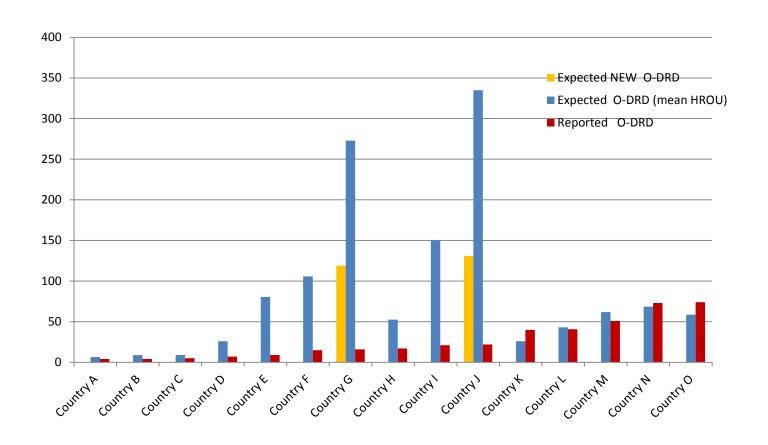
# Method detailed in "Technical Appendix" of project description to Heads NFP

	HROU	Overdose mortality	'Expected' deaths	Reported deaths
Low risk (OST) Methadone	10.000	2.6/1.000	26	
Medium risk	5.000	4.6/1000	23	
High risk	5.000	15.7/1000	78	
TOTALS	20.000		127	e.g. 90



#### With more updated information

#### Lower HROU estimate -- National cohort, lower mortality





## With further adjustments (HROU – lower bound)

