Acute Harms of Prescription Drug Misuse: What Can We Learn from the European Drug Emergencies Network (Euro-DEN) Plus Project

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Conflicts of Interest

- Expenses covered and honorarium to attend and present at this meeting from RADARS

- Rocky Mountain Poison and Drug Control Center
  - Statistical assistance and grants in relation to prescription drug misuse and web monitoring surveys in the UK and Singapore

- Euro-DEN and Euro-DEN Plus
  - 2013-2015: Financial support from the DPIP/ISEC Programme of the European Union
  - 2015 onwards: Ongoing financial support from EMCDDA for data analysis and meetings

- Member of the UK Advisory Council on the Misuse of Drugs (ACMD) prescription medication misuse working group
Acute Drug Toxicity Data

- Systematic data collected and reported on
  - Prevalence of drug use
  - Drug seizures
  - Problematic drug use
  - Drug-related deaths

- There is limited *systematic* data collated drug (and NPS) toxicity
  - Despite being *key public health indicator* on the population impact of drug use
The RADARS System utilizes a mosaic strategy to monitor abuse, misuse and diversion across all phases of the drug abuse pathway.
Collecting the Data Questions and Answers

What is a DAWN case?

A DAWN case is any ED visit or death related to recent drug use. The criteria for inclusion in DAWN are intentionally broad and simple, with few exceptions.

What drugs are included in DAWN?

Thousands of drugs of all types are included in DAWN. These include:

- Illegal drugs of abuse
- Prescription and over-the-counter medications
- Dietary supplements
- Non-pharmaceutical inhalants
- Alcohol in combination with other drugs (adults and children)
- Alcohol alone (age < 21)

What types of cases are included in DAWN?

Because DAWN cases are defined broadly, DAWN captures many different types of drug-related cases.

<table>
<thead>
<tr>
<th>DAWN ED cases include:</th>
<th>DAWN mortality cases include:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug abuse and misuse</td>
<td>Drug abuse and misuse</td>
</tr>
<tr>
<td>Suicide attempts</td>
<td>Completed suicides</td>
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<tr>
<td>Overmedication</td>
<td>Overmedication</td>
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<tr>
<td>Adverse reactions</td>
<td>Adverse reactions</td>
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<tr>
<td>Accidental ingestions</td>
<td>Accidental ingestions</td>
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<tr>
<td>Malicious poisoning</td>
<td>Homicide by drugs</td>
</tr>
<tr>
<td>Underage drinking</td>
<td>Underage drinking</td>
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<tr>
<td>Patients seeking detoxification or drug abuse treatment</td>
<td>Other deaths related to drugs</td>
</tr>
</tbody>
</table>
Survey of REITOX National Focal Points on national and/or regional data collection on acute drug toxicity
- 12/36 countries: national data on classical drugs
- 10/36 countries: national data on NPS
- Data collected from multiple non-consistent sources
- Inconsistent variables collection
Euro-DEN minimum dataset (60 parameters) on all ED presentations with **acute drug toxicity**
- Clinical features consistent with acute drug / NPS / prescription medicine toxicity
- Drug(s) involved: patient self-report, clinical interpretation

**Exclusions**
- Lone alcohol toxicity
- Cases not related to acute drug toxicity e.g. trauma, self-harm

Data returned to London for collation

**Euro-DEN Plus**: refinement of minimum dataset
Original Euro-DEN Network

- Oslo, Norway (OAEOC, OUH)
- Tallinn, Estonia
- Pärnu, Estonia
- Gdansk, Poland
- Munich, Germany
- Paris, France
- London, UK (STH/KCH)
- Dublin, Ireland
- Drogheda, Ireland
- Copenhagen, Denmark
- York, UK
- Barcelona, Spain
- Palma, Mallorca, Spain
- Basel, Switzerland
Current Euro-DEN Plus Network

Note: Centres are also located in non-EU countries: Basel and Bern (Switzerland) and in Yekaterinburg (Russian Federation).
European Drug Report

Trends and Developments

2017

Hospital emergency presentations and acute drug toxicity in Europe

Update from the Euro-DEN Plus research group and the EMCDDA
August 2016
QUESTION

Do you think the proportion of prescription / over-the-counter medicines in Euro-DEN Plus presentations between 2014 and 2016 is:

A. Increasing
B. Staying the same
C. Decreasing
D. Not sure
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D. Not sure
Drug categories over the 3 years (24,538 drugs)

- Illicit drugs: 66.2%
- Prescription: 23.5%
- NPS: 7.1%
- Unknown: 2.7%
- Other: 0.5%

Euro-DEN Plus Presentations: 16,034
Top 20 Drugs Euro-DEN Plus 2014-2016

- Heroin
- Cocaine
- Cannabis
- GHB/GBL
- Amphetamine
- MDMA
- Clonazepam
- Methadone
- Methamphetamine
- Mephedrone
- Unknown
- Synthetic cannabinoids
- Crack cocaine
- Alprazolam
- Unknown branded
- NPS unknown
- Zopiclone
- Ketamine
Median age (IQR) 37 (28-46) years
Range 13-90 years
68.7% male

Median age (IQR) 31 (24-39) years
Median (IQR) Length of Stay: 4h 36m (2h 28m – 9h 34m)
79.2% <12 hours; 89.2% <24 hours
Conclusions and Parting Thoughts

- Euro-DEN Plus provides detailed information on the acute harms related to use of prescription medicines
  - Older individuals than recreational drugs and NPS
  - Potentially decreasing presentations related to POM
  - Variability between centres in prescription medicines seen
- Opioids associated with acute harm presentations not the same as opioids of concern in the US
  - Minimal Oxycodone
  - No Oxynorm, Hydromorphone, Hydrocodone
- Drugs causing acute harm correlate with drug sales data
- Provides an additional indicator on prescription medicine misuse to other RADARS mosaic indicators
The Euro-DEN Plus Research Group