Trends in Opioid Analgesic Abuse and Mortality in Europe in 2017

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EUROTOX 2017

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RADARS® System
Introduction

• A mosaic approach – use of multiple different data sources, surveying different populations, collecting important outcome measures

• Important to look within a country, comparing trends across countries but quantitative rates not comparable due to varying methodology, cultures, market availability

• Important to be product and route specific to identify risks and evaluate interventions such as abuse deterrent formulations
Europe – Dosage Units per Population

- France
- Germany
- Italy
- Spain
- Uk

- Buprenorphine
- Codeine
- Fentanyl
- Hydromorphone
- Hydrocodone
- Methadone
- Morphine
- Oxycodone
- Sufentanil
- Tapentadol
- Tramadol
France- EUROPAD (through 4Q2016)

Primary Drug Used to Get High in Past Month

- Oxycodone
- Tramadol
- Methadone
- Morphine
- Morphine
- Codeine
- Buprenorphine
- Heroin

Percent Respondents

0% 5% 10% 15% 20% 25%
Route of Primary Drug

- Injected
- Dermal
- Sniffed Snorted
- Smoked
- Dissolved in Mouth
- Chewed
- Swallowed
- Other

France - EUROPAD
France GTNet–Adult Human Exposures to Opioids Reported to Poison Center

France Intentional Opioid Rate per 100,000 Population
France GTNet–Adult Human Exposures to Opioids Reported to Poison Center

![Graph showing frequency of opioid exposures by route of administration. The majority are oral exposures, followed by parenteral and unknown route.]

- **Inhalation/Nasal**: Minimal
- **Oral**: Dominant
- **Parenteral**: Low
- **Unknown Route**: Minor
France Summary

- Codeine and tramadol by far the most utilized, most other opioids increasing
- Patients entering substance abuse treatment most often report heroin and buprenorphine as their primary drug of abuse
  - Sniff/smoke primary drug 42%
  - Inject primary drug 34%
- Decreasing exposures reported to poison centres
Europe – Dosage Units per Population

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<tr>
<th>France</th>
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- Buprenorphine
- Codeine
- Fentanyl
- Fentanyl
- Hydrocodone
- Hydromorphone
- Methadone
- Morphine
- Oxycodone
- Sufentanil
- Tapentadol
- Tramadol

Graph showing trends in dosage units per population for different countries from 2011 to 2016.
Primary Drug Used to Get High in Past Month

- Tramadol
- Morphine
- Buprenorphine
- Methadone
- Heroin
Germany - EUROPAD

Route of Primary Drug

- Injected
- Sniffed Snorted
- Smoked
- Dissolved in Mouth
- Chewed
- Swallowed
- Other
Germany GTNet–Adult Human Exposures to Opioids Reported to Poison Center

Germany Intentional Opioid Rate per 100,000 Population

Rate per 100,000 Population

Year-Quarter

20121 20122 20123 20124 20131 20132 20133 20134 20141 20142 20143 20144 20151 20152 20153 20154
Germany GTNet–Adult Human Exposures to Opioids Reported to Poison Center

![Bar chart showing frequency of different opioid routes]

- **Inhalation/Nasal**: Low frequency
- **Oral**: High frequency
- **Parenteral**: Medium frequency
- **Transdermal**: Very low frequency
- **Unknown Route**: Very low frequency
Germany Summary

- Oxycodone and hydromorphone utilization increasing
- Patients entering substance abuse treatment most often report heroin, benzodiazepines as their primary drug of abuse
  - Smoking and injection reported by ~22-26%
- Intentional abuse of benzodiazepines reported 4-5x more often than opioids to poison centre
Europe – Dosage Units per Population

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<tr>
<th>France</th>
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<tbody>
<tr>
<td><img src="image1.png" alt="Graph" /></td>
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Legend:
- Buprenorphine
- Codeine
- Fentanyl
- Hydrocodeone
- Hydromorphone
- Methadone
- Morphine
- Oxycodone
- Sufentanil
- Tapentadol
- Tramadol
Italy - EUROPAD

Primary Drug Used to Get High in Past Month

- Methadone
- Oxycodone
- Tramadol
- Heroin

Percent Respondents
Italy GTNet–Adult Human Exposures to Opioids Reported to Poison Center

Italy Intentional Opioid Rate per 100,000 Population

Rate per 100,000 Population

Year-Quarter

20121 20122 20123 20124 20131 20132 20133 20134 20141 20142 20143 20144 20151 20152 20153 20154
Italy GTNet–Adult Human Exposures to OpioidsReported to Poison Center

Routes

Frequency
Italy Summary

• Codeine most commonly utilized opioid, oxycodone utilization increasing

• Patients entering substance abuse treatment most often report heroin and THC (not Rx) as their primary drug of abuse
  • Smoking reported most often (49%)
  • Injection reported by ~27%

• Exposures to benzodiazepines reported 7-8x more often than opioids to poison centre
Europe – Dosage Units per Population

- France
- Germany
- Italy
- Spain
- UK

Legend:
- Buprenorphine
- Codeine
- Fentanyl
- Fentanyl
- Hydromorphone
- Methadone
- Morphine
- Oxycodone
- Sufentanil
- Tapentadol
- Tramadol
United Kingdom - EUROPAD

Primary Drug Used to Get High in Past Month

- Hydrocodone
- Oxycodone
- Morphine
- Methadone
- Buprenorphine
- Tramadol
- Codeine
- Heroin

Percent Respondents
United Kingdom - EUROPAD

Route of Primary Drug

- Other
- Injected
- Dermal
- Sniffed Snorted
- Smoked
- Dissolved in Mouth
- Chewed
- Swallowed
UK GTNet–Adult Human Exposures to Opioids Reported to Poison Center

Uk Intentional Opioid Rate per 100,000 Population

Year-Quarter

Rate per 100,000 Population
UK GTNet–Adult Human Exposures to Opioids Reported to Poison Center
United Kingdom Summary

• Codeine most commonly utilized opioid, morphine utilization increasing
• Patients entering substance abuse treatment most often report heroin and codeine as their primary drug of abuse
  • Smoking reported most often (46%)
• Exposures to benzodiazepines and opioids similar as reported to poison centre
Europe – Dosage Units per Population

<table>
<thead>
<tr>
<th>Country</th>
<th>Buprenorphine</th>
<th>Codeine</th>
<th>Fentanyl</th>
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<th>Methadone</th>
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EUROPAD – Primary Drug Used to Get High

United Kingdom
- Heroin
- Codeine
- Tramadol
- Methadone
- Morphine

Norway
- Buprenorphine
- Morphine
- Methadone
- Codeine
- Fentanyl
- Tramadol

Germany
- Buprenorphine
- Heroin

Italy
- Heroin

France
- Heroin
- Buprenorphine
- Morphine

Spain
- Codeine
- Methadone
- Tramadol
- Oxycodone

Oxycodone
EUROPAD – Primary Prescription Drug Used to Get High

- France: Buprenorphine
- United Kingdom: Codeine, Tramadol
- Norway: Buprenorphine
- Germany: Methadone, Oxycodone
- Italy: Tramadol
- Spain: Morphine, Fentanyl, Tramadol
- France: Methadone
- United Kingdom: Morphine, Oxycodone
- Norway: Methadone
- Germany: Buprenorphine
- Italy: Methadone, Oxycodone
- Spain: Buprenorphine, Tramadol
Assembling the Mosaic

- UK and France endorsements match dispensing
- Fentanyl and morphine in Spain were endorsed more frequently than expected by dispensing
- While oxycodone use is increasing in Germany, endorsements were low, but methadone was endorsed more than expected
- In Italy, the increase in oxycodone dispensing is reflected in treatment centre endorsements
Conclusion

• A mosaic approach to surveillance provides valuable insight from multi-dimensional perspectives

• Each of the programs presented target different facets of prescription opioid abuse, misuse, and diversion

• While magnitude and patterns vary, heroin, THC, prescription opioids and benzodiazepines commonly abused/misused in many countries
THANK YOU!

Questions?
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