RADARS® System Collaboration: European Opioid Treatment Program Goals & Data

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28 May 2016
Holiday Inn Leiden
Disclosure

- The RADARS® System is supported by subscriptions from pharmaceutical manufacturers for surveillance, research and reporting services.
- RADARS System is the property of Denver Health and Hospital Authority, a political subdivision of the State of Colorado.
- Denver Health retains exclusive ownership of all data, databases and systems.
- Subscribers do not participate in data collection or analysis, nor do they have access to the raw data.
Outline

- Prescription Opioid Utilization in Europe
- The Mosaic Surveillance Program
- Data
Includes: buprenorphine, codeine, fentanyl, hydrocodone, hydromorphone, methadone, oxycodone, sufentanil, tapentadol, tramadol
Europe – Dosage Units per Population

- **Canada**
  - Standard Units per Population
  - Years: 2011 to 2015

- **France**
  - Standard Units per Population
  - Years: 2011 to 2015

- **Germany**
  - Standard Units per Population
  - Years: 2011 to 2015

- **Italy**
  - Standard Units per Population
  - Years: 2011 to 2015

- **Spain**
  - Standard Units per Population
  - Years: 2011 to 2015

- **UK**
  - Standard Units per Population
  - Years: 2011 to 2015

Legend:
- Buprenorphine
- Codeine
- Fentanyl
- Hydromorphone
- Methadone
- Morphine
- Oxycodone
- Sufentanil
- Tapentadol
- Tramadol
What is a *Mosaic* Surveillance Program?

- Each program is designed to obtain information from different populations, repeatedly over time, at different points in the drug abuse pathway and in different settings, making them appropriate for “data triangulation” (Thurmond).

- “mosaic” by definition means “a combination of diverse elements forming a more or less coherent whole”
Surveillance Program Goals

- Utilize a mosaic approach to measure rates of misuse, abuse, and diversion of prescription and illicit drugs in Europe

- Collect product-specific and geo-specific data

- Analyze data accounting for population and drug utilization
RADARS® System Mosaic Approach

**NMU-Rx**
Survey of Non-Medical Use of Prescription Drugs in general population in Canada, France, Germany, Italy, the UK, and Spain

**EUROPAD**
Patients entering treatment in France, Germany, Italy, Spain, Norway, and the UK

**Survey of Key Informants’ Patients**
Patients entering treatment in Canada

**StreetRx**
Street price reported by Users/Buyers in Australia, Canada, France, Germany, Italy, Spain, and the UK

**Global Toxicosurveillance Network**
Acute events reported to poison centres in Australia, Canada, France, Germany, Italy, Scandinavia, Switzerland, Spain, The Netherlands, the UK, and Lithuania

**Web Monitoring**
Early signals/contextual experience using public internet postings in Australia, Canada, and the UK

**Drug Diversion**
Criminal activity reported by Law Enforcement investigators in Canada
European Opioid Treatment Program: Methods

- Principal Investigator & Program Manager based in Italy

- Pilot phase
  - Site investigators recruited from EUROPAD professional association
  - Operational feasibility of methods and data collection

- In-person working group meetings to discuss study refinements and directions (e.g., survey instrument, inclusion criteria, publications)
Collaborators

Icro Maremmani  Marilena Guareschi  Rick Dart  Jody Green

Silvia Bacciardi  Karin McBride  Catherine Kern

Europad
European Opiate Addiction Treatment Association

RADARS
System
European Opioid Treatment Program: Methods

- Full program implementation in 4th quarter 2014, completed surveys to-date: 1,134

- 13 site investigators in:
Collaborators

Francina Fonseca  Gaetano Deruvo  Lorenzo Somaini  Didier Touzeau
Marc Auriacombe  Jean-Pierre Daulouède  Pierre Villèger  Amine Benyamina
Norbert Scherbaum  Thomas Clausen  Duncan Hill  Oscar D’Agnone  Kevin Ratcliffe
Europe – Dosage Units per Population

Graphs showing the standard units per population for different countries over the years.
### France- EUROPAD

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<table>
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<td>Yes</td>
<td>3 (1.60)</td>
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France- EUROPAD

Primary Drug Used to Get High

- Fentanyl
- Amphetamine - Rx
- Oxycodone
- Tramadol
- THC / Cannabinoid / Marijuana - Rx
- Methadone
- Amphetamine - NOT Rx
- Morphine
- Codeine
- Buprenorphine
- Benzodiazepine
- Heroin
- THC / Cannabinoid / Marijuana - NOT Rx
- >1 primary drug
- Other: write in

>1 PRIMARY
THC-NOT Rx

0.0% 10.0% 20.0% 30.0%
France - EUROPAD

Route of Abuse

- Swallowed whole
- Sniffed/Snorted
- Smoked
- Dermal
- Other
- >1 route used
- Injected
- Dissolved in mouth
- Chewed/swallowed

0.0 20.0 40.0 60.0
Europe – Dosage Units per Population

CANADA

FRANCE

GERMANY

ITALY

SPAIN

UK

Standard Units per Population

Year
## Germany - EUROPAD

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Germany - EUROPAD

Primary Drug Used to Get High

- Benzodiazepine
- >1 Primary
- Heroin

- Fentanyl
- Amphetamine - Rx
- Oxycodone
- Tramadol
- THC / Cannabinoid / Marijuana - Rx
- Methadone
- Amphetamine - NOT Rx
- Morphine
- Codeine
- Buprenorphine
- Benzodiazepine
Germany - EUROPAD

Route of Abuse

- Swallowed whole
- Sniffed/Snorted
- Smoked
- Dermal
- Other
- >1 route used
- Injected
- Dissolved in mouth
- Chewed/swallowed
Europe – Dosage Units per Population

- CANADA
- FRANCE
- GERMANY
- ITALY
- SPAIN
- UK

Standard Units per Population

Year

BUPRENORPHINE
CODEINE
FENTANYL
HYDROCODONE
HYDROMORPHONE
METHADONE
MORPHINE
OXYCODONE
SUFENTANIL
TAPENTADOL
TRAMADOL
## Italy- EUROPAD

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Primary Drug Used to Get High

- Fentanyl
- Amphetamine - Rx
- Oxycodone
- Tramadol
- THC / Cannabinoid / Marijuana - Rx
- Methadone
- Amphetamine - NOT Rx
- Morphine
- Codeine
- Buprenorphine
- Benzodiazepine
- Heroin
- >1 primary drug
- Other: write in

THC / Cannabinoid / Marijuana - NOT Rx
Route of Abuse

- Swallowed whole
- Sniffed/Snorted
- Smoked
- Dermal
- Other
- >1 route used
- Injected
- Dissolved in mouth
- Chewed/swallowed

Italy- EUROPAD
Europe – Dosage Units per Population

[Graph showing the dosage units per population for different countries over the years. The countries include Canada, France, Germany, Italy, Spain, and the UK. The graph illustrates the trends for various opioids such as Buprenorphine, Codeine, Fentanyl, Hydrocodone, Hydromorphone, Methadone, Morphine, Oxycodeone, Sufentanil, Tapentadol, and Tramadol.]
Spain - EUROPAD

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<td>Female</td>
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<td>(35.48)</td>
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<td>40</td>
<td>(64.52)</td>
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<td><strong>Pregnant</strong></td>
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</tbody>
</table>
Primary Drug Used to Get High

- Fentanyl
- Amphetamine - Rx
- Oxycodone
- Tramadol
- THC / Cannabinoid / Marijuana - Rx
- Methadone
- Amphetamine - NOT Rx
- Morphine
- Codeine
- Buprenorphine
- Benzodiazepine
- Heroin
- >1 primary drug
- Other: write in
Spain - EUROPAD

Route of Abuse

- Swallowed whole
- Sniffed/Snorted
- Smoked
- Dermal
- Other
- >1 route used
- Injected
- Dissolved in mouth
- Chewed/swallowed

Bars represent the percentage of individuals using each route of abuse.
Europe – Dosage Units per Population
# United Kingdom - EUROPAD

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<tr>
<td><strong>Pregnant</strong></td>
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<tr>
<td>Yes</td>
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</table>
United Kingdom - EUROPAD

Primary Drug Used to Get High

- Fentanyl
- Amphetamine - Rx
- Oxycodone
- Tramadol
- THC / Cannabinoid / Marijuana - Rx
- Methadone
- Amphetamine - NOT Rx
- Morphine
- Codeine
- Buprenorphine
- Benzodiazepine
- Heroin
- >1 primary drug
- Other: write in

THC / Cannabinoid / Marijuana - NOT Rx
United Kingdom - EUROPAD

Route of Abuse

- Swallowed whole
- Sniffed/Snorted
- Smoked
- Dermal
- Other
- >1 route used
- Injected
- Dissolved in mouth
- Chewed/swallowed

SMOKED

>1 ROUTE

INJECTED

0.0
20.0
40.0
60.0
Conclusions

- A mosaic approach to surveillance provides valuable insight from multi-dimensional perspectives.
- Each of the programs 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.
  - alternate routes of abuse often reported (smoked, injected, chewed).
Conclusions

- Partnerships on global research projects are an opportunity to collaborate with local experts who share the goal of collecting, analyzing and providing data-driven information about misuse, abuse and diversion of prescription drugs.
- The EUROPAD Program engages addiction treatment specialists in research focused on their unique treatment populations.
- Data results can:
  - Provide regulatory entities with context about individuals entering drug dependence treatment in their countries and regions.
  - Inform community-based intervention strategies.