NEW SUBSTANCES OF ABUSE IN EUROPE

Results from a EUROPAD Pilot Study in Four Countries

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Denver Health & Hospital Authority, Denver CO USA
10 November 2013
Background – RADARS® System

• Researched Abuse, Diverted and Addiction-Related Surveillance

• Independently owned & operated

• Conducting prescription drug abuse, misuse and diversion surveillance in the United States since 2001
Background – RADARS® System

• Guided by external Scientific Advisory Board

• Qualified Principal Investigator for each program

• Provide common ground for Industry, Regulatory Agencies, Academics and Clinicians
United States RADARS® System
Mosaic Approach

- College Survey CS-US
- Early Experimenters
- Poison Center PC-US
- Acute Events
- Opioid Tx Program OTP-US
- Patients in Treatment
- Survey of Key Informant Pts SKIP-US
- Patients in Treatment
- Drug Diversion DD-US
- Criminal Justice/Law Enforcement
- Street Price SRx-US
- Users/Buyers
REVIEW OF OPIOID AND STIMULANT TRENDS IN THE UNITED STATES

Have we reached the plateau?
URDD per quarter by drug for each state

- hydrocodone: 21.8 M
- IR oxycodone: 8.4 M
- tramadol: 6.2 M
- ER oxycodone: 0.6 M
- fentanyl: 0.7 M
- morphine: 1.2 M
- methadone: 0.5 M
- hydromorphone: 0.5 M
- buprenorphine: 0.8 M
- oxymorphone: 0.1 M
- tapentadol: 0.2 M

States:
- CA
- TX
- FL
- MI
- OH
- TN
- GA
- NY
- IL
- AL
- PA
- WA
- KY
- IN
- NC
- OR
- LA
- VA
- MS
- AZ
- MO
- WI
- CO
- SC
- OK
- AR
- NJ
- WV
- MN
- UT
- KS
- NV
- IA
- MD
- ID
- NM
- MA
- CT
- NE
- ME
- HI
- MT
- NH
- WY
- AK
- SD
- RI
- VT
- ND
- DE
- DC

Sum over states:
- 843693
- 218389
- 619927
- 651953
- 762787
- 118867
- 540497
- 478014
- 768581
- 540497
- 174142
- 133911

URDD per quarter in 2012 (log10 scale)
URDD per quarter by drug for each state

1 out of 10 Americans prescribed an opioid each quarter
Overall Opioid Abuse Trends in United States
Population Rates, 2002-2012

Population Rate

Availability Rate (URDD)
The RADARS® System
Treatment Programs-Population Rate – All Opioids
2009 Q1 through 2013 Q2
The RADARS® System
Treatment Programs– URDD Rate – All Opioids
2009 Q1 through 2013 Q2
The RADARS® System Opioids

Treatment Programs– URDD Rate by Drug
2009 Q1 through 2013 Q2
UPDATE TO ABUSE DETERRENT FORMULATION DATA
Treatment Programs, Population Rate
OxyContin®, Opana® ER, Other Opioids

- **OxyContin®**
  - Rate per 100,000 population
  - Graph showing data from 2004 to 2012, with periods labeled as Pre ORF, Pre CRF, Post ORF, and Post CRF.

- **Opana® ER**
  - Graph showing data from 2012 to 2013, with periods labeled as Pre CRF, Post ORF, and Post CRF.

- **Other Opioids**
  - Graph showing data from 2004 to 2013, with periods labeled as Pre ORF, Pre CRF, Post ORF, and Post CRF.
Treatment Programs, URDD Rate
OxyContin®, Opana® ER, Other Opioids

- **OxyContin®**
  - Pre ORF
  - Pre CRF
  - Post ORF
  - Post CRF

- **Opana® ER**
  - Pre CRF
  - Post ORF
  - Post CRF

- **Other Opioids**
  - Pre ORF
  - Pre CRF
  - Post ORF
  - Post CRF

Graphs showing the rate per 1,000 URDD for different opioids over various time periods.
Drug Diversion, Population Rate
OxyContin®, Opana® ER, Other Opioids

- **OxyContin®**
  - Rates per 100,000 population
  - Pre ORF, Pre CRF, Post CRF

- **Opana® ER**
  - Rates per 100,000 population
  - Pre CRF, Post ORF, Post CRF

- **Other Opioids**
  - Rates per 100,000 population
  - Pre ORF, Pre CRF, Post ORF, Post CRF

Year/Quarter
Drug Diversion, URDD Rate
OxyContin®, Opana® ER, Other Opioids

OxyContin®

Opana® ER

Other Opioids

Rate per 1,000 URDD

Year/Quarter
Poison Center Intentional Exposures, Population Rate
OxyContin®, Opana® ER, Other Opioids
Poison Center Intentional Exposures, URDD Rate

OxyContin®, Opana® ER, Other Opioids

Graphs showing the rate per 1,000 URDD for OxyContin®, Opana® ER, and Other Opioids over different periods.
Poison Center Intentional Abuse, Population Rate
OxyContin®, Opana® ER, Other Opioids

**OxyContin®**

**Opana® ER**

**Other Opioids**

<table>
<thead>
<tr>
<th>Year/Quarter</th>
<th>Pre ORF</th>
<th>Pre CRF</th>
<th>Post ORF</th>
<th>Post CRF</th>
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<tbody>
<tr>
<td>2003</td>
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<tr>
<td>2022</td>
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</tbody>
</table>

Rate per 100,000 population

Pre ORF: Pre OxyContin® release
Pre CRF: Pre Opana® ER release
Post ORF: Post OxyContin® release
Post CRF: Post Opana® ER release

Year/Quarter: 2003-2022
Poison Center Intentional Abuse, URDD Rate
OxyContin®, Opana® ER, Other Opioids

Graphs showing the rate per 1,000 URDD by year/quarter for OxyContin®, Opana® ER, and Other Opioids.
United States RADARS® System Mosaic Approach

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- Users/Buyers
United States RADARS® System Mosaic Approach

Mark W. Parrino, MPA
American Association for the Treatment of Opioid Dependence
Collaboration with EUROPAD begins (2010)
EUROPAD PILOT STUDY

European Opiate Addiction Treatment Association
PILOT PROGRAM

FRANCE

GERMANY

ITALY

SPAIN
EUROPAD Survey

Study Objective

• assess overall rates and trends of prescription drug misuse in European countries

Study Methods

• Survey newly-enrolled patients (at intake) about their recent use of prescription drugs to get “high”

• Data collected from January 2012 through August 2013
EUROPAD Survey

Includes:

• Demographic information
• Treatment history
• Primary drug used to get high before coming to program
• Past 30-day use to get high and if injected
Total Surveys = 744
## Demographic Information

### Mean Age by Country

<table>
<thead>
<tr>
<th>Country</th>
<th>Mean Age (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>38.9(8.0)</td>
</tr>
<tr>
<td>Germany</td>
<td>36.8(9.8)</td>
</tr>
<tr>
<td>Italy</td>
<td>27.8(7.6)</td>
</tr>
<tr>
<td>Spain</td>
<td>38.9(9.1)</td>
</tr>
<tr>
<td>Total</td>
<td>33.8(9.9)</td>
</tr>
</tbody>
</table>

### Gender by Country (%male)

<table>
<thead>
<tr>
<th>Country</th>
<th>Gender (%male)</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>77.8%</td>
</tr>
<tr>
<td>Germany</td>
<td>63.3%</td>
</tr>
<tr>
<td>Italy</td>
<td>67.3%</td>
</tr>
<tr>
<td>Spain</td>
<td>77.2%</td>
</tr>
<tr>
<td>Total</td>
<td>70.2%</td>
</tr>
</tbody>
</table>
Primary Endpoints

- **Primary Drug** = “used the most to get high with before coming to this program”
  - Each patient can report ONLY ONE primary drug

- **Endorsed Drug** = “used in past month (or 90 days) to get high”
  - Each patient can report MULTIPLE endorsements
Primary Drug by Country

France

Germany

Italy

Spain

Legend:
- Buprenorphine
- Codeine
- Fentanyl
- Heroin
- Methadone
- Morphine
- Other
- Oxycodone
- Tramadol
Number of Endorsements by Drug
All Surveys (n=744)
# EUROPAD Drug Rankings by Country

<table>
<thead>
<tr>
<th>Rank</th>
<th>France</th>
<th>Germany</th>
<th>Italy</th>
<th>Spain</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Heroin</td>
<td>Heroin</td>
<td>Heroin</td>
<td>Heroin</td>
<td>Heroin</td>
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<tr>
<td>2</td>
<td>Buprenorphine</td>
<td>Methadone</td>
<td>Buprenorphine</td>
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<td>3</td>
<td>Codeine</td>
<td>Fentanyl</td>
<td>Methadone</td>
<td>Codeine</td>
<td>Buprenorphine</td>
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<tr>
<td>4</td>
<td>Methadone</td>
<td>Buprenorphine</td>
<td>Codeine</td>
<td>Tramadol</td>
<td>Fentanyl</td>
</tr>
<tr>
<td>5</td>
<td>Morphine</td>
<td>Tramadol</td>
<td>Tramadol</td>
<td>Buprenorphine</td>
<td>Codeine</td>
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<tr>
<td>6</td>
<td>Fentanyl</td>
<td>Morphine</td>
<td>Fentanyl</td>
<td>Morphine</td>
<td>Tramadol</td>
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<tr>
<td>7</td>
<td>Tramadol</td>
<td>Codeine</td>
<td>Hydrocodone</td>
<td>Fentanyl</td>
<td>Morphine</td>
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<tr>
<td>8</td>
<td>Methylphenidate</td>
<td>Oxycodone</td>
<td>Oxycodone</td>
<td>Hydrocodone</td>
<td>Oxycodone</td>
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<tr>
<td>9</td>
<td>Oxycodone</td>
<td>Methylphenidate</td>
<td>Hydromorphone</td>
<td>Hydromorphone</td>
<td>Hydrocodone</td>
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<td>10</td>
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<td>Hydrocodone</td>
<td>Methylphenidate</td>
<td>Methylphenidate</td>
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<td>11</td>
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<td>Hydromorphone</td>
<td>Oxymorphone</td>
<td>Oxycodone</td>
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<td>12</td>
<td>Oxymorphone</td>
<td>Oxymorphone</td>
<td>Morphine</td>
<td>Oxymorphone</td>
<td>Oxymorphone</td>
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</tbody>
</table>
Injections by Drug
All Surveys (n=744)
Injections by Drug by Country

- France
- Germany
- Italy
- Spain

Legend:
- Buprenorphine
- Fentanyl
- Heroin
- Hydrocodone
- Hydromorphone
- Methadone
- Methylphenidate
- Morphine
- Oxycodone
- Tramadol
Key Findings

• Mean age is 33.8 years, however Italy appears to have a younger patient population (27.8 years)
• Gender is similar across 4 countries studied (male 63-79% of respondents)
• Heroin is by far highest reported endorsed drug, primary drug and injection
• Drug endorsements vary depending on country – fentanyl concentrated in Germany
• Drug rankings much different than United States
• Pilot Study – proof of concept successful!
Limitations

• Small samples from each country
• Multiple languages – lost in translation?
• Distinction between general use of drug versus use “to get high”
• Variation in drug availability in each country
• Variation in cultural considerations in each country
Expanding EUROPAD Study
Future of EUROPAD Study

Expanding from pilot into full program

• Feedback from study investigators
• Survey revisions
  • Clarify instructions and definitions
  • Add questions regarding treatment history and medications
• Additional sites in currently participating countries (increased number of surveys)
• Expansion into other countries (Norway, United Kingdom)
Grazie!
Danke!
Merci!
Gracias!
Thank You!

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