The Intersection of Two Public Health Problems: the Under Treatment of Pain and the Abuse and Misuse of Pain Medications

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Outline

• Describing the epidemic
• Data
• Framework for addressing the challenge
  – Yes, some patients will be come addicted (Juurlink)
  – First, we are making progress (Dart)
    • Some are harsh
    • Some interfere with appropriate care of chronic pain
  – How to we incorporate these lessons?
Opioid Consumption (ME/capita), 2010

http://www.painpolicy.wisc.edu/home
Prescription Opioid Consumption, 1964 - 2010

http://www.painpolicy.wisc.edu/home
More Drug Production = More Drug Abuse
But - the Slope Varies by Drug

Age-adjusted drug poisoning and opioid analgesic poisoning death rates: US, 1999-2011

Figure 1. Age-adjusted drug-poisoning and opioid-analgesic poisoning death rates: United States, 1999–2011

http://www.cdc.gov/nchs/data/databriefs/db166.htm
Opioid analgesic poisoning death rates by age group: US, 1999-2011

http://www.cdc.gov/nchs/data/databriefs/db166.htm
What About Prescription Opioid Abuse in 2014?

What is the RADARS® System?
- 2002, Purdue Pharma
- 2006, Denver Health and Hospital Authority
  - Rocky Mountain Poison and Drug Center
  - Denver Public Hospital for 150 years
  - State sanctioned independent authority
- Most companies with an opioid product on the US market are subscribers.

Conflict of Interest Statement
- Most manufacturers of prescription opioids or stimulants subscribe to RADARS System.
- RADARS System is the property of Denver Health and Hospital Authority, a political subdivision of the State of Colorado.
- Subscribers receive information, but do not participate in developing the System, data collection, or analysis of the data. They do not have access to the raw data.
- Employees are prohibited from personal financial relationships with any company.
Mosaic Surveillance of Prescription Drug Abuse

Acute Health Events
- 49 Poison centers
  - 46 states
  - 456,610 cases
  - 491,874 opioid mentions

Drug Transactions
- Criminal Justice
  - 260 agency; 49 states
  - 145,090 cases with 146,786 opioid mentions

Entering Treatment
- Opioid Tx Program
  - 66 programs; 34 states
  - 41,031 cases
  - 183,573 opioid mentions

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- College Survey
  - 2000 students, 50 state
  - 3,564 cases
  - 11,871 opioid mentions

Entering Treatment
- SKIP
  - 109 practices, 45 states
  - 10,214 cases with 64,678 opioid mentions

Illicit Market Price
- StreetRx.com
  - Users/Buyers, 50 states
  - 8,441 price entries for an opioid

Web Monitoring
- >150 million sites monitored
- >35,000 posts coded for analysis
Opioid Analgesic Trends in the United States, 2014 Q1

Analgesic group: oxycodone, hydrocodone, hydromorphone, fentanyl, morphine, and tramadol
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StreetRx: Oxycodone ADF in US and Canada

<table>
<thead>
<tr>
<th>Formulation</th>
<th>United States</th>
<th>Canada</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Number reports</td>
<td>Reported Median Price per mg, US Dollar (range)</td>
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<tr>
<td>Crushable “Old OxyContin”</td>
<td></td>
<td></td>
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<tr>
<td>Apo-Oxycodone CR</td>
<td>24</td>
<td>1.00 (0.15 – 16.80)</td>
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<tr>
<td>OxyContin®</td>
<td>93</td>
<td>1.00 (0.06 – 10.00)</td>
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<tr>
<td>Co-Oxycodone CR</td>
<td>11</td>
<td>1.00 (0.30 – 4.00)</td>
</tr>
<tr>
<td>Teva-Oxycodone CR</td>
<td>4</td>
<td>0.88 (0.10 – 3.75)</td>
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<tr>
<td>Average</td>
<td></td>
<td>1.00</td>
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<tr>
<td>Abuse Deterrent “New OxyContin”</td>
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<td></td>
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<tr>
<td>Oxycodone ER</td>
<td>277</td>
<td>0.63 (0.03 – 10.00)</td>
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<tr>
<td>Average</td>
<td></td>
<td>0.63</td>
</tr>
</tbody>
</table>
What Caused the Change in Rates of Abuse?

- Law Enforcement
- Risk Evaluation and Mitigation Strategy (REMS)
- Abuse Deterrent Formulations (e.g. reformulated OxyContin)
- Prescription Monitoring Plans (PMP)
- Changes in Physician Prescribing Behavior
- Public education
Intentional abuse: an exposure resulting from intentional, improper, or incorrect use of a substance where the victim was likely attempting a high, euphoric effect or some other psychotropic effect.

Reformulated OxyContin

Numbers in Thousands

Past Month Past Year


166+ 119+ 136+ 339 161+ 213 193+ 621 620 669 335

404+ 314+ 398+ 379+ 560 373+ 455+ 582

0 100 200 300 400 500 600 700
Conclusions

- Prescription drug abuse may be decreasing in the United States
- An established population of dependent or addicted people has developed.
- Squeezing the balloon - other drugs of abuse like heroin may be increasing
- Impact of legalized marijuana?
Collaborators

• Hilary L. Surratt, Drug Diversion Program, Nova Southeastern University
• Theodore J. Cicero, Survey of Key Informant Patients, Washington University
• Mark W. Parrino, Opioid Treatment Program, American Association for Treatment of Opioid Dependence
• S. Geoff Severtson, RADARS System
• Becki Bucher-Bartelson, RADARS System
• Jody L. Green, RADARS System