Overview of the Public Health Burden of Prescription Drug and Heroin Overdoses

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How We Got to Now?

The relentless marketing of pain pills. Crews from one small Mexican town selling heroin like pizza. The collision has led to America’s greatest drug scourge.

The True Tale of America’s Opiate Epidemic
145,000 Rx opioid deaths in 10 years.

4x as many deaths in 2013 as 1999.
Rise in Rx overdose deaths since 1999 and recent increase in heroin deaths

CDC, National Center for Health Statistics, National Vital Statistics System
For every Rx opioid overdose death in 2011, there were...

12 treatment admissions for opioids

25 emergency department visits for opioids

105 people who abused or were dependent on opioids

659 nonmedical opioid users

SAMHSA NSDUH, DAWN, TEDS data sets.
Quarter billion opioid prescriptions in 2012
Opioid prescribing can vary 3-fold between states
Sharp increases in opioid prescribing coincides with sharp increases in Rx opioid deaths

Opioid Sales (kg per 10k)

Rx Opioid Deaths (per 100k)

States with more opioid pain reliever sales tend to have more drug overdose deaths

The Role of Opioid Prescribing

Upper Midwest

Appalachia

CA Workers Compensation Program

A small fraction of prescribers fueling the problem

Swedlow et al. Prescribing patterns of schedule II opioids in California Workers’ Compensation, CWCI Institute, 2011
3 Percent Prescribe. . .

- 55% of CSII opioid Rx
- 62% of morphine equivalents
- 65% of associated payments
Primary care providers prescribe the most opioids

Pain specialists prescribe opioids most frequently

IMS Health, National Prescription Audit, United States, 2012
Half of US Opioids Market is Treatment for Chronic, Non-Cancer Pain

U.S. opioids market revenues
7 leading indications - 2010

Cancer
Fibromyalgia
Neuropathic Pain
Osteoarthritis
Post Operative Care
Rheumatoid Arthritis
Low Back Pain

50%

Who is at risk for an overdose?

Risk Factors
- Patients receiving opioids from multiple prescribers and/or pharmacies
- Patients taking high daily doses of opioids

Demographics
- Men
- 35-54 year olds
- Whites
- American Indians/Alaska Natives

Socioeconomics & geography
- Medicaid
- Rural
Association Between Opioid Prescribing Patterns and Opioid Overdose-Related Deaths

Hazard ratio for opioid overdose death

- 1 - < 20 (reference) [chronic pain 1.88, acute pain 1.58]
- 20 - <50 [chronic pain 4.63, acute pain 4.73]
- 50 - <100 [chronic pain 7.18, acute pain 6.64]
- >= 100 [chronic pain 7.18, acute pain 6.64]

Maximum prescribed daily dose, morphine milligram equivalents
Majority of opioid overdose deaths associated with multiple sources and/or high dosages

Methadone contributes to the largest fraction of opioid-related deaths.

Death rate from overdoses when a single prescription painkiller involved.

Source: Substance Abuse and Mental Health Services Administration, Center for Behavioral Statistics and Quality, Drug Abuse Warning Network Medical Examiner Component, 2009.
Longer durations and higher doses of opioid treatment are associated with opioid use disorder

adjusted OR for opioid use disorder (abuse or dependence) compared with no opioid use

<table>
<thead>
<tr>
<th>Opioid Dose</th>
<th>Adjusted OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (36 mg or less)</td>
<td>3</td>
</tr>
<tr>
<td>Medium (36 to 120 MME)</td>
<td>29</td>
</tr>
<tr>
<td>High (120 MME or more)</td>
<td>122</td>
</tr>
</tbody>
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HIV and HEP C Outbreak 2015

- 135 new HIV infections diagnosed in town of 4,200 people – Austin, Indiana.
- Co-infection with hepatitis C virus in 84% of patients
- Spread by Injection Drug Users using OPANA. Daily injections ranged from 4 to 15.
- Average of nine syringe-sharing partners, sex partners, or other social contacts
- Reported number of injection partners ranged from 1 to 6 per injection event

Trends in Heroin Use & Health Outcomes
Prescription opioid misuse is a major risk factor for heroin use

3 out of 4 people who used heroin in the past year misused opioids first

7 out of 10 people who used heroin in the past year also misused opioids in the past year

Heroin overdose deaths nearly four times higher for men than women

Adults age 25-44 have the highest rate of heroin overdose

Recent increase in heroin overdose deaths are not associated with decreases in Rx opioid deaths

18 States - 2010-2012

Today’s Heroin Epidemic

Release Date
July 7, 2015
Two groups of people with two different sets of needs

**Addicted/Dependent**

- Need access to services

**At risk for addiction/dependence**

- Protect from dangerous drugs
Opioid Abuse and Dependence exceeds Medication-Assisted Treatment Capacity in most States

Rate of past year opioid abuse or dependence

Rate of OA-MAT capacity

Rate of abuse/dependence exceeds capacity

Three Pillars of CDC’s Prescription Drug Overdose Prevention Work

- **Improve data** quality and track trends
- **Strengthen state efforts** by scaling up effective public health interventions
- **Supply healthcare providers with resources** to improve patient safety
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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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