The Prescription Drug Overdose Epidemic

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Dramatic increase in overdose deaths related to opioid pain relievers since 1999

CDC, National Center for Health Statistics, National Vital Statistics System
Opioid pain reliever-related overdose deaths increasing at a faster rate than deaths from any major cause

% change in number of deaths, United States, 2000-2010

- Rx opioid overdose: 276%
- Alzheimer's: 68%
- Hypertension: 47%
- Parkinson's Disease: 40%
- Nephritis: 36%
- Suicide: 31%
- Liver Disease: 20%
- Chronic Lower Respiratory disease: 13%
- Septicemia: 11%
- HIV: 7%
- Malignant Neoplasms: 4%
- Pneumonitis: 2%
- Diabetes Mellitus: 0%
- Homicide: -3%
- Perinatal Period: -14%
- Heart disease: -16%
- Motor vehicle traffic: -22%
- Cerebro-vascular: -23%
- Influenza & Pneumonia: -23%
- Aortic Aneurysm: -34%

WISQARS, 2000 and 2010; CDC/NCHS, National Vital Statistics System
Middle-aged adults are at greatest risk for drug overdose in the United States.

Death rates by age

Deaths per 100,000 population

CDC/NCHS, National Vital Statistics System
Males, American Indians/Alaska Natives, and Whites at highest risk for opioid overdose deaths

National Vital Statistics System; crude rates, 2009
Opioid pain reliever prescribing rates vary by state

Some states have more painkiller prescriptions per person than others.

Opioid prescribing rates correlate with drug overdose death rates

Opioid prescribing rates correlate with opioid overdose death rates

Rates of hydrocodone and/or oxycodone filled by NYC neighborhood

Rates of unintentional opioid pain reliever overdose deaths by NYC neighborhood

Opioid-related overdose death rates and treatment admissions increased over time along with opioid sales.
Half of United States opioids market is treatment for chronic, non-cancer pain.
Primary care providers prescribe the most opioids

Pain specialists prescribe opioids most frequently

IMS Health, National Prescription Audit, United States, 2012
Doctors most common source of opioids for most frequent nonmedical users

Association Between Opioid Prescribing Patterns and Opioid Overdose-Related Deaths

Hazard ratio for opioid overdose death

- chronic pain
- acute pain

Maximum prescribed daily dose, morphine milligram equivalents

- 1 - <20 (reference)
- 20 - <50
- 50 - <100
- >= 100

Hazard ratio:
- 1
- 1.88
- 4.63
- 7.18

Hazard ratio for acute pain:
- 1.58
- 4.73
- 6.64
Patients receiving high doses of opioid pain relievers account for disproportionate share of overdoses.
Patients with depression 3x more likely to be prescribed long-term opioid therapy

Opioid pain reliever overdose deaths: summary of epidemiology

- Increasing at a faster rate than deaths from any major cause in the United States
- Correlation between opioid prescribing rates and drug overdose death rates
- Patients receiving opioids from multiple prescribers and at high doses at highest risk
Prevention Policies & Interventions
Overdose deaths continue to climb.
“It is one of the happy incidents of the federal system that a single courageous state may, if its citizens choose, **serve as a laboratory**; and try novel social and economic experiments without risk to the rest of the country.”

–Justice Louis Brandeis
Opioid prescribing is the key driver

Sales (kg per 10k)

Deaths (per 100k)

National Vital Statistics System, DEA's Automation of Reports and Consolidated Orders System, SAMHSA's TEDS
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.
What Are Prescription Drug Monitoring Programs?

Source: PDMP Center of Excellence at Brandeis University.

*Groups other than those listed may also receive reports.*
Prescription Drug Monitoring Programs (PDMPs)

PDMP Promising Practices

- Epidemiological analysis
- Unsolicited reporting
- Criteria for questionable activity
- Integrating with EHRs and HIEs
- Increasing utilization
- Interstate data-sharing
- Interagency collaboration
- Improving data quality
- Conducting evaluation

Source: ASTHO, Brandeis PDMP Center of Excellence:
Prescription Drug Monitoring Programs: Tools for Education, Epidemiological Surveillance, Prevention, and Early Intervention
Example of Innovation: PDMP Report Cards to Outliers

Source: Arizona Prescription Monitoring Program, Arizona State Board of Pharmacy
Prescribing Rules

- **Washington State Rules**
  - Washington Agency Medical Directors’ Opioid Dosing Guidelines
  - Pain Management Rules
  - ED prescribing guidelines

- **Other measures**
  - Good Samaritan Law
  - PDMP
  - Medicaid Narcotic Review Program
  - Expanded Patient Review and Coordination program
Insurer/Pharmacy Benefit Manager (PBM) Mechanisms

- Reimbursement incentives/disincentives
- Quantity limits
- Step therapies/Prior Authorization
- Real-time claims analysis
- Retrospective claims review programs
Pain Clinic Laws
The Problem of “Pill Mills”

“You just walk in, they ask you what hurts, they take your blood pressure, they weigh you, and they say actually – literally sometimes, ‘What do you want?’… ‘How many do you take a day?’ You could be ridiculous and say 40. I mean, I could get 200 of each, Roxi's and Oxy's at the same time, which makes no sense, and Xanny bars (Xanax) at the same time. They just ask you what you want.”

—White female, 41

Anatomy of a Pain Clinic Law

- **Louisiana**
  - Statute passed in ‘05; rules in Jan. ‘08
  - Passes a pain management clinic law
  - Brings heightened scrutiny to pain clinics

- **Requirements:**
  - Pain specialist physician ownership
  - Licensure from Department of Health and Hospitals
  - Inspections
  - 50% on-site requirement
  - Urine drug screen for each patient
  - 30-day supply limit
Florida and the Epidemic

- **2003-2009** (CDC MMWR)
  - 84% increase in prescription drug overdoses
  - 264% increase in oxycodone overdoses
  - In 2009, 8 people died of overdoses every day

- **2010:**
  - 90 of the top 100 oxycodone purchasing physicians in US were in Florida
  - 900+ pain clinics

Florida’s Policy Response

- **Jan. 2010**: State legislature required pain clinics register with the state

- **Feb. 2010**: DEA and various Florida law enforcement agencies began to work together in Operation Pill Nation

- **Late 2010**: Pain clinic regulations further expanded

- **Feb. 2011**: Law enforcement conducted statewide raids

- **July 2011**: State legislature prohibited physician dispensing of schedule II or III; activated regional strike forces to address the emergency.

- **Sept. 2011**: Mandatory dispenser reporting to the newly established PDMP

- **2012**: State legislature expanded regulation of wholesale drug distributors
Florida opioid overdoses fell sharply between 2010 and 2012

Naloxone & Good Samaritan Laws
Naloxone Access

Naloxone Access Laws
April 2014

Source: Public Health Law Research - phlr.org
Laws that explicitly limit criminal liability in some way for an overdose bystander who summons help in good faith.
Three Pillars of CDC’s PDO 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
Example Program: Boost for State Prevention

Advance and evaluate comprehensive state-level interventions for preventing prescription drug overdose in 3 areas:

- Enhancing and maximizing PDMPs
- Improving and evaluating public insurer mechanisms
- Evaluating state-level laws, policies, and regulations
The findings and conclusions in this report are those of the author and do not necessarily represent the views of the Centers for Disease Control and Prevention.