Prescription Drug Abuse and Overdose in the United States

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Overview

- Abuse and overdose trends
- Drivers of the epidemic
- Prescribing and use patterns contributing to risk
- CDC's public health response
Motor vehicle traffic, poisoning, and drug poisoning (overdose) death rates
United States, 1980-2010

Deaths per 100,000 population

Year

Motor Vehicle Traffic
Poisoning
Drug Poisoning (Overdose)

NCHS Data Brief, December, 2011, Updated with 2009 and 2010 mortality data
Drug overdose deaths by intent, US, 1999-2010

Number of drug overdose deaths involving opioid pain relievers and other drugs US, 1999-2010

CDC/NCHS, National Vital Statistics System
Prescription drug overdose deaths with and without opioids, US, 1999-2010

CDC/NCHS, National Vital Statistics System
Drug overdose deaths by major drug type, US, 1999-2010

Emergency department visits related to drug misuse or abuse, US, 2004-2010

- Illicit Drugs
- Pharmaceuticals
- Opioid Pain Relievers
- Benzodiazepines

Primary substance of abuse at treatment admission, US, 2000-2010

SAMHSA Treatment Episode Data Set, 2000-2010.
Opioid pain reliever overdose death rates by age group, US, 2010

Opioid prescriptions per person by age group, U.S., 2009

Prescriptions per person

Age group (years)

0-9
10-29
30-39
40-59
60+

0.0
0.3
0.7
1.1
1.9

Volkow et al. JAMA 2011;305:1299-1301
Opioid pain reliever overdose death rates by sex and race, US, 2010

CDC National Vital Statistics System 2012
Opioid pain reliever overdose death rates by urbanization, US, whites, 2010

CDC National Vital Statistics System 2012
High risk populations

- Men
- Whites, American Indians/Alaska Natives
- Middle-aged persons
- People taking high daily doses of opioids
- People who “doctor shop”
- People using multiple abuseable substances
- Low-income people and those living in rural areas
- People with substance abuse or other mental health issues
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Rates of opioid overdose deaths, sales and treatment admissions, US, 1999-2010

National Vital Statistics System, DEA’s Automation of Reports and Consolidated Orders System, SAMHSA’s TEDS
Drug overdose death rate 2008 and opioid pain reliever sales rate 2010

Kg of opioid pain relievers used per 10,000
- 3.7 - 5.9
- 6.0 - 7.2
- 7.3 - 8.4
- 8.5 - 12.6

Age-adjusted rate per 100,000
- 5.5 - 9.4
- 9.5 - 12.3
- 12.4 - 14.8
- 14.9 - 27.0

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Percent of total opioids consumed by patient consumption level, Arkansas Medicaid, 2005

Source: Edlund et al. J Pain Symp Manage 2010;40:279289
Overdose risk highest among small percentage of patients at high dosage, Group Health, 1997-2005

Most opioids consumed by small percentage of patients at high dosage levels, New Mexico, 2007-2008

Unpublished data from New Mexico case-control study.
Oregon PDMP report top 8.1% of providers prescribe 79% of CII-CIV drugs

- Top 2,000 Providers: 60%
- 2,001-4,000 Providers: 19%
- Remaining 45,330 Providers: 21%

Top 10% of prescribers account for 76% of total Rx
CA Workers Compensation, 2005-2009

Swedlow et al. Prescribing patterns of schedule II opioids in California Workers’ Compensation, CWCI Institute, 2011
Top 20% of prescribers account for 72% of Rx, Public Drug Program, Ontario, Canada, 2006

Top 20% of prescribers account for 63% of overdose deaths
Ontario Public Drug Program, 2006

Adapted from data from Dhalla et al. Can Fam Physician 2011;57:e92-e96
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Reduce abuse and overdose of opioids and other controlled prescription drugs while ensuring patients with pain are safely and effectively treated.
CDC in Context of National Response

- Blueprint for Federal government

- Focus Areas
  - I. Education
  - II. Monitoring
  - III. Disposal
  - IV. Enforcement

- CDC Role - Fits within our mission and complement other Federal agencies
CDC Strategic Focus Areas

- Enhance Surveillance
- Inform Policy
- Improve Clinical Practice
PRESCRIPTION DRUGS

Strategies and points of intervention for preventing misuse, abuse, and overdose, while safeguarding access to treatment.

**Strategies Legend**
- PDMPs
- PRRs
- Laws/Regulations/Policies
- Insurers/PBMs
- Clinical Guidelines

**PEOPLE AT HIGH RISK FOR OVERDOSE**

**GENERAL PATIENTS / PUBLIC**

**NOTE:** What is presented here are the priority strategies that are likely to have the greatest impact. This is not an exhaustive list.
Intervention Points

- Pill Mills
- Problem Prescribing
- General Prescribing
- EDs & Hospitals
- Pharmacies
- Insurer & Pharmacy Benefit Managers (PBMs)
- General Patients & The Public
- People at High Risk of Overdose
Public Health Policy Options

- Prescription Drug Monitoring Programs (PDMPs)
- Patient Review & Restriction Programs
- Laws/Regulations/Policies
- Insurers & Pharmacy Benefit Managers (PBM) Mechanisms
- Clinical Guidelines
- Substance Abuse Treatment
Maximize Prescription Drug Monitoring Programs (PDMPs)

- **Focus PDMPs**
  - On patients at highest risk of abuse and overdose
  - On prescribers who clearly deviate from accepted medical practice

- **Implement PDMP Best Practices**
  - Allow access to prescribers and dispensers
  - Allow access to regulatory boards, state Medicaid and public health agencies, Medical Examiners, and law enforcement (under appropriate circumstances)
  - Provide real-time data and access
  - Share data with other states (interoperability)
  - Integrate with other health information technology to improve use among health care providers
  - Have ability to send unsolicited reports
Patient Review and Restriction Programs (aka “Lock-In” Programs)

- Applies to patients with inappropriate use of controlled substances
- 1 prescriber and 1 pharmacy for controlled substances
- Improve coordination of care and ensure appropriate access for patients at high risk for overdose
- Evaluations show cost savings as well as reductions in ED visits and numbers of providers and pharmacies
Some states have enacted laws and policies aimed at reducing diversion, abuse, and overdose

Policies can strengthen health care provider accountability

Safeguard access to treatment when implementing policies

Rigorous evaluations to determine effectiveness and identify model aspects
Insurer/Pharmacy Benefit Manager (PBM) Mechanisms

- Reimbursement strategies
- Formulary development
- Quantity limits
- Step therapies/Prior Authorization
- Real-time claims analysis
- Retrospective claims review programs
Clinical Guidelines

- Improve prescribing and treatment
- Basis for standard of accepted medical practice for purposes of licensure board actions
- Several consensus guidelines available
Common themes among current consensus guidelines

- Screen and monitor patients for substance abuse and mental health problems
- Prescribe opioids only when other treatments have not been effective for pain
- Prescribe only quantity needed based on expected length of pain
- Use patient-provider agreements combined with urine drug tests for long-term users
- Teach patients how to safely use, store and dispose of medications
- Avoid co-prescribing opioids and benzodiazepines (if possible)
- Use PDMPs to identify patients improperly using opioids and other controlled prescription drugs
Access to substance abuse treatment is critical. Effective, accessible treatment programs can reduce abuse and overdose among people struggling with dependence and addiction. States should expect increased demand, including access to medication assisted therapies.
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<th>Intervention Points</th>
<th>Key Strategy</th>
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Additional Information


http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6126a5.htm

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6043a4.htm

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6126a5_w.htm
Conclusions

- Drug overdose deaths are exacting a significant toll on individuals and communities across the US

- Data can improve understanding of the problem and help drive decision making

- Promising interventions exist and need to be fully implemented and robustly evaluated

- Collaboration between multiple sectors is essential
Thank You

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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.