Prescription Drug Overdoses:
Public Health Response to the Epidemic

Christopher M. Jones, PharmD, MPH

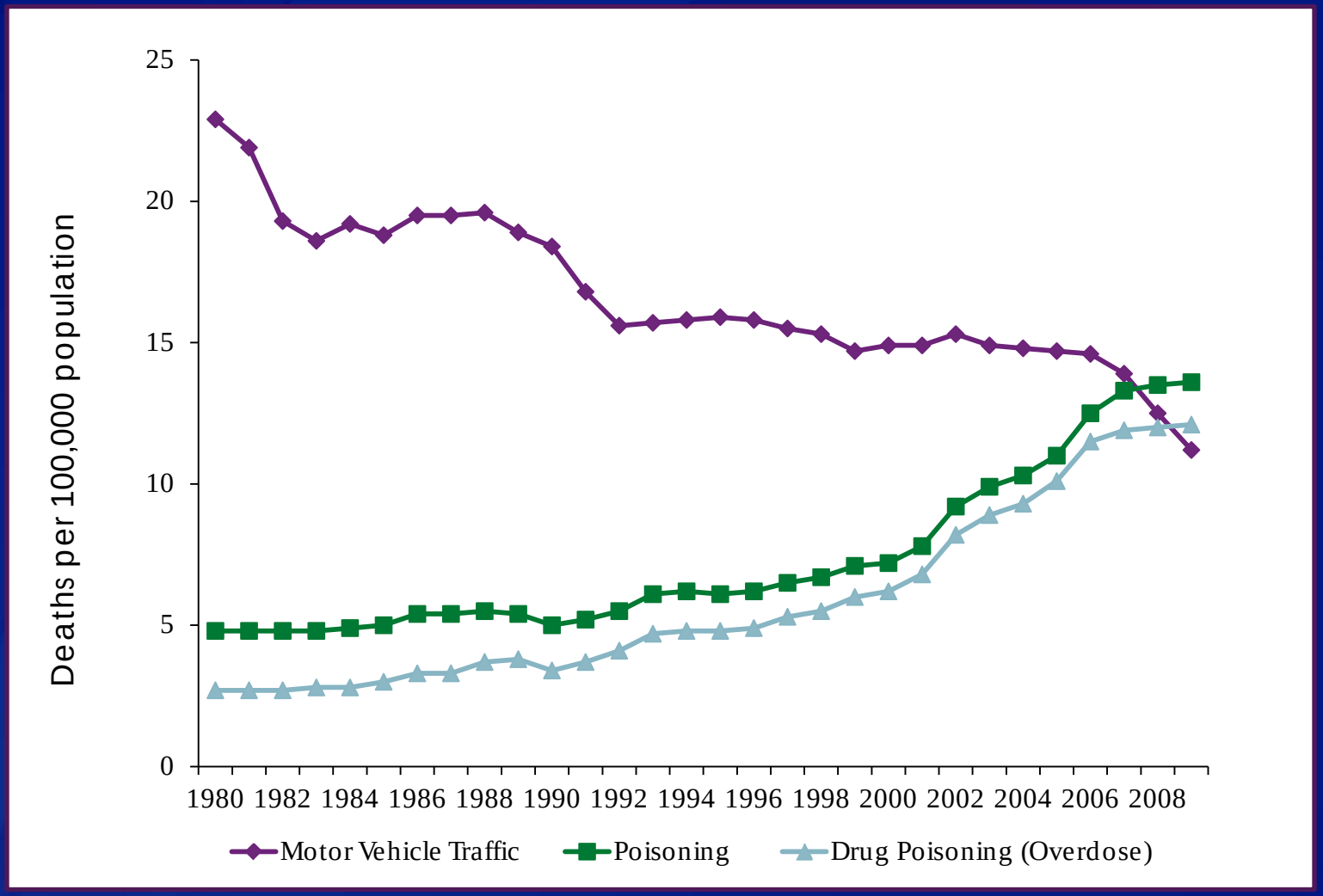
LCDR, US Public Health Service

Centers for Disease Control and Prevention

CDC Goal

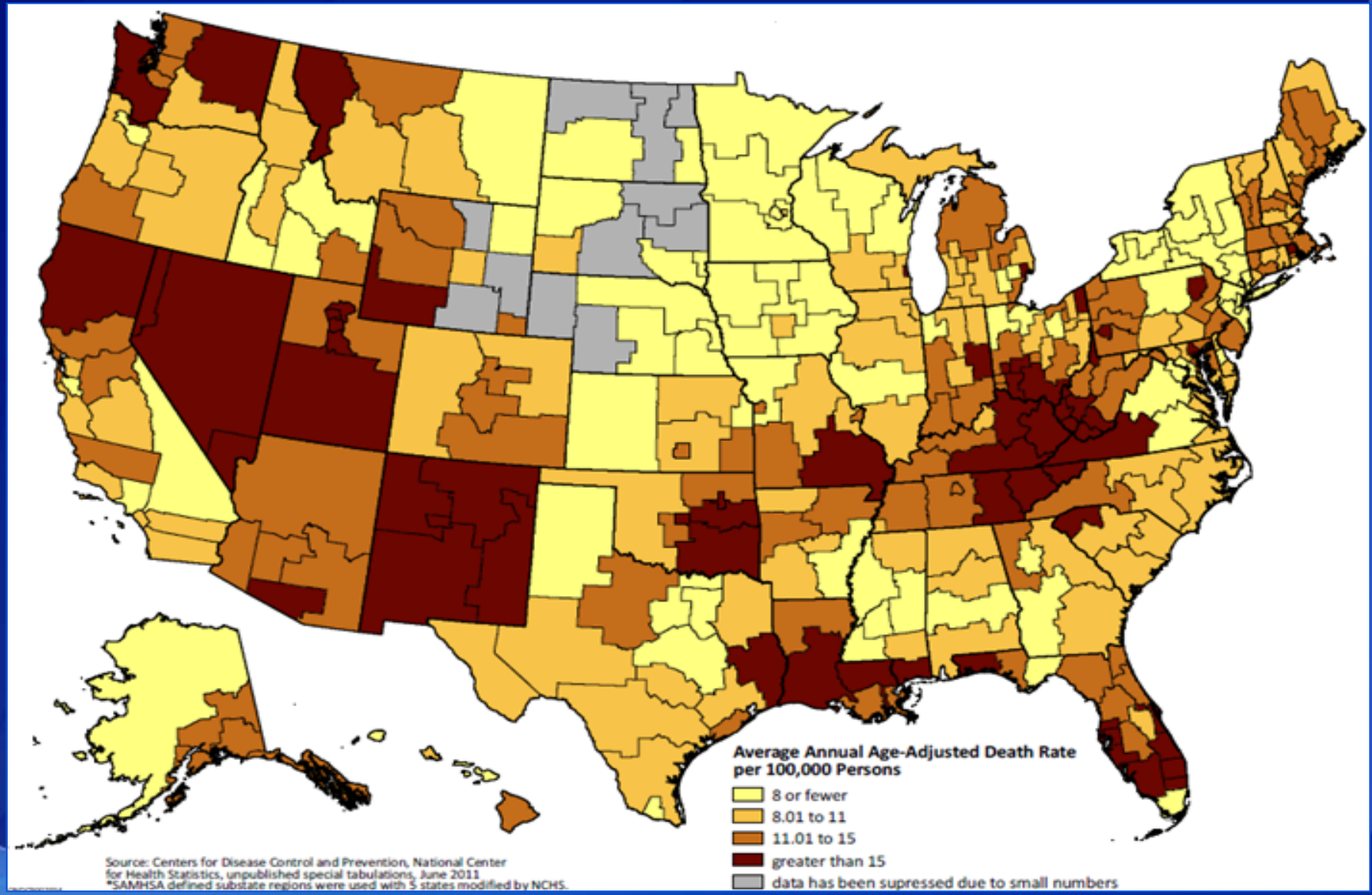
- Reduce abuse and overdose of opioids and other controlled prescription drugs while ensuring patients with pain are safely and effectively treated.

Motor vehicle traffic, poisoning, and drug poisoning (overdose) death rates US, 1980-2009

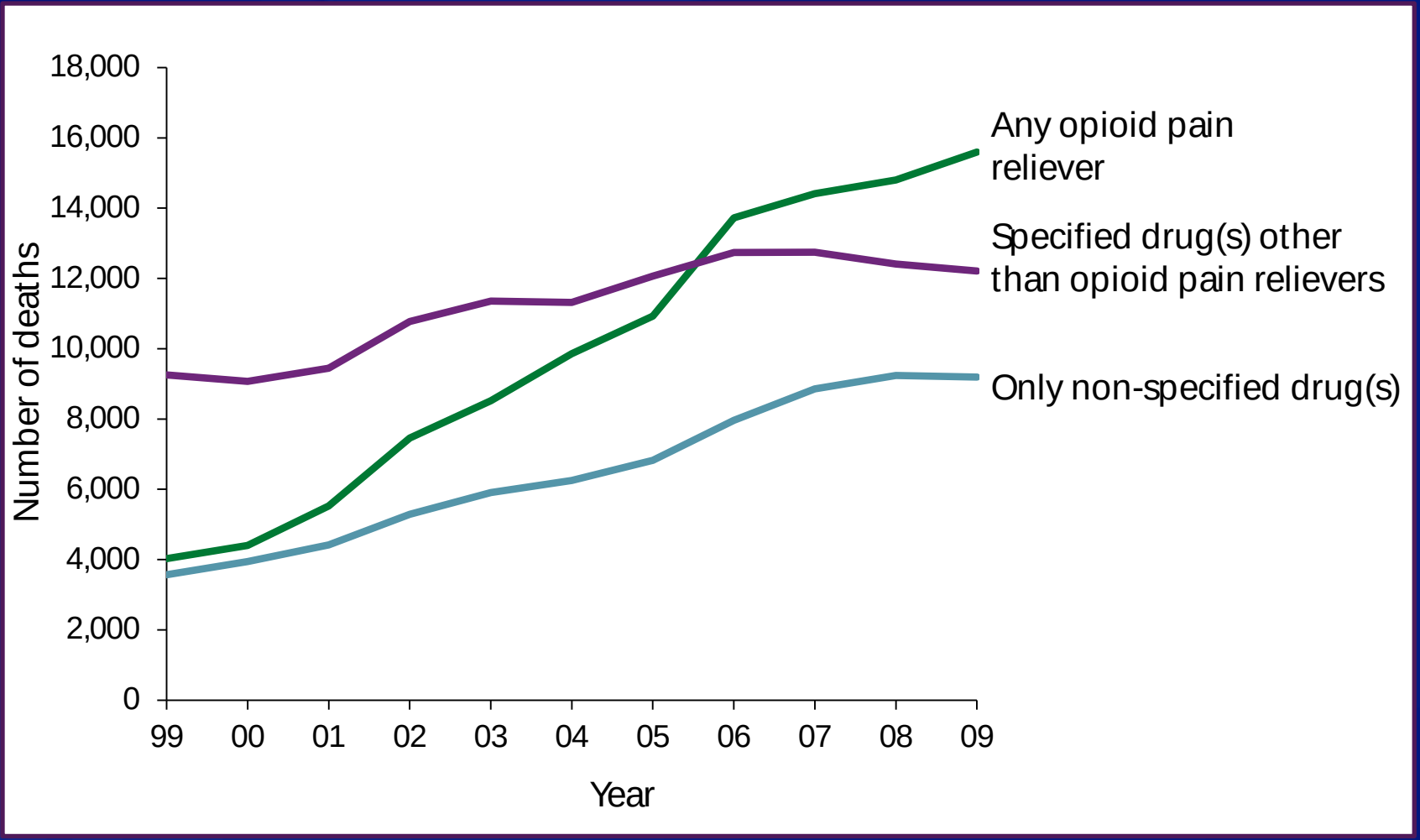


Source: NCHS Data Brief, December, 2011, updated with 2009 mortality data. Some overdose deaths were not included in the total for 2009 because of delayed reporting of the final cause of death. The reported 2009 numbers are underestimates.

Drug Overdose Deaths per 100,000 People, United States, 2004-2008

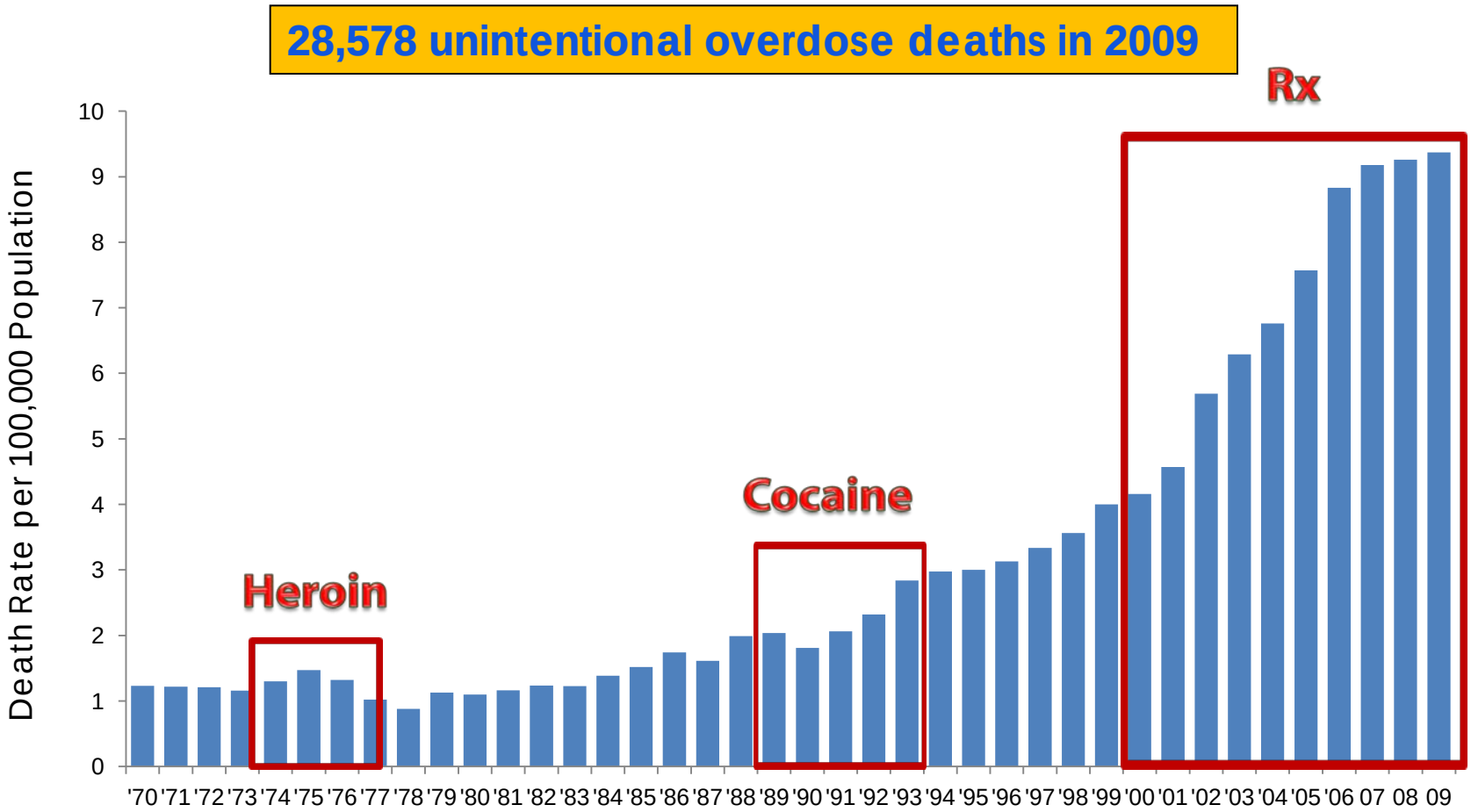


Number of drug overdose deaths involving opioid pain relievers and other drugs US, 1999-2009

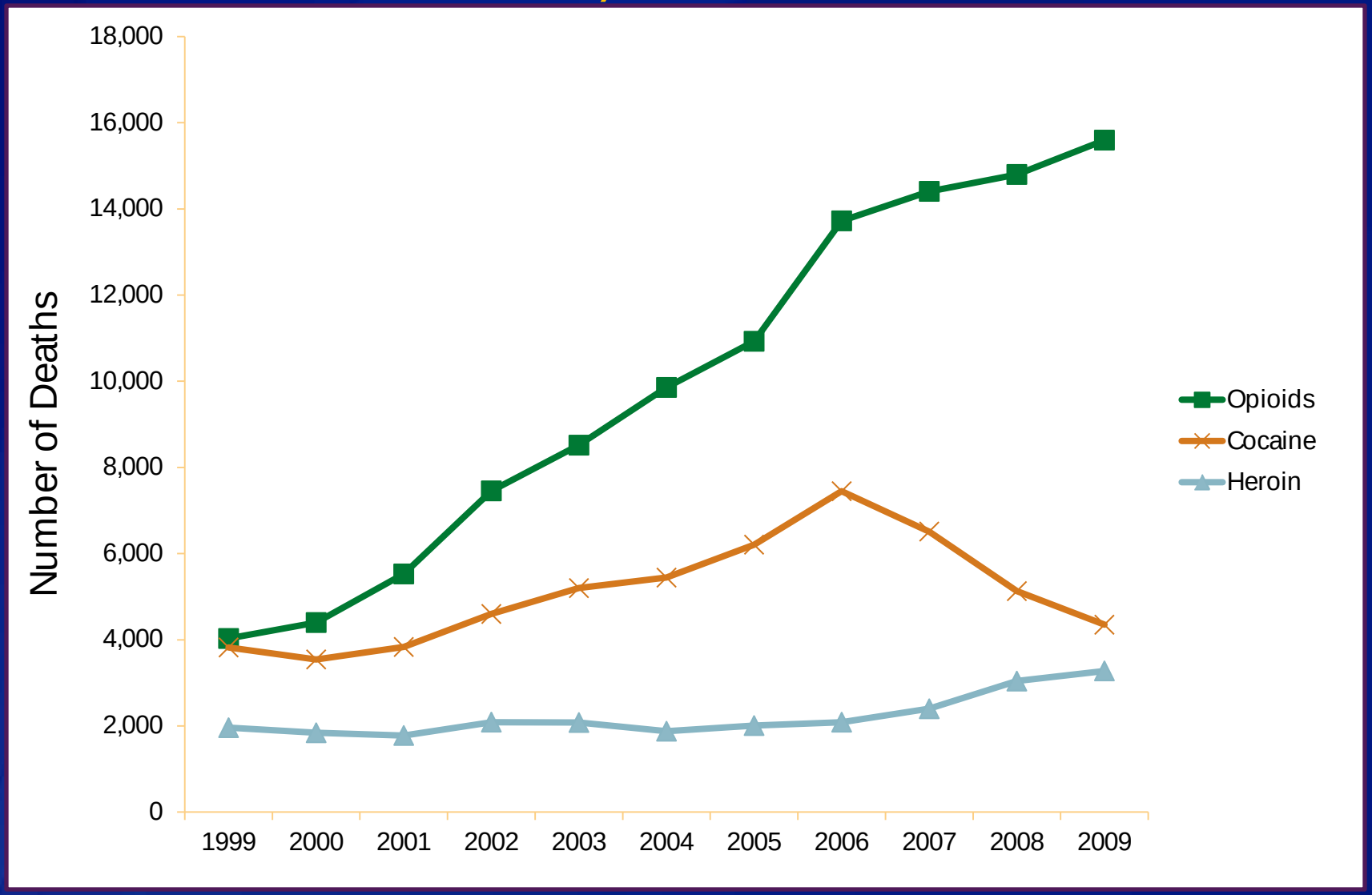


Source: NCHS Data Brief, December, 2011, updated with 2009 mortality data. Some overdose deaths were not included in the total for 2009 because of delayed reporting of the final cause of death. The reported 2009 numbers are underestimates.

Unintentional Drug Overdose Deaths United States, 1970-2009

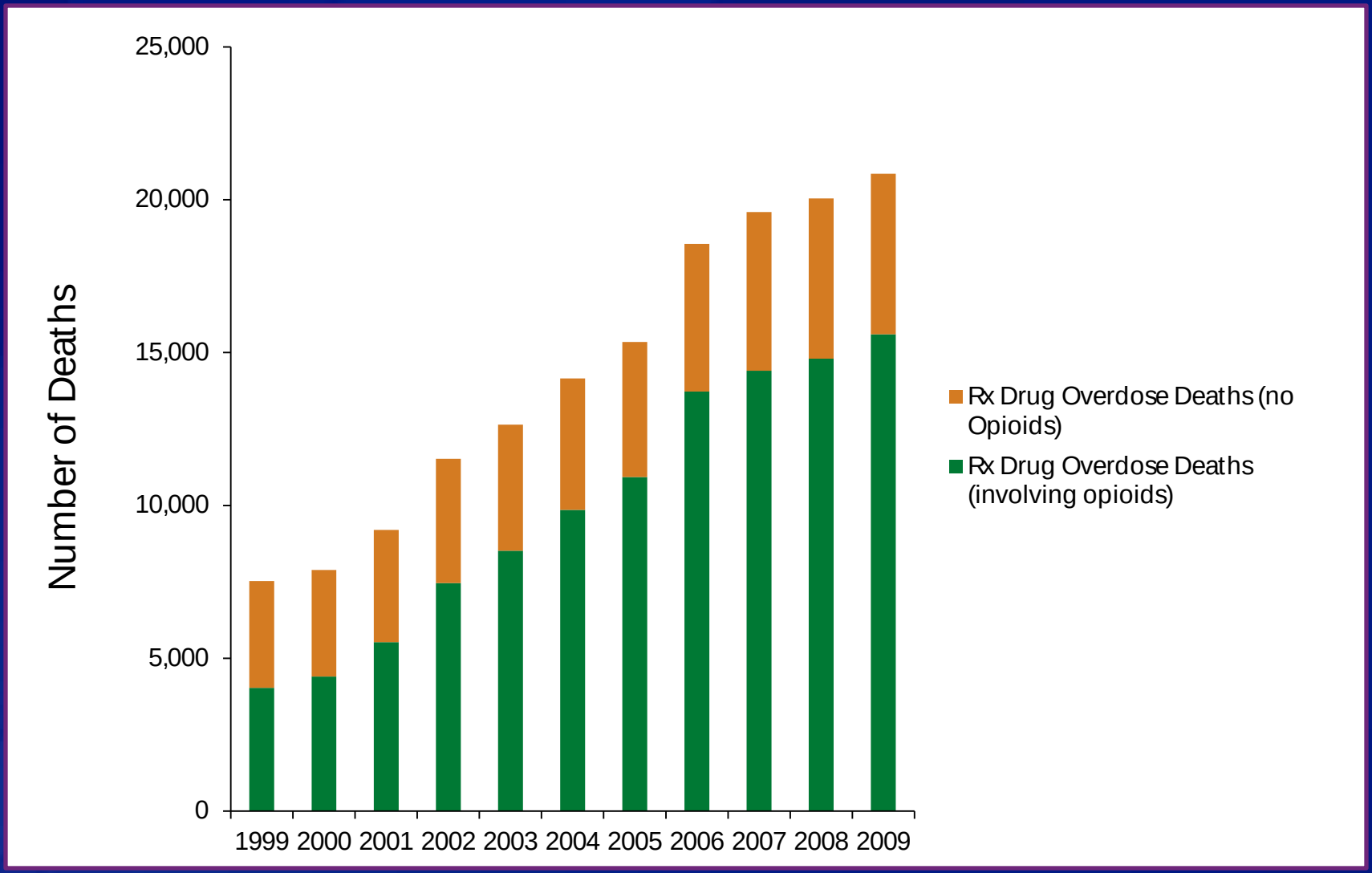


Drug overdose deaths by major drug type US, 1999-2009



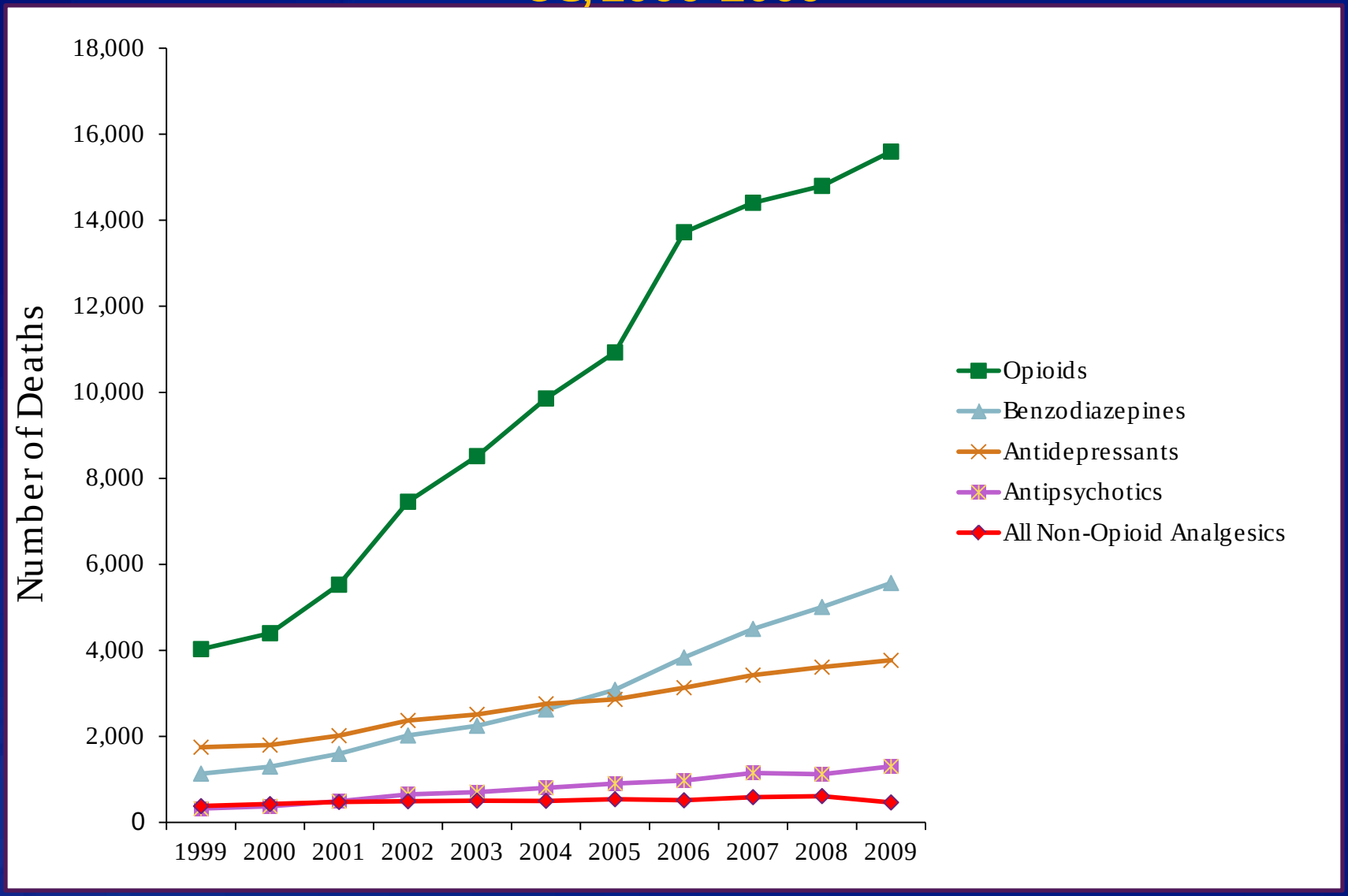
Source: CDC/NCHS National Vital Statistics System, CDC Wonder

Prescription drug overdose deaths involving and not involving opioids, US, 1999-2009



Source: CDC/NCHS National Vital Statistics System, CDC Wonder

Overdose deaths by select prescription drug type, US, 1999-2009



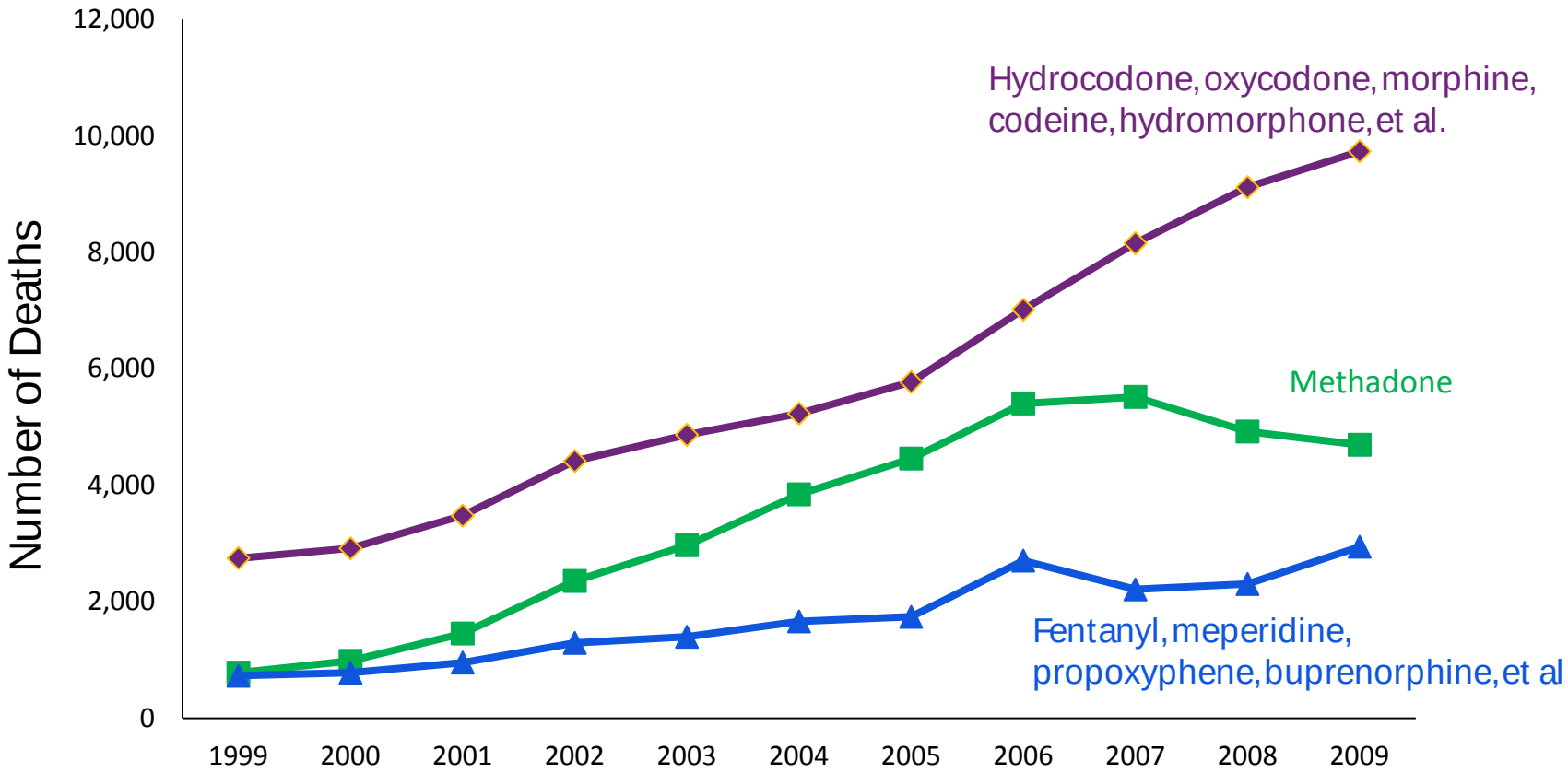
Source: CDC/NCHS National Vital Statistics System, CDC Wonder

Opioid deaths in comparison with other pharmaceuticals, US, 2009

Type of pharmaceutical	Related causes of death (defining ICD10 codes)	No. of deaths
Opioid analgesics	•Overdose (OD codes* with T40.2-T40.4)	15,597
	•Overdose without benzodiazepine or antidepressant	10,115
All non-opioid analgesics	•Overdose (X40, X60, Y10)	465
---Acetaminophen	•Overdose (OD codes with T39.1)	871
	•Toxic liver disease/liver failure from any cause except alcohol or viruses (K71-K72)	4,021
---NSAIDS	•Overdose (OD codes with T39.0,T39.2,T39.3)	250
	•GI ulcers/gastritis from any cause (K25-K29)	3,242
Antidepressants	•Overdose (OD codes with T43.0-43.2)	3,768
	•Overdose without opioid analgesic	1,605
Benzodiazepines	•Overdose (OD codes with T42.4)	5,567
	•Overdose without opioid analgesic	1,440
Antipsychotics	•Overdose (OD codes with T43.3-43.5)	1,301
	•Overdose without opioid analgesic	604

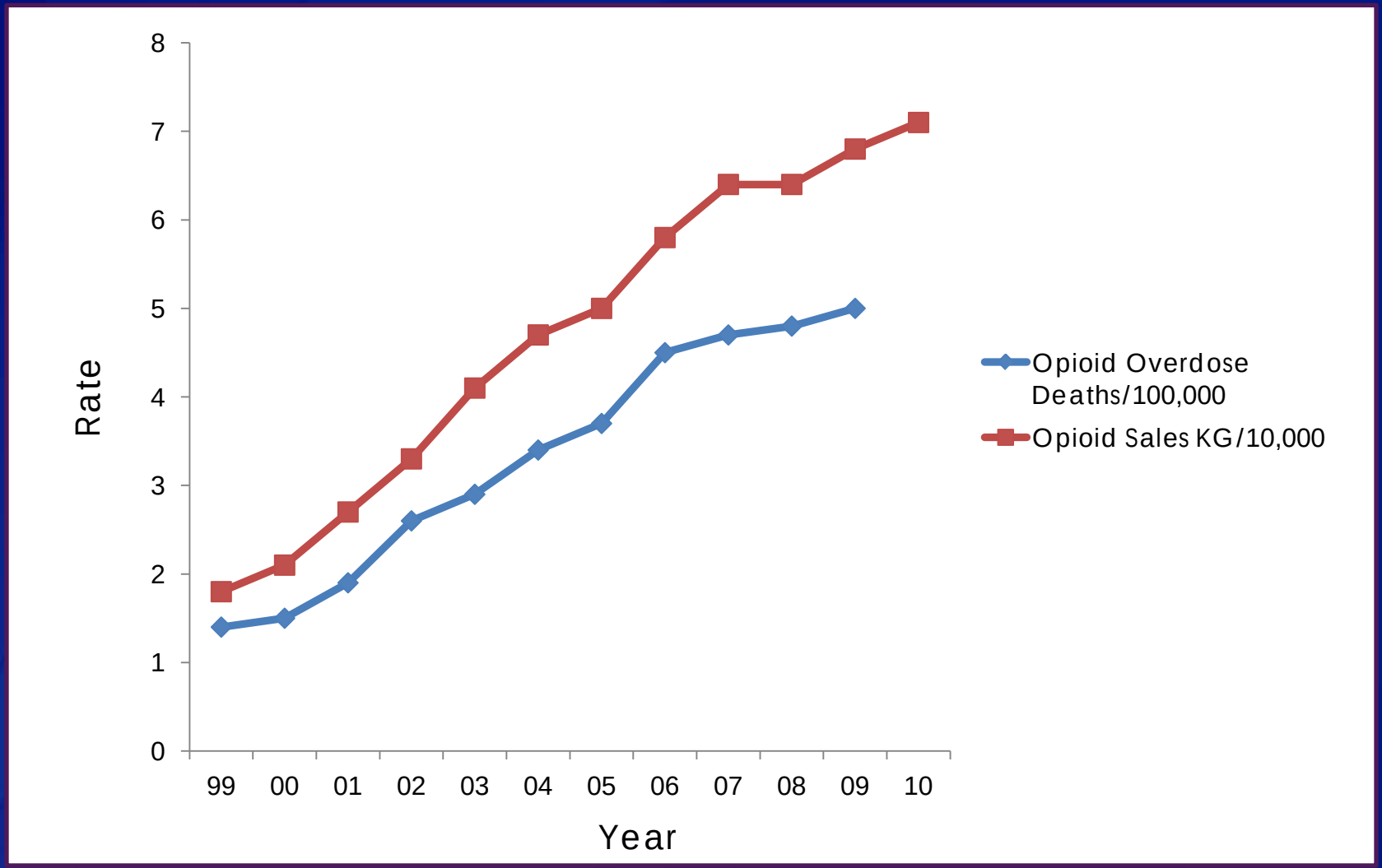
Source: CDC/NCHS National Vital Statistics System, CDC Wonder

Drug overdose deaths by type of opioid involved, US, 1999-2009



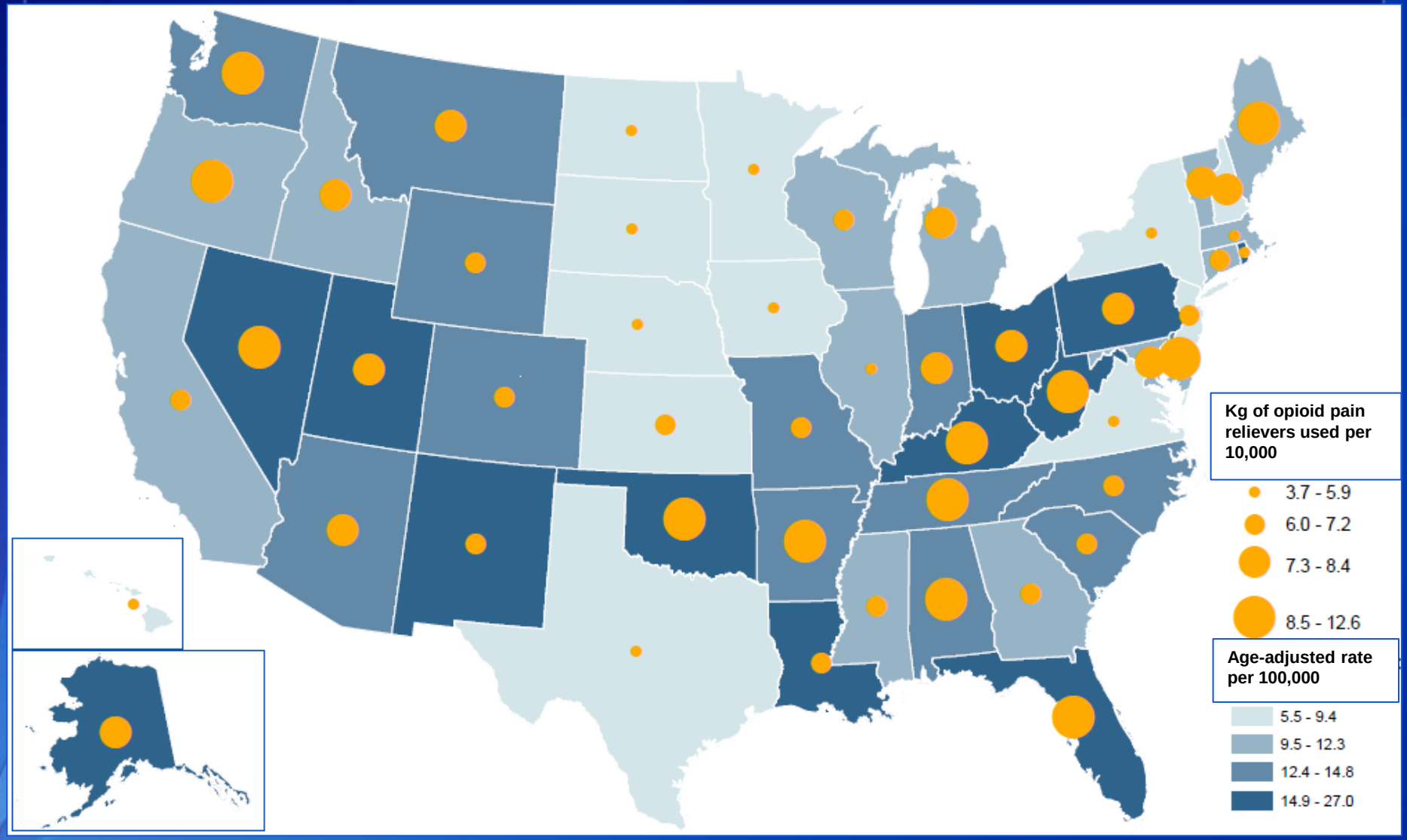
Source: CDC/NCHS National Vital Statistics System, CDC Wonder

Rates of Opioid Overdose Deaths and Sales
United States,1999-2010



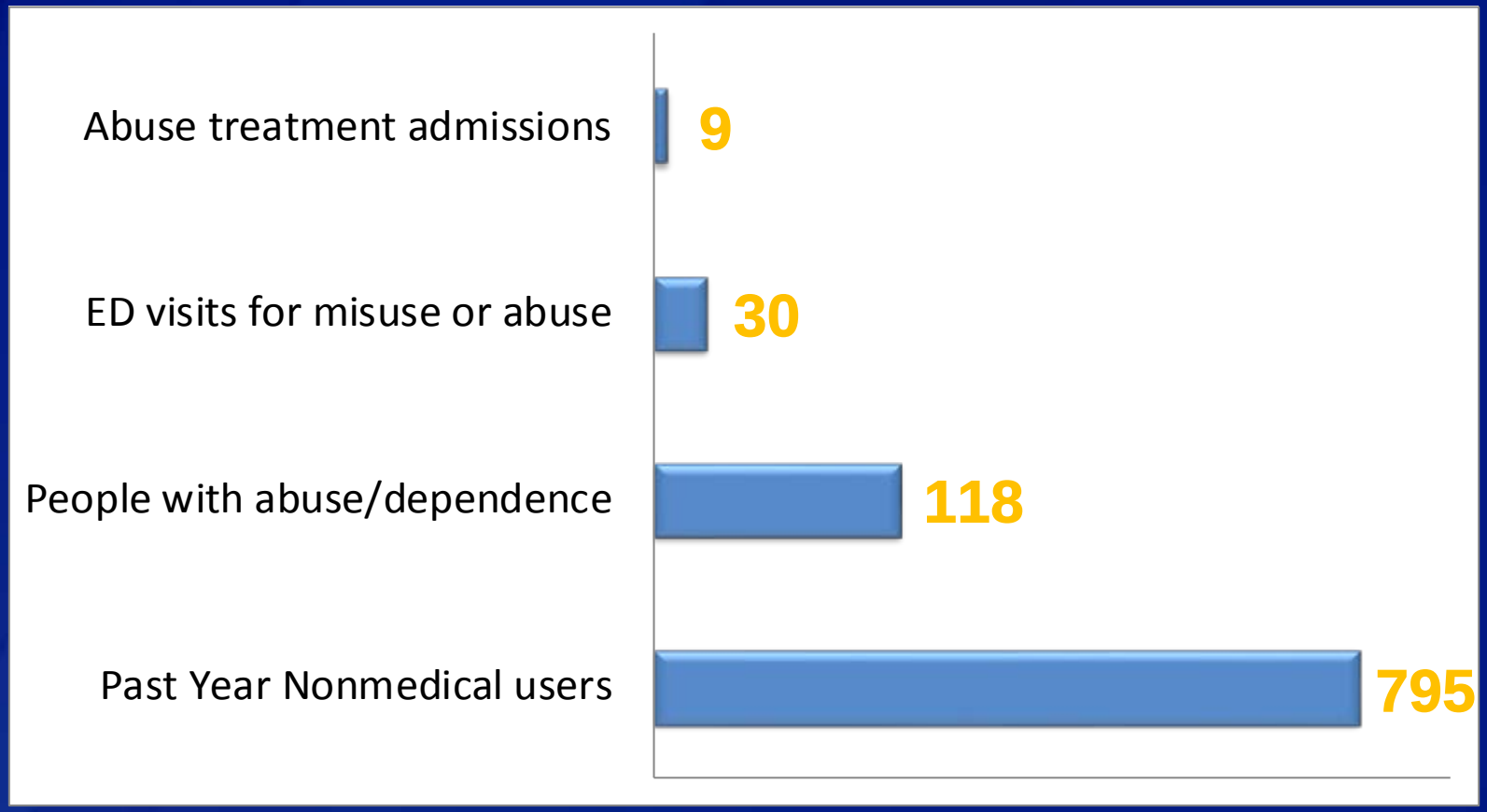
National Vital Statistics System and DEA's Automation of Reports and Consolidated Orders System

Drug overdose death rate 2008 and opioid pain reliever sales rate 2010



Public Health Impact of Opioid Pain Reliever Use

For every 1 overdose death there are



Economic Costs

- $72.5 Billion in healthcare costs[1]
- Opioid abusers generate, on average, annual direct health care costs 8.7 times higher than nonabusers[2]

1. Coalition Against Insurance Fraud. Prescription for peril: how insurance fraud finances theft and abuse of addictive prescription drugs. Washington, DC: Coalition Against Insurance Fraud; 2007

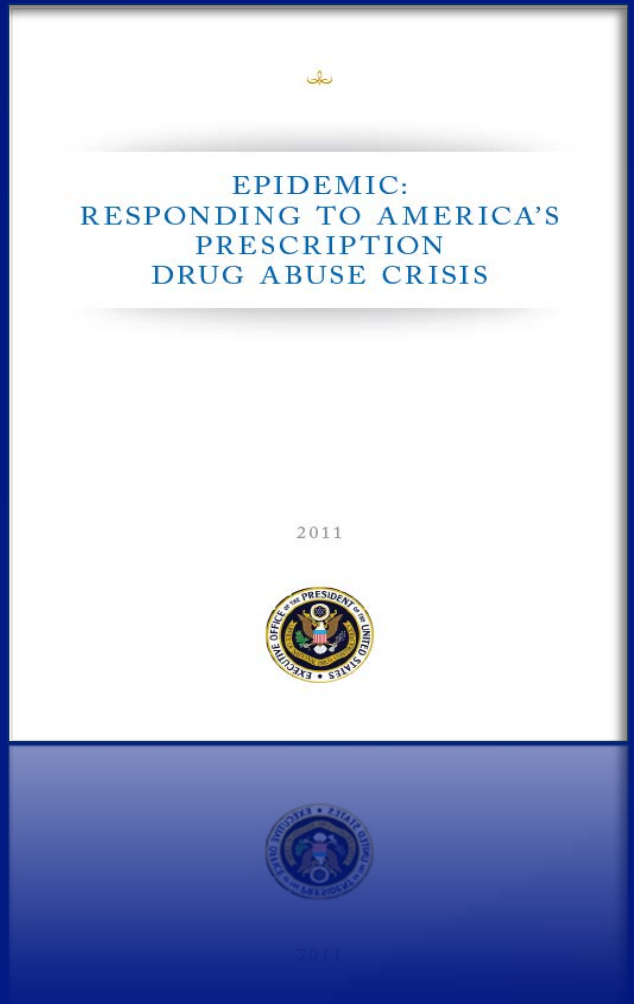
2. White AG, Birnbaum, HG, Mareva MN, et al. Direct Costs of Opioid Abuse in an Insured Population in the United States. *J Manag Care Pharm*. 11(6):469-479. 2005

Populations at High Risk for Overdose

- "Doctor Shoppers"
- People on high daily dosages of opioid pain relievers and poly-drug abusers
- Low-income people and those living in rural areas
- Medicaid populations
- People with mental illness or history of substance abuse

Administration's Rx Abuse Plan Where Does CDC Fit In?

- Blueprint for Federal government
- 4 Focus Areas
  - Education
  - Monitoring
  - Disposal
  - Enforcement
- CDC focusing on areas that fit within our mission and complement other Federal agencies



CDC Strategic Focus Areas

- Enhance Prescription Drug Abuse 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

MANUFACTURERS / WHOLESALERS / DISTRIBUTORS

Intervention

PILL MILLS

Interventions

PROBLEM PRESCRIBING

Interventions

GENERAL PRESCRIBING

Interventions

HOSPITALS / EMERGENCY DEPARTMENTS

Interventions

PEOPLE AT HIGH RISK FOR OVERDOSE

Interventions

GENERAL PATIENTS / PUBLIC

Interventions

PHARMACIES

Interventions

Anthem · Aetna · UniCare · HUMANA · CIGNA · PacifiCare · UnitedHealthcare · Health Net

INSURERS / PBMs

Interventions

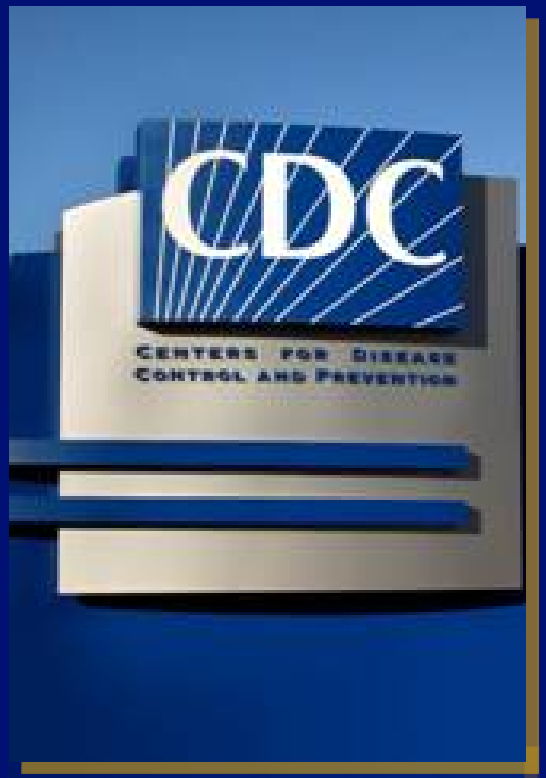
NOTE: What is presented here are the priority strategies that are likely to have the greatest impact. This is not an exhaustive list.

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

CDC Policy Recommendations

- Prescription Drug Monitoring Programs (PDMPs)
- Patient Review & Restriction Programs
- Laws/Regulations/Policies
- Insurers & Pharmacy Benefit Managers (PBM) mechanisms
- Clinical Guidelines



Prescription Drug Monitoring Programs (PDMPs)

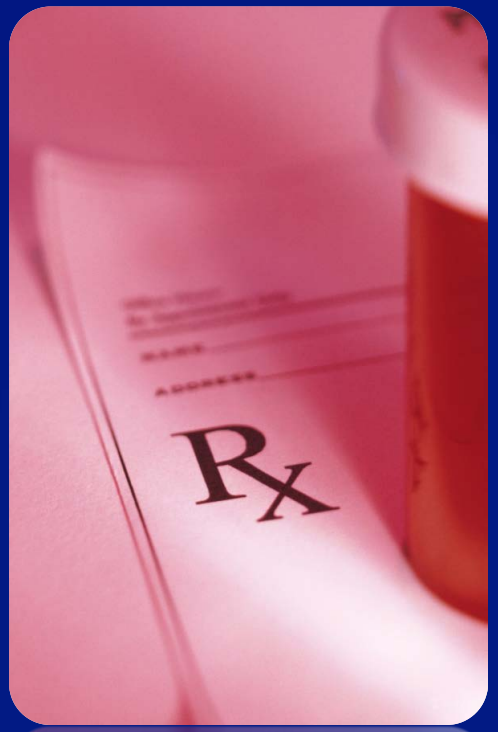
- Operational in 40 states
- Focus PDMPs
  - On patients at highest risk of abuse and overdose
  - On prescribers who clearly deviate from accepted medical practice
- Implement PDMP Best Practices
  - Allow access for all prescribers and dispensers
  - Allow access for regulatory boards, state Medicaid and public health agencies, Medical Examiners, and law enforcement (under appropriate circumstances)
  - Provide real-time data
  - Develop interoperability
  - Integrate with other health information technologies to improve use among health care providers
  - Have ability to send unsolicited reports

Patient Review and Restriction Programs (aka "Lock-In" Programs)

- For patients with patterns of inappropriate use of controlled substances
- Improve coordination of care and 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
- Need to evaluate these programs and identify best practices

Laws/Regulation/Policies

- 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

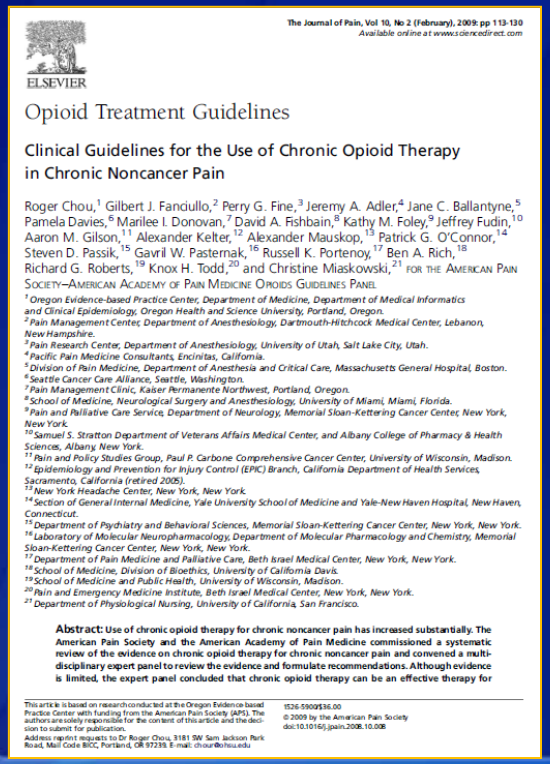


Insurer/Pharmacy Benefit Manager (PBM) Mechanisms

- Reimbursement incentives/disincentives
- Formulary development
- Quantity limits
- Step therapies/Prior Authorization
- Claims analysis programs

Clinical Guidelines

- Improve prescribing and treatment
- Basis for standard of accepted medical practice
- Several consensus guidelines available



ELSEVIER

The Journal of Pain, Vol 10, No 2 (February), 2009: pp 113-130
Available online at www.sciencedirect.com

Opioid Treatment Guidelines

Clinical Guidelines for the Use of Chronic Opioid Therapy in Chronic Noncancer Pain

Roger Chou,[1] Gilbert J. Fanciullo,[2] Perry G. Fine,[3] Jeremy A. Adler,[4] Jane C. Ballantyne,[5] Pamela Davies,[6] Marilee I. Donovan,[7] David A. Fishbain,[8] Kathy M. Foley,[9] Jeffrey Fudin,[10] Aaron M. Gilson,[11] Alexander Kelter,[12] Alexander Mauskop,[13] Patrick G. O'Connor,[14] Steven D. Passik,[15] Gavril W. Pasternak,[16] Russell K. Portenoy,[17] Ben A. Rich,[18] Richard G. Roberts,[19] Knox H. Todd,[20] and Christine Miaskowski,[21] for the American Pain Society–American Academy of Pain Medicine Opioids Guidelines Panel

[1] Oregon Evidence-based Practice Center, Department of Medicine, Department of Medical Informatics and Clinical Epidemiology, Oregon Health and Science University, Portland, Oregon.
[2] Pain Management Center, Department of Anesthesiology, Dartmouth-Hitchcock Medical Center, Lebanon, New Hampshire.
[3] Pain Research Center, Department of Anesthesiology, University of Utah, Salt Lake City, Utah.
[4] Pacific Pain Medicine Consultants, Encinitas, California.
[5] Division of Pain Medicine, Department of Anesthesia and Critical Care, Massachusetts General Hospital, Boston.
[6] Seattle Cancer Care Alliance, Seattle, Washington.
[7] Pain Management Clinic, Kaiser Permanente Northwest, Portland, Oregon.
[8] School of Medicine, Neurological Surgery and Anesthesiology, University of Miami, Miami, Florida.
[9] Pain and Palliative Care Service, Department of Neurology, Memorial Sloan-Kettering Cancer Center, New York, New York.
[10] Samuel S. Stratton Department of Veterans Affairs Medical Center, and Albany College of Pharmacy & Health Sciences, Albany, New York.
[11] Pain and Policy Studies Group, Paul P. Carbone Comprehensive Cancer Center, University of Wisconsin, Madison.
[12] Epidemiology and Prevention for Injury Control (EPIC) Branch, California Department of Health Services, Sacramento, California (retired 2005).
[13] New York Headache Center, New York, New York.
[14] Section of General Internal Medicine, Yale University School of Medicine and Yale-New Haven Hospital, New Haven, Connecticut.
[15] Department of Psychiatry and Behavioral Sciences, Memorial Sloan-Kettering Cancer Center, New York, New York.
[16] Laboratory of Molecular Neuropharmacology, Department of Molecular Pharmacology and Chemistry, Memorial Sloan-Kettering Cancer Center, New York, New York.
[17] Department of Pain Medicine and Palliative Care, Beth Israel Medical Center, New York, New York.
[18] School of Medicine, Division of Bioethics, University of California Davis.
[19] School of Medicine and Public Health, University of Wisconsin, Madison.
[20] Pain and Emergency Medicine Institute, Beth Israel Medical Center, New York, New York.
[21] Department of Physiological Nursing, University of California, San Francisco.

Abstract: Use of chronic opioid therapy for chronic noncancer pain has increased substantially. The American Pain Society and the American Academy of Pain Medicine commissioned a systematic review of the evidence on chronic opioid therapy for chronic noncancer pain and convened a multidisciplinary expert panel to review the evidence and formulate recommendations. Although evidence is limited, the expert panel concluded that chronic opioid therapy can be an effective therapy for

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Address reprint requests to Dr Roger Chou, 3181 SW Sam Jackson Park Road, Mail Code BICC, Portland, OR 97239. E-mail: chour@ohsu.edu

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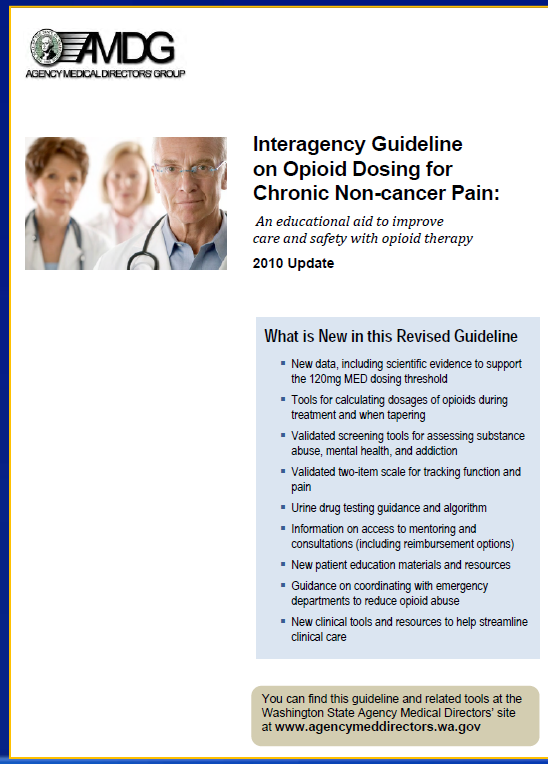


AMDG
AGENCY MEDICAL DIRECTORS' GROUP

Interagency Guideline on Opioid Dosing for Chronic Non-cancer Pain:

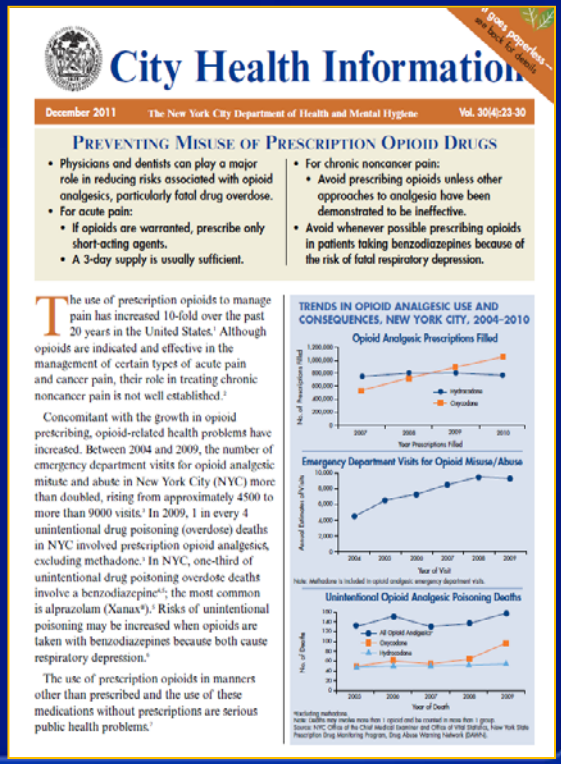
An educational aid to improve care and safety with opioid therapy

2010 Update

What is New in this Revised Guideline

- New data, including scientific evidence to support the 120mg MED dosing threshold
- Tools for calculating dosages of opioids during treatment and when tapering
- Validated screening tools for assessing substance abuse, mental health, and addiction
- Validated two-item scale for tracking function and pain
- Urine drug testing guidance and algorithm
- Information on access to mentoring and consultations (including reimbursement options)
- New patient education materials and resources
- Guidance on coordinating with emergency departments to reduce opioid abuse
- New clinical tools and resources to help streamline clinical care

You can find this guideline and related tools at the Washington State Agency Medical Directors' site at **www.agencymeddirectors.wa.gov**



City Health Information

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PREVENTING MISUSE OF PRESCRIPTION OPIOID DRUGS

- Physicians and dentists can play a major role in reducing risks associated with opioid analgesics, particularly fatal drug overdose.
- For acute pain:
  - If opioids are warranted, prescribe only short-acting agents.
  - A 3-day supply is usually sufficient.
- For chronic noncancer pain:
  - Avoid prescribing opioids unless other approaches to analgesia have been demonstrated to be ineffective.
  - Avoid whenever possible prescribing opioids in patients taking benzodiazepines because of the risk of fatal respiratory depression.

The use of prescription opioids to manage pain has increased 10-fold over the past 20 years in the United States.[1] Although opioids are indicated and effective in the management of certain types of acute pain and cancer pain, their role in treating chronic noncancer pain is not well established.[2]

Concomitant with the growth in opioid prescribing, opioid-related health problems have increased. Between 2004 and 2009, the number of emergency department visits for opioid analgesic misuse and abuse in New York City (NYC) more than doubled, rising from approximately 4500 to more than 9000 visits.[3] In 2009, 1 in every 4 unintentional drug poisoning (overdose) deaths in NYC involved prescription opioid analgesics, excluding methadone.[3] In NYC, one-third of unintentional drug poisoning overdose deaths involve a benzodiazepine[4,5]; the most common is alprazolam (Xanax®).[5] Risks of unintentional poisoning may be increased when opioids are taken with benzodiazepines because both cause respiratory depression.[6]

The use of prescription opioids in manners other than prescribed and the use of these medications without prescriptions are serious public health problems.[7]

TRENDS IN OPIOID ANALGESIC USE AND CONSEQUENCES, NEW YORK CITY, 2004-2010

Opioid Analgesic Prescriptions Filled

Emergency Department Visits for Opioid Misuse/Abuse

Unintentional Opioid Analgesic Poisoning Deaths

Increase Access to Substance Abuse Treatment

- 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 plan for increased demand, including access to medication assisted therapies like buprenorphine and methadone

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
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- Clinical Guidelines

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HOSPITALS / EMERGENCY DEPARTMENTS
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PEOPLE AT HIGH RISK FOR OVERDOSE
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Anthem · Aetna · UniCare · HUMANA · CIGNA · PacifiCare · UnitedHealthcare · Health Net

INSURERS / PBMs
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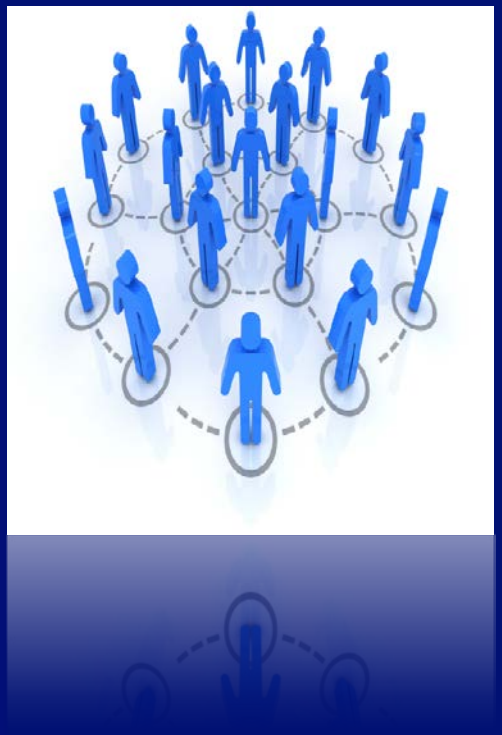
NOTE: What is presented here are the priority strategies that are likely to have the greatest impact. This is not an exhaustive list.

Intervention Points	Policy Interventions
Pill Mills	PDMPs, Laws/Regulations/Policies
Problem Prescribing	PDMPs, Laws/Regulations/Policies, Insurers/PBMs, Clinical Guidelines
General Prescribing	PDMPs, Laws/Regulations/Policies, Insurers/PBMs, Clinical Guidelines
EDs & Hospitals	PDMPs, Laws/Regulations/Policies, Insurers/PBMs, Clinical Guidelines
Pharmacies	PDMPs, Patient Review & Restriction Programs, Laws/Regulations/Policies, Insurers/PBMs, Clinical Guidelines
Insurers & Pharmacy Benefit Managers	PDMPs, Patient Review & Restriction Programs, Laws/Regulations/Policies, Insurers/PBMs,
People at High Risk of Overdose	PDMPs, Patient Review & Restriction Programs, Laws/Regulations/Policies, Insurers/PBMs, Clinical Guidelines
General Patients & The Public	PDMPs, Insurers/PBMs, Clinical Guidelines

A little on Delaware

- Delaware 9th highest drug overdose death rate in 2009
  - 15.5 deaths per 100,000 population
  - National average 12.0 deaths per 100,000 population
  - Drug overdose death rate increased 142% between 1999-2009
- 5.6% of Delaware residents 12 and older report nonmedical use of opioid pain relievers
  - National average 4.8%
- Delaware 5th highest for opioid sales in 2010
  - 10.2 KG per 10,000 population
  - National average 7.1 KG per 10,000 population
- Substance abuse treatment admission rates for opioids increased over 2,750% between 1999 and 2010

Conclusions



- Overdose deaths from prescription drugs have reached epidemic levels in the United States
- A concerted public health and public safety approach is essential
- Critical to identify the drivers of the epidemic and tailor policy interventions to address them
- States are essential to reversing the epidemic. A multi-sector approach is required

Thank You

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