



# Prescription Drug Abuse and Overdose in the United States

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**Division of Unintentional Injury Prevention**

**National Center for Injury Prevention and Control**

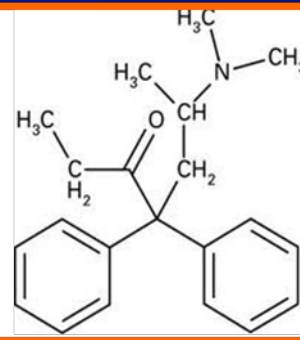
**Centers for Disease Control and Prevention**

National Center for Injury Prevention and Control  
Division of Unintentional Injury Prevention

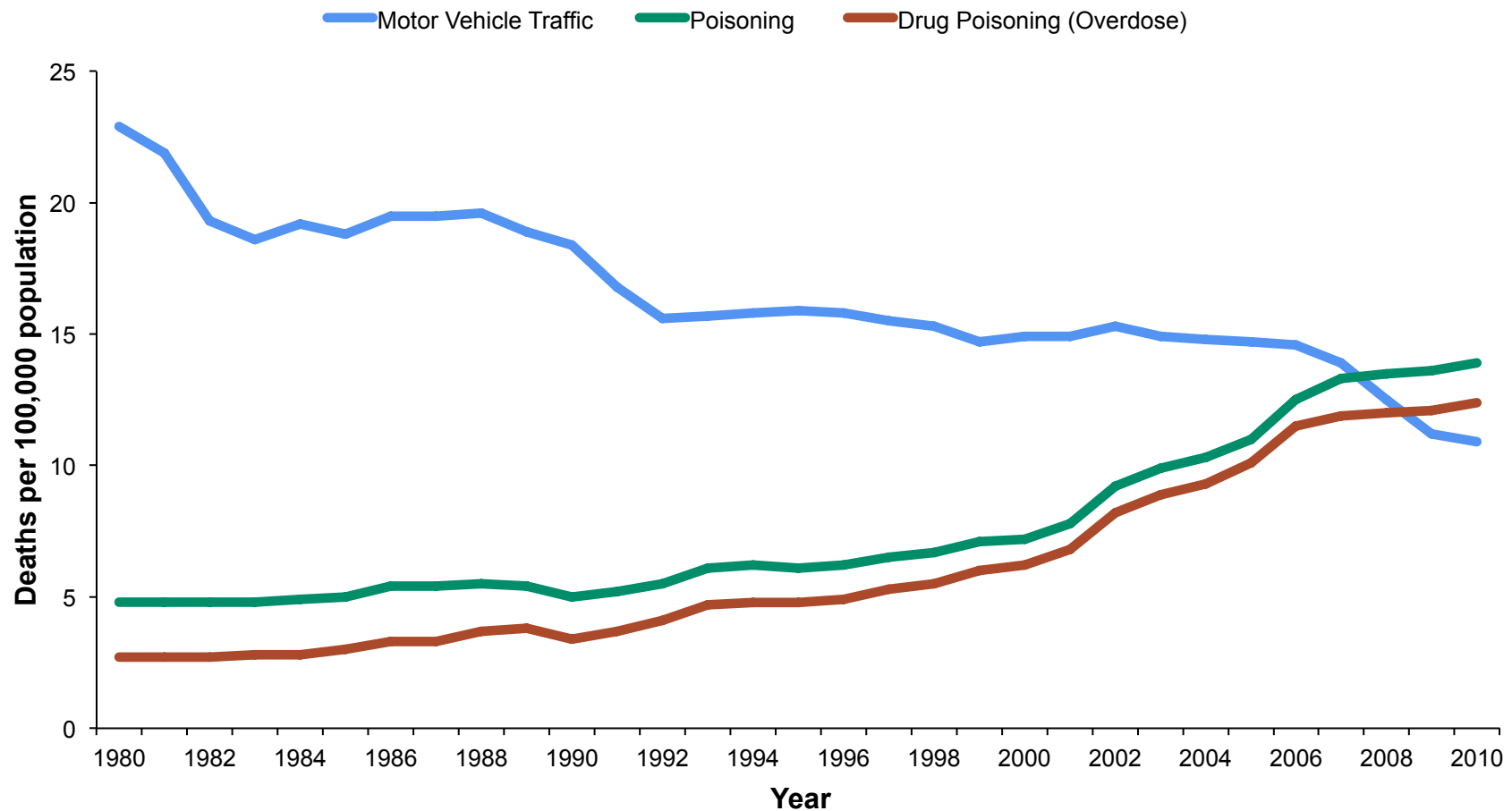


# Overview

- ❑ Abuse and overdose trends
- ❑ Drivers of the epidemic
- ❑ Prescribing and use patterns contributing to risk
- ❑ Outcomes by insurance status

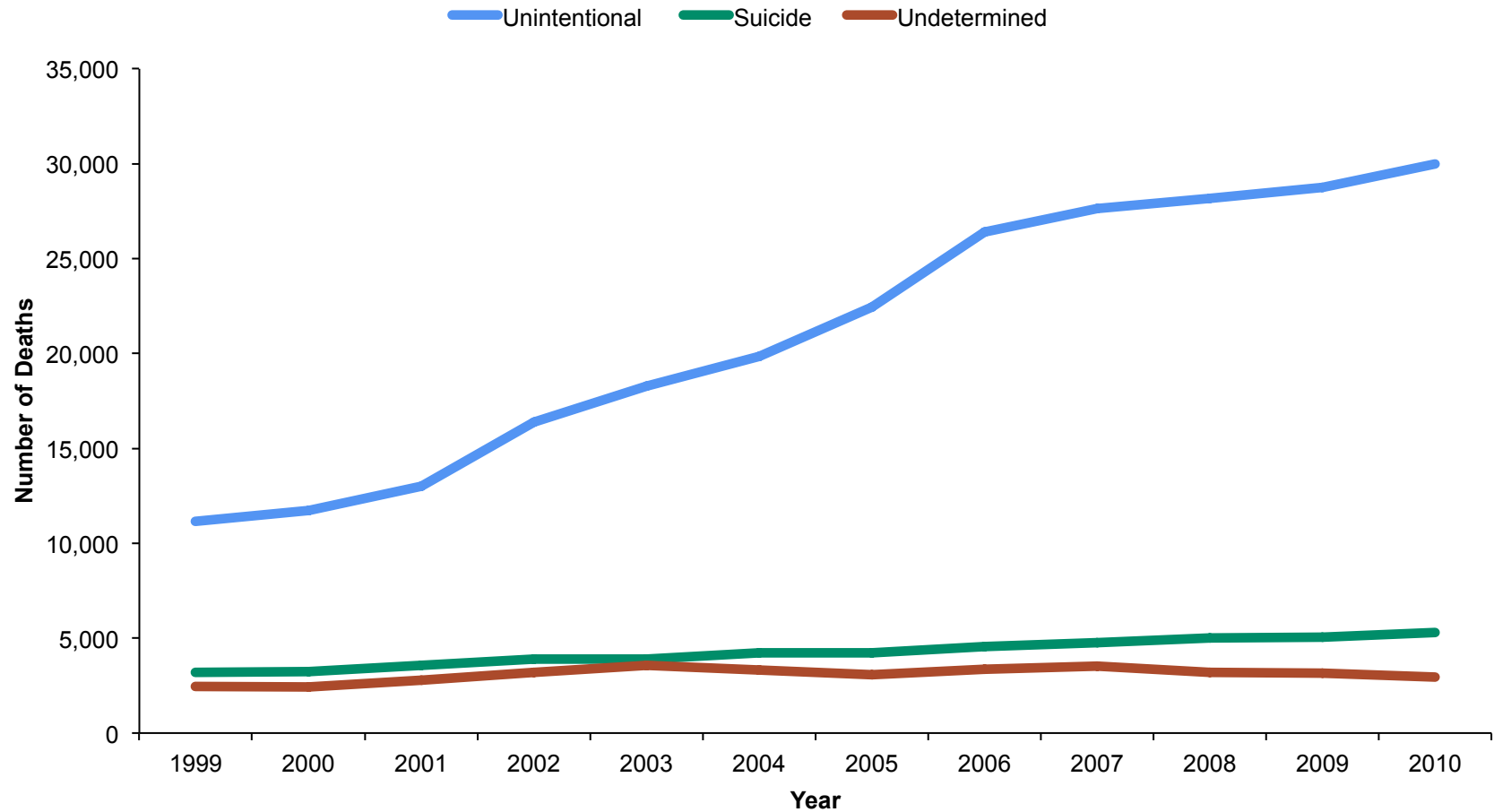


# Motor vehicle traffic, poisoning, and drug poisoning (overdose) death rates United States, 1980-2010



NCHS Data Brief, December, 2011, Updated with 2009 and 2010 mortality data

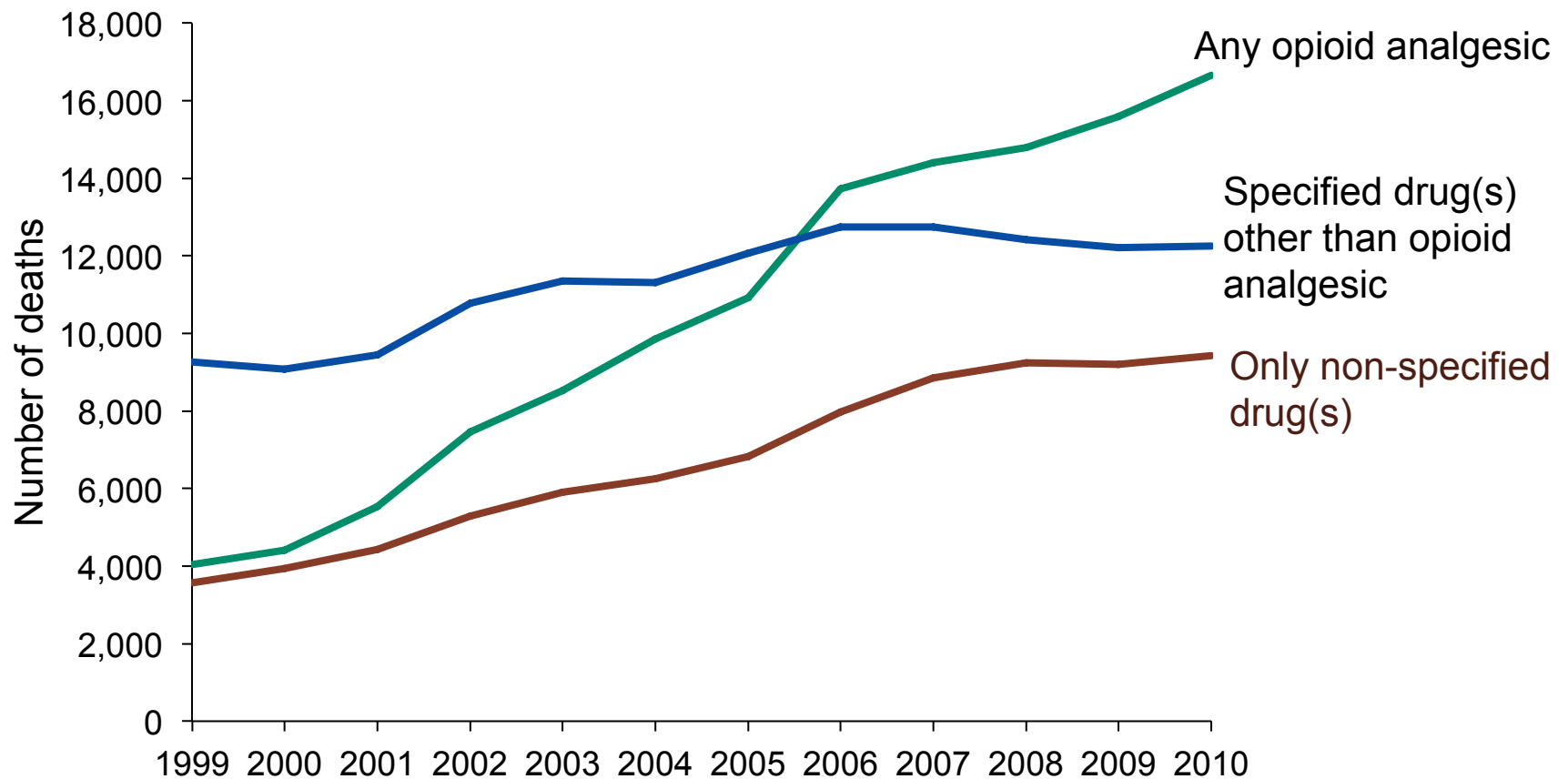
# Drug overdose deaths by intent, US, 1999-2010



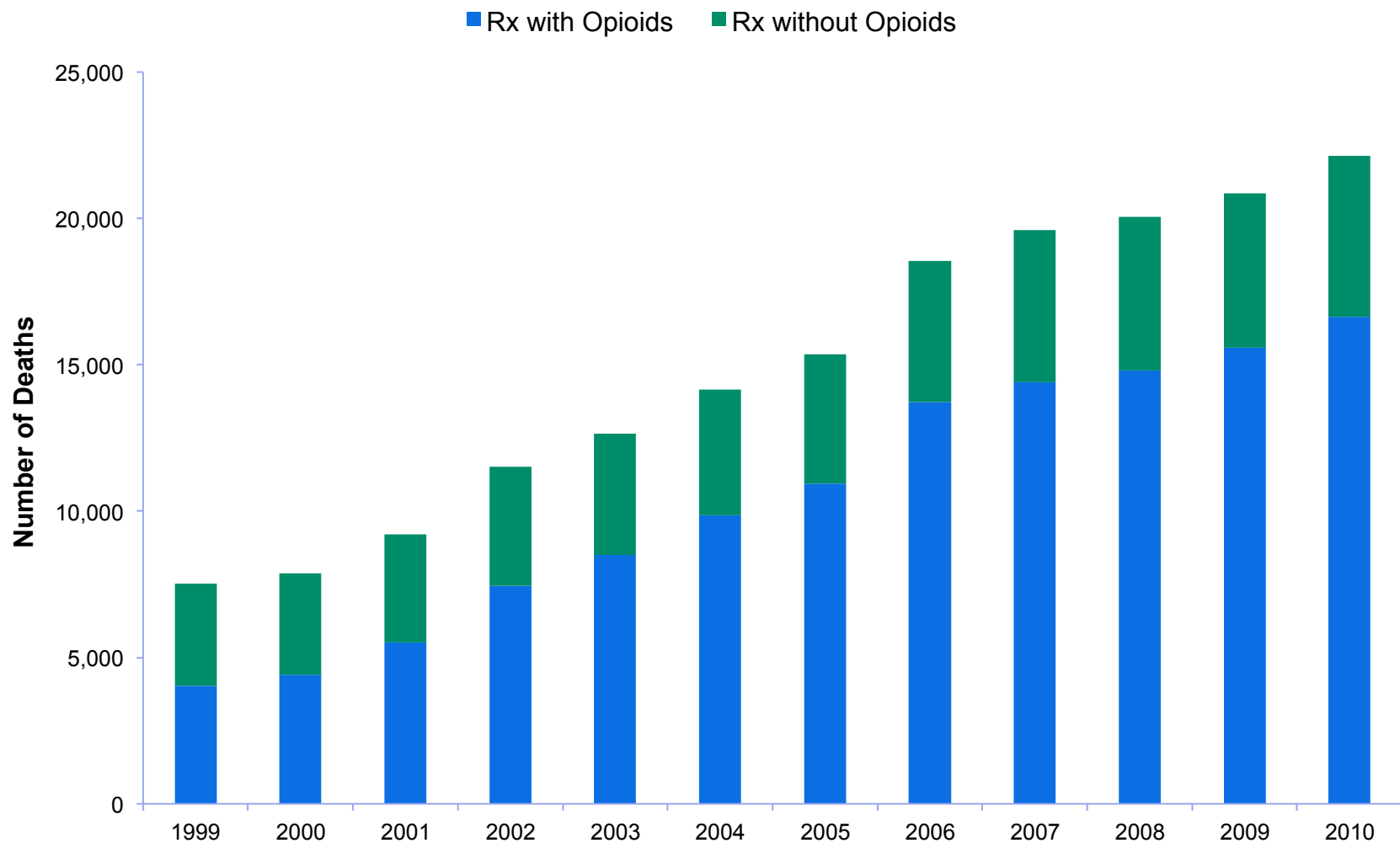
National Vital Statistics System. 1999-2010.



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

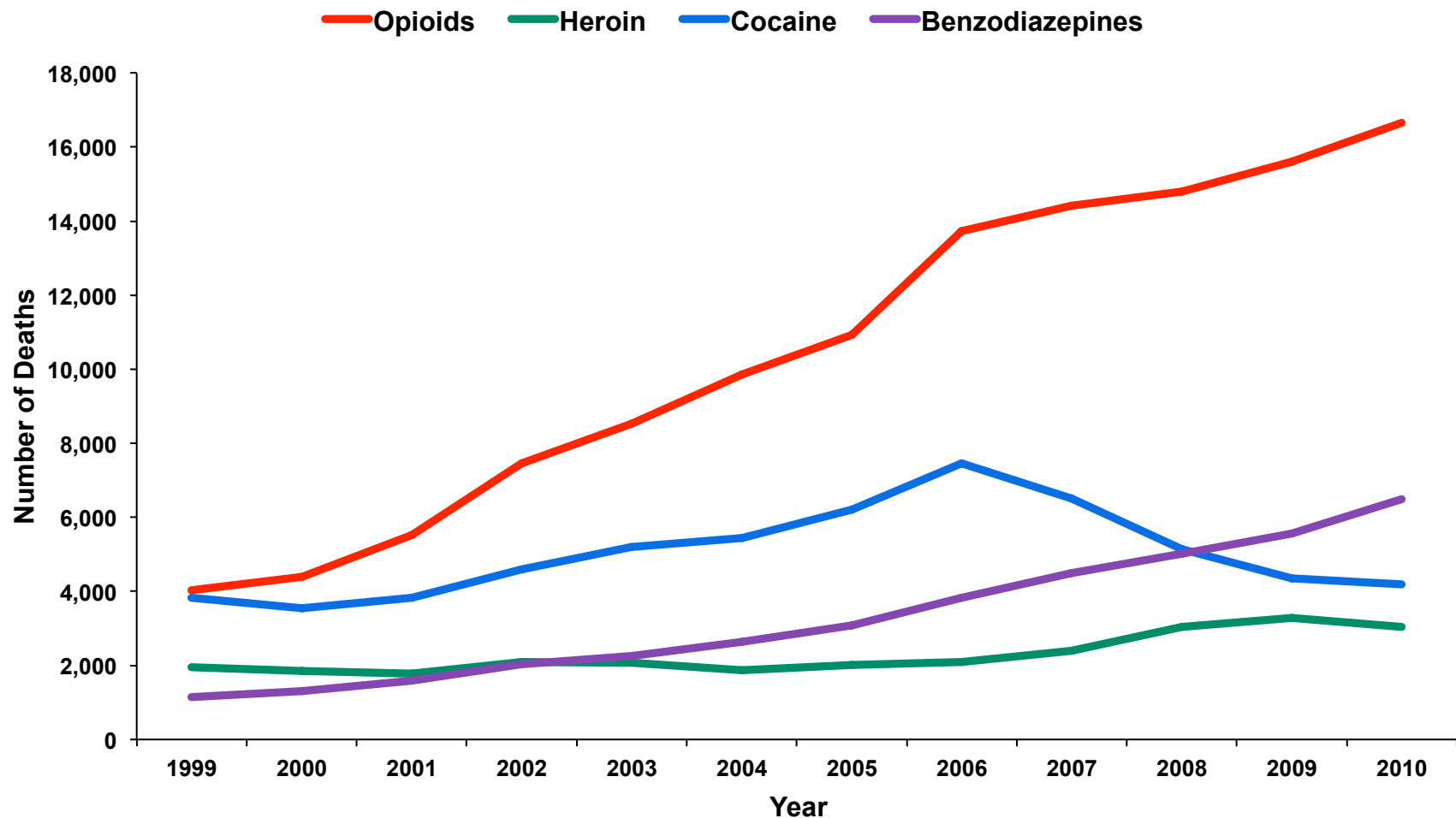


# Prescription drug overdose deaths with and without opioids, US, 1999-2010



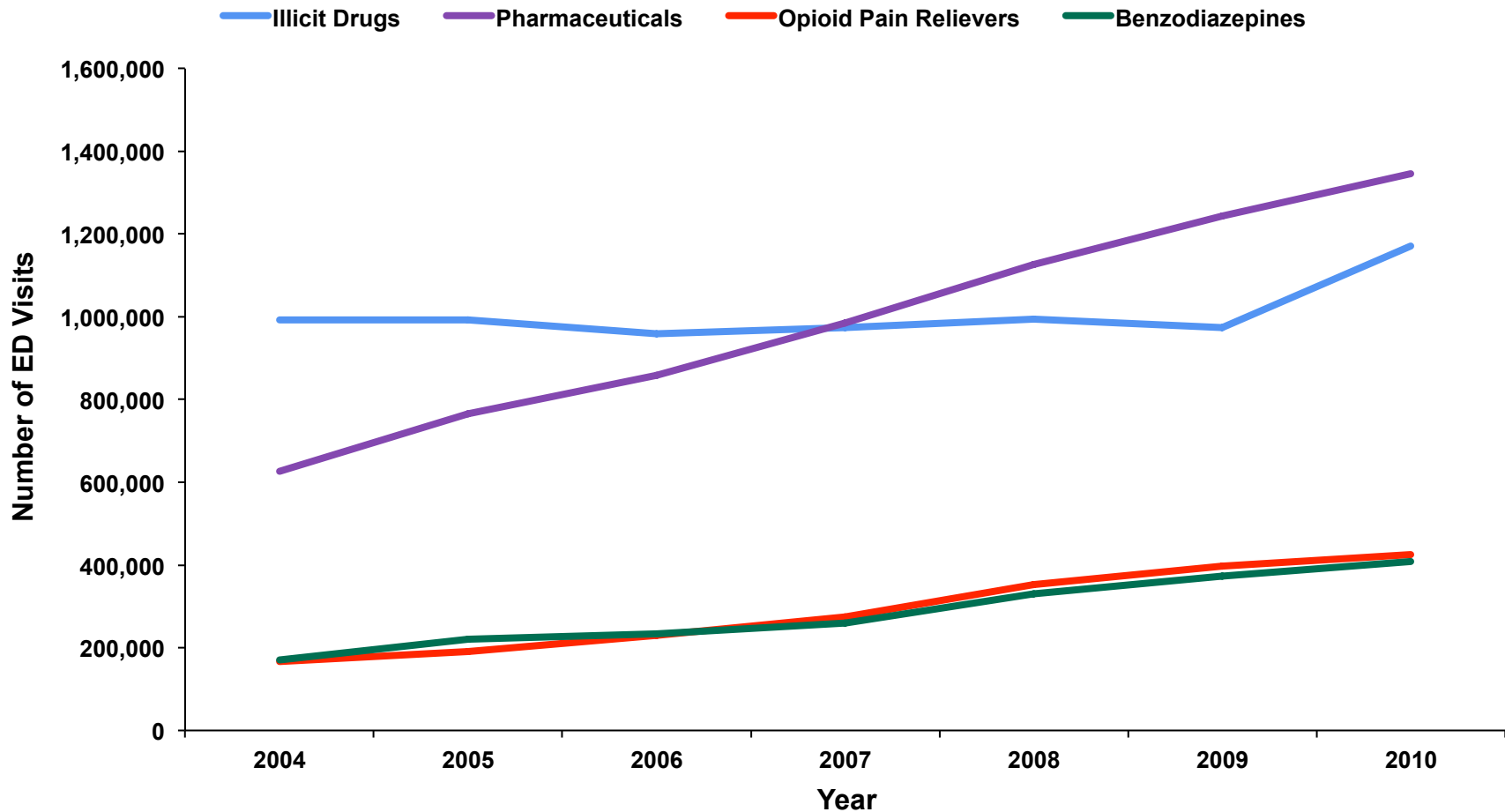
CDC/NCHS, National Vital Statistics System

# Drug overdose deaths by major drug type, US, 1999-2010



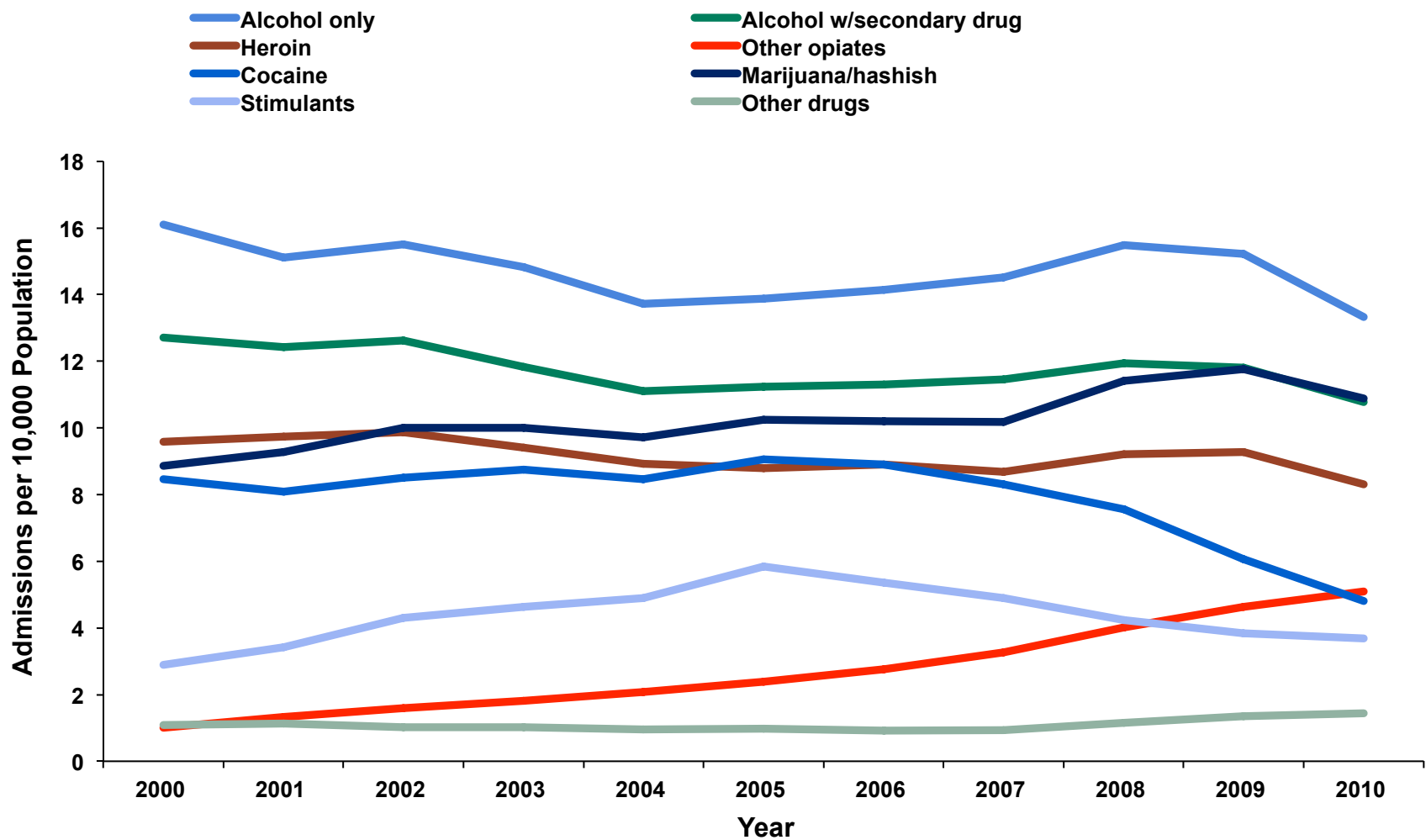
CDC/NCHS National Vital Statistics System, CDC Wonder. Updated with 2010 mortality.

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



SAMHSA. Highlights of the 2010 Drug Abuse Warning Network (DAWN) Findings on Drug-Related ED Visits, (2011).

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



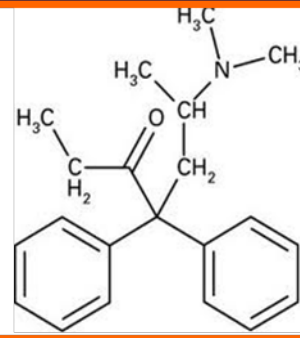
SAMHSA Treatment Episode Data Set, 2000-2010.

## High risk populations

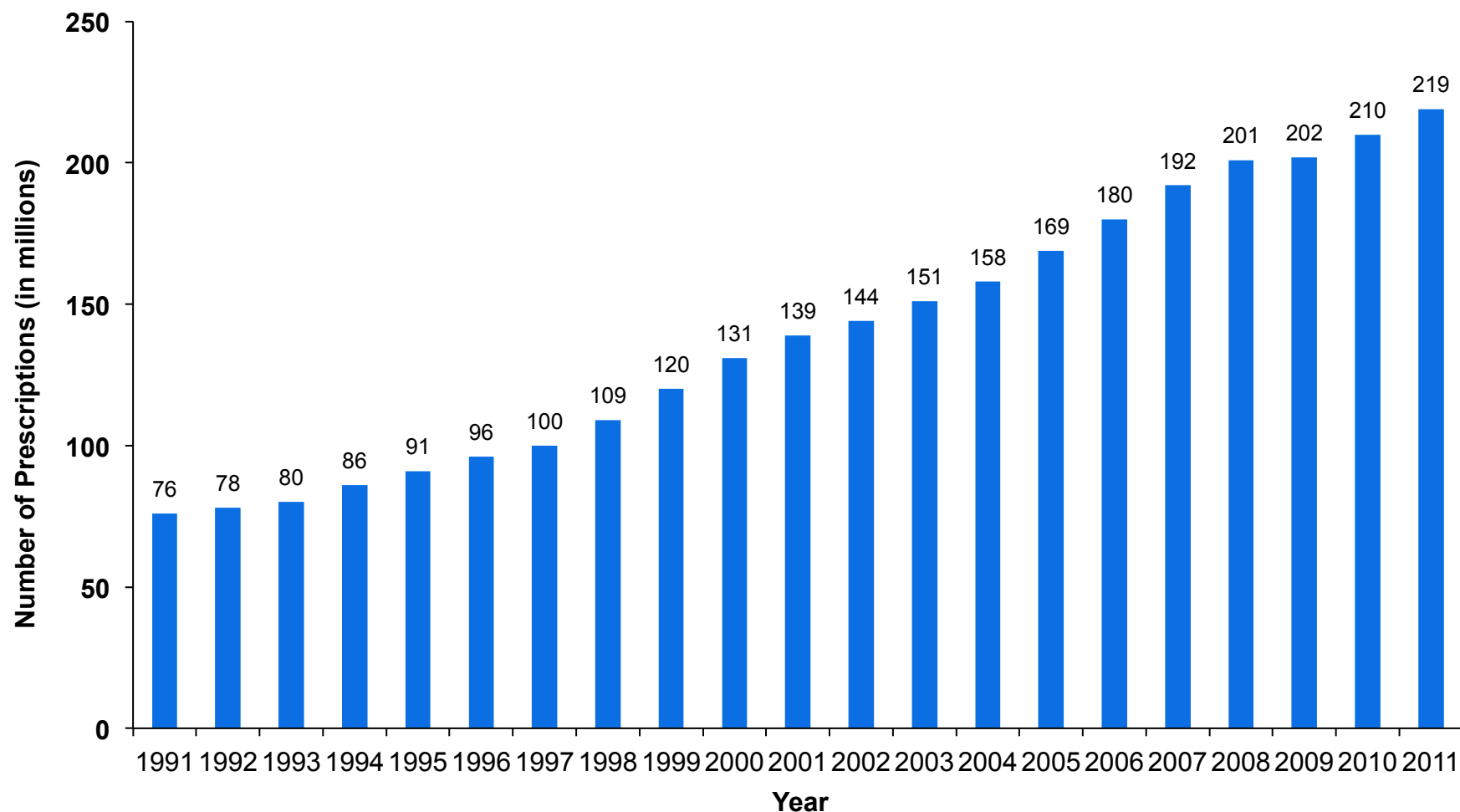
- ❑ People taking high daily doses of opioids
- ❑ People who “doctor shop”
- ❑ People using multiple abuseable substances
- ❑ Low-income people and those living in rural areas
- ❑ People with substance abuse or other mental health issues
- ❑ Men
- ❑ Whites, American Indians/Alaska Natives
- ❑ Middle-aged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

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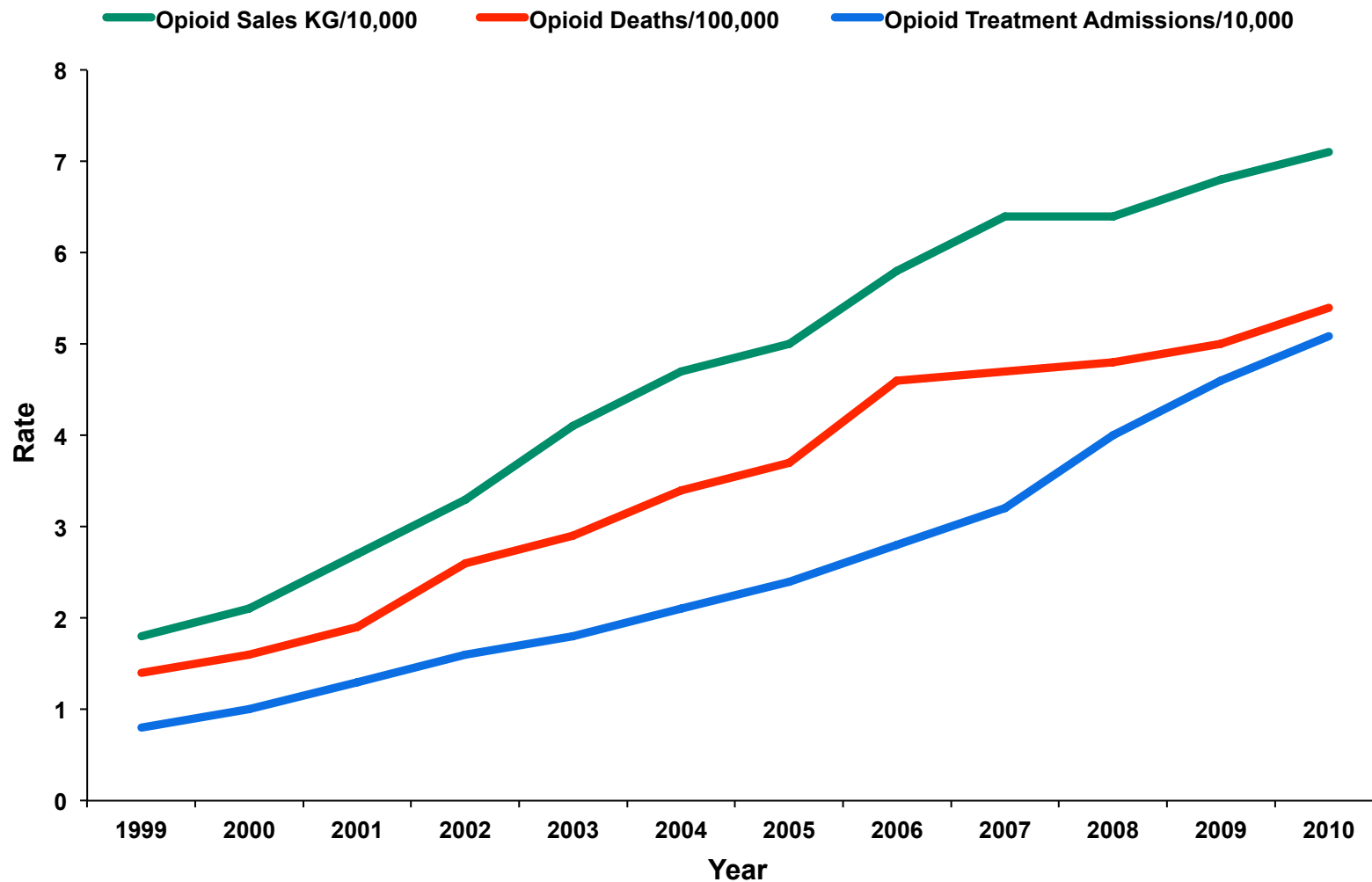
# Opioid prescriptions dispensed by retail pharmacies, U.S., 1991-2011



IMS Vector One. From "Prescription Drug Abuse : It's Not what the doctor ordered" Nora Volkow National Prescription Drug Abuse Summit April 2012. Available at: <http://www.slideshare.net/OPUNITE/nora-volkow-final-edits>

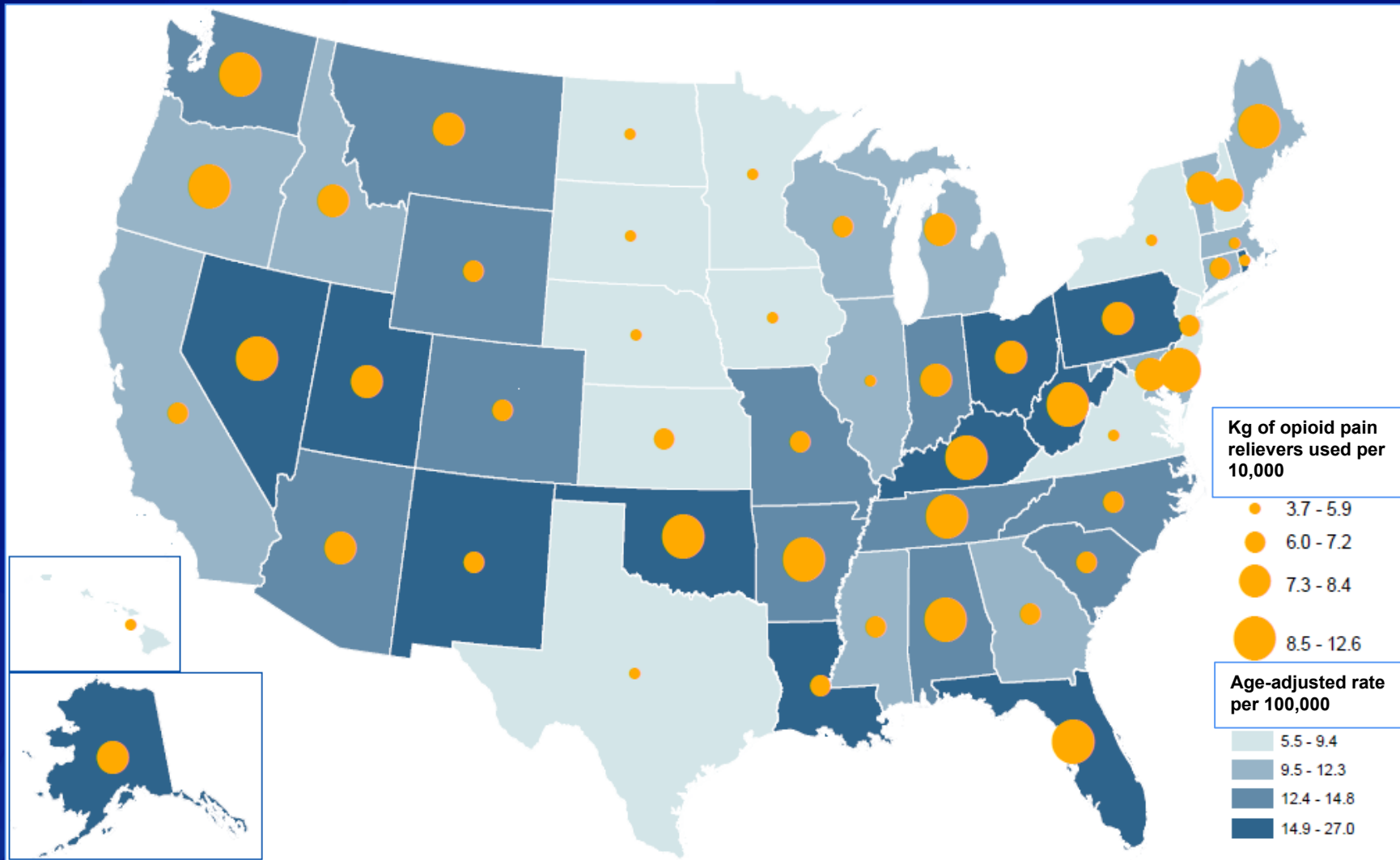


# Rates of opioid overdose deaths, sales and treatment admissions, US, 1999-2010



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

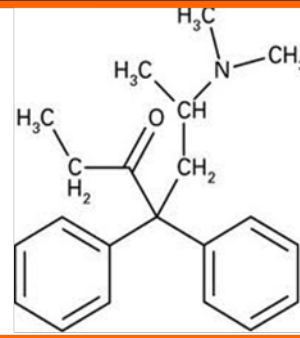
# Drug overdose death rate 2008 and opioid pain reliever sales rate 2010



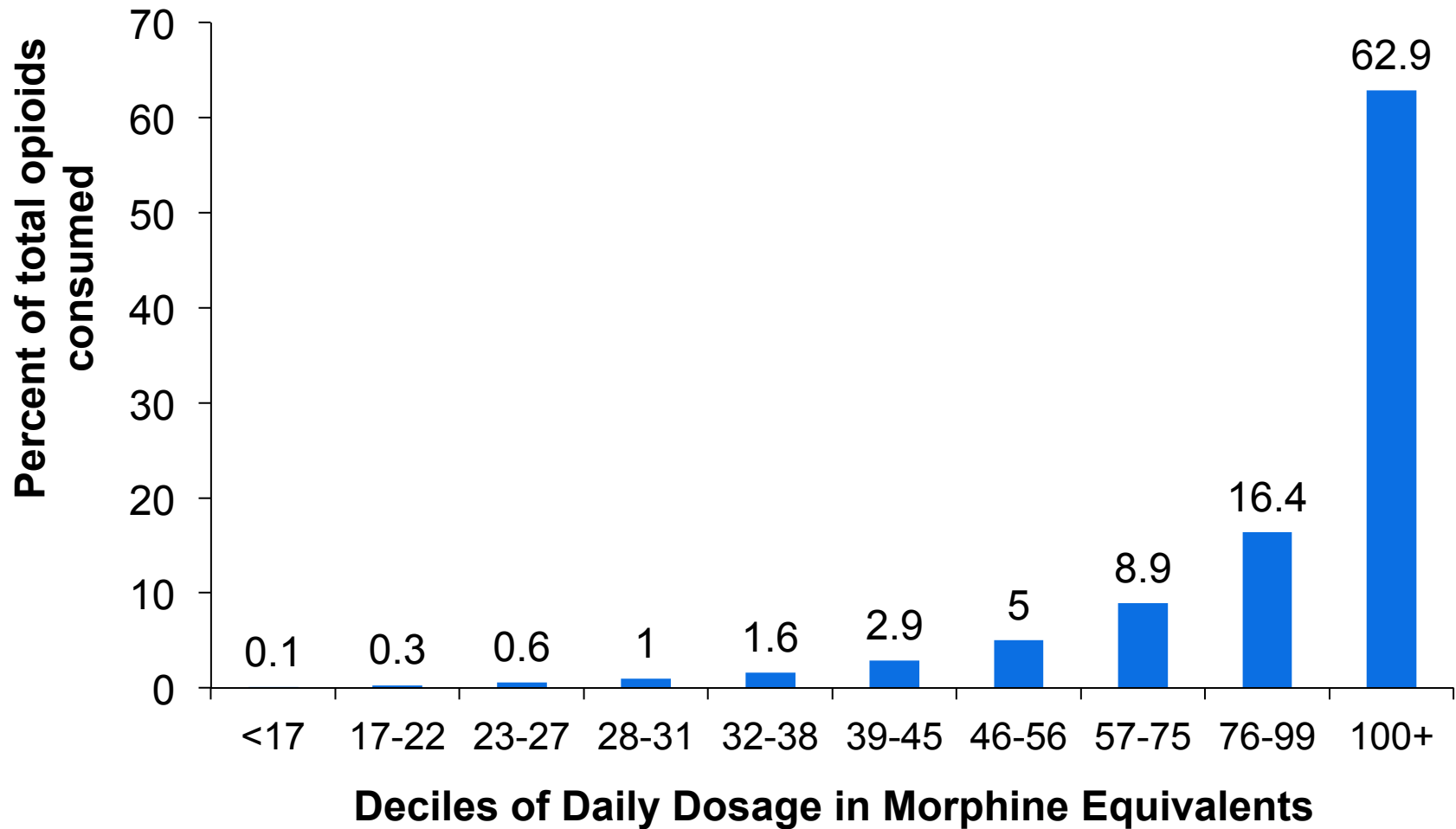
National Vital Statistics System, 2008; Automated Reports Consolidated Orders System (2010)

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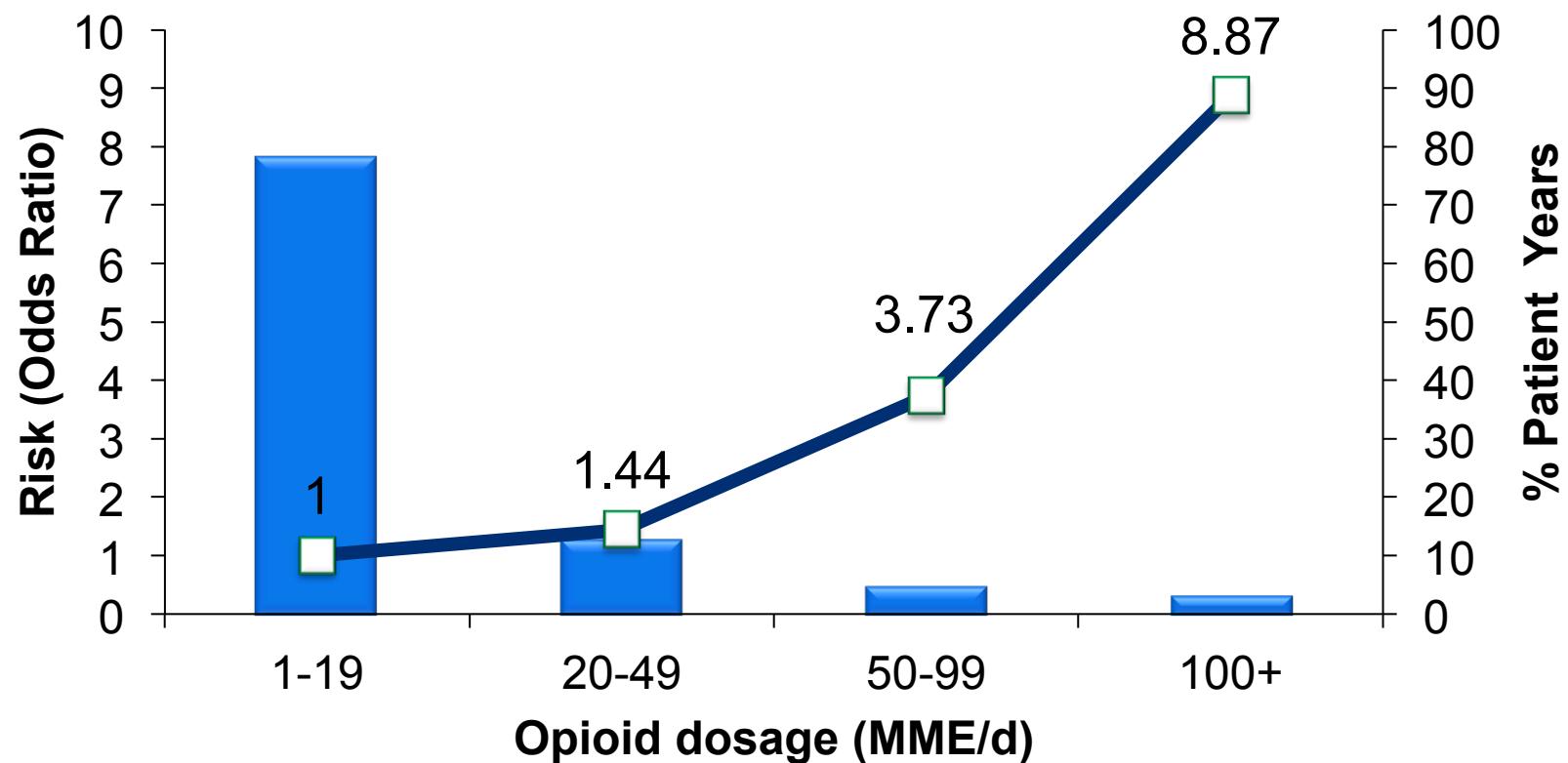


## Percent of total opioids consumed by patient consumption level, Arkansas Medicaid, 2005



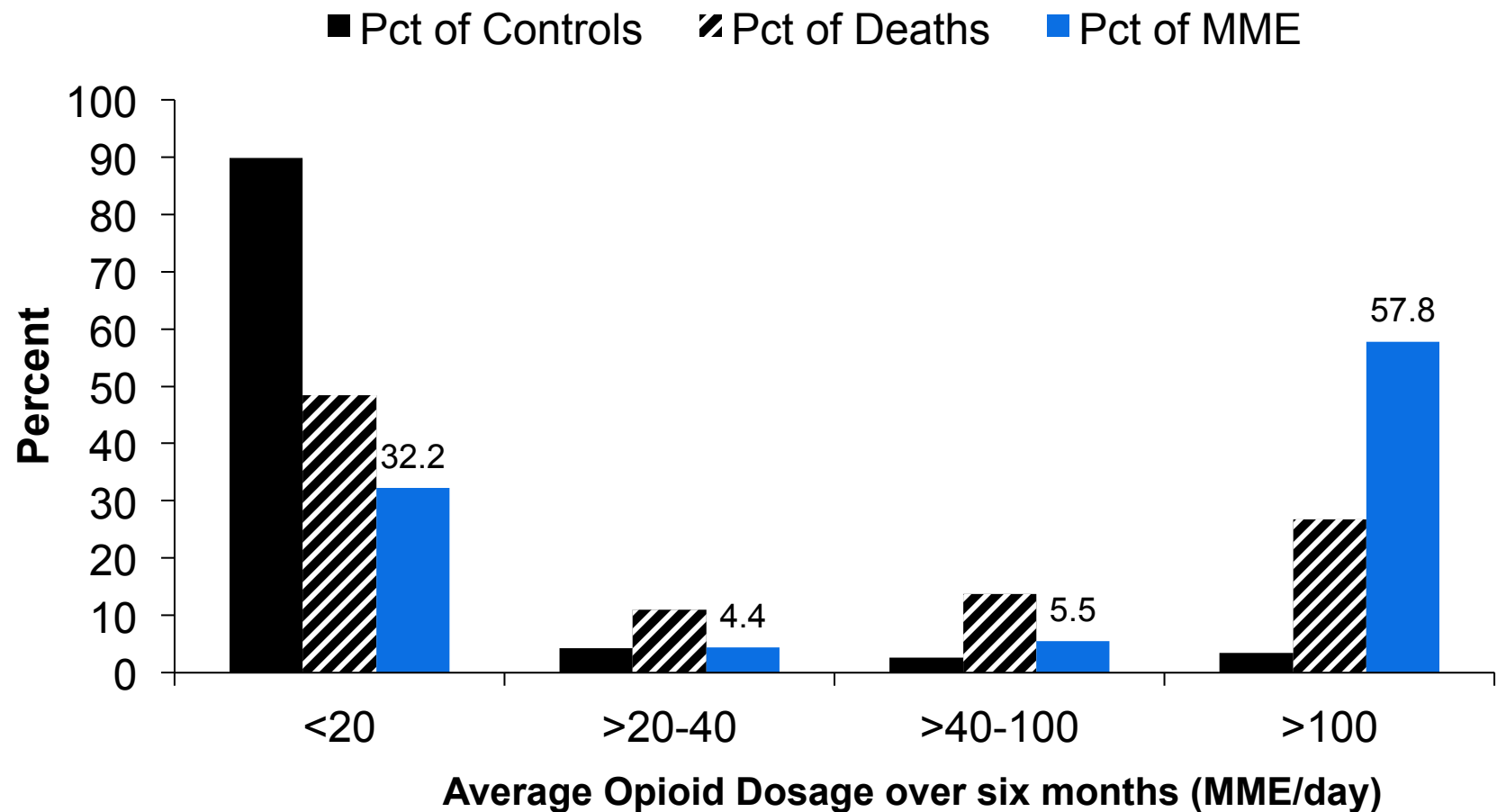
Source: Edlund et al. J Pain Symp Manage 2010;40:279289

# Overdose risk highest among small percentage of patients at high dosage, Group Health, 1997-2005



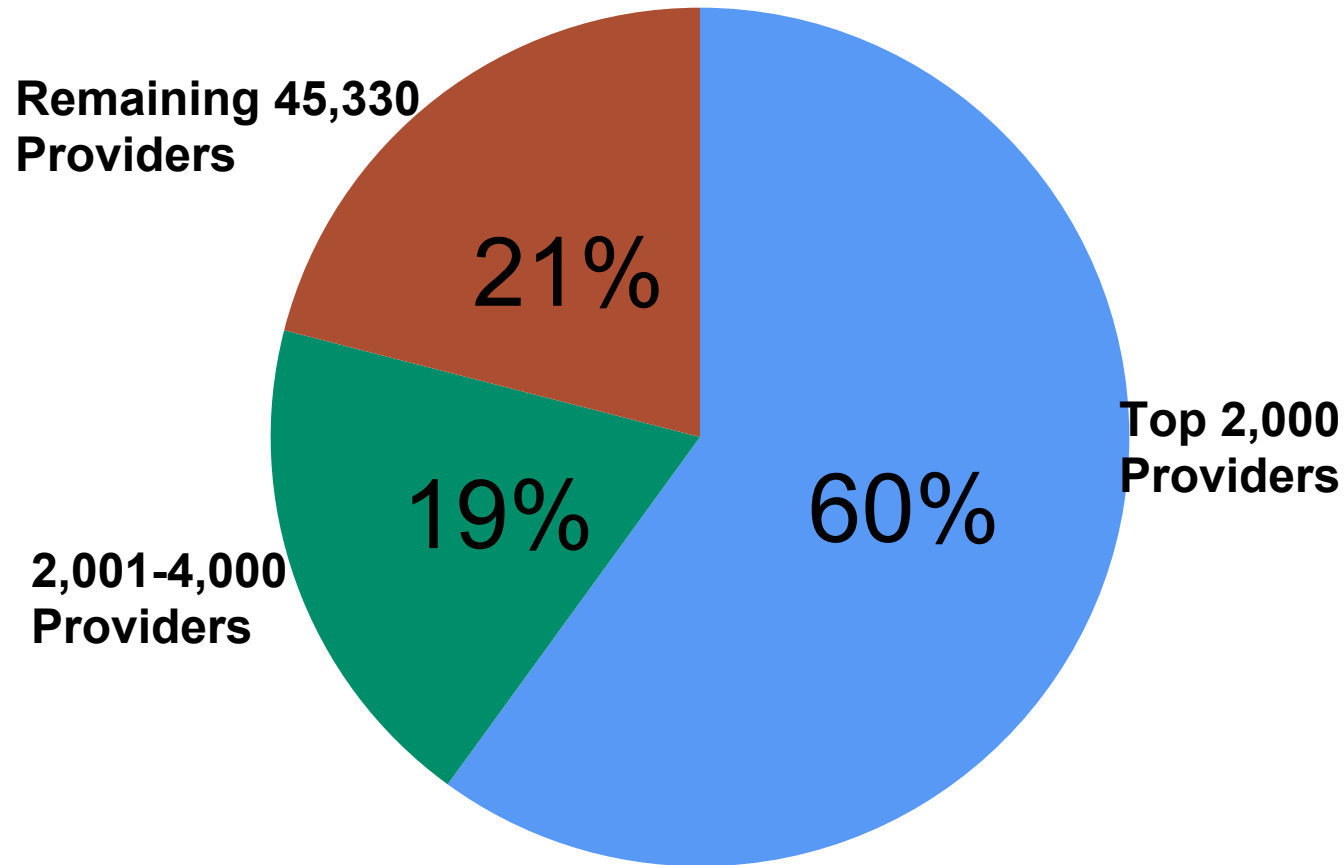
Dunn et al, Opioid prescriptions for chronic pain and overdose. Ann Int Med 2010;152:85-92.

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



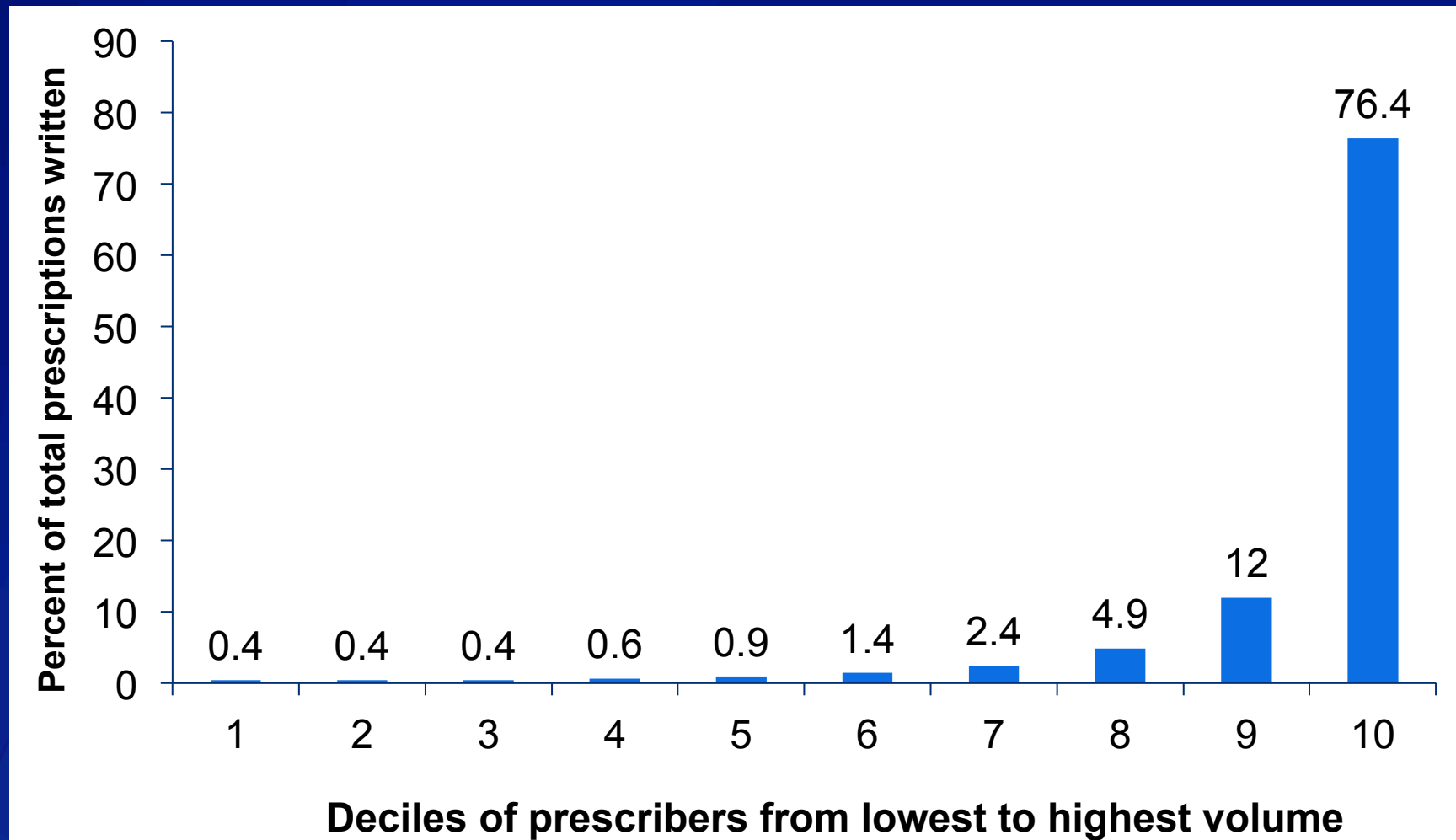
Unpublished data from New Mexico case-control study.

## Oregon PDMP report top 8.1% of providers prescribe 79% of CII-CIV drugs



# Top 10% of prescribers account for 76% of total Rxs

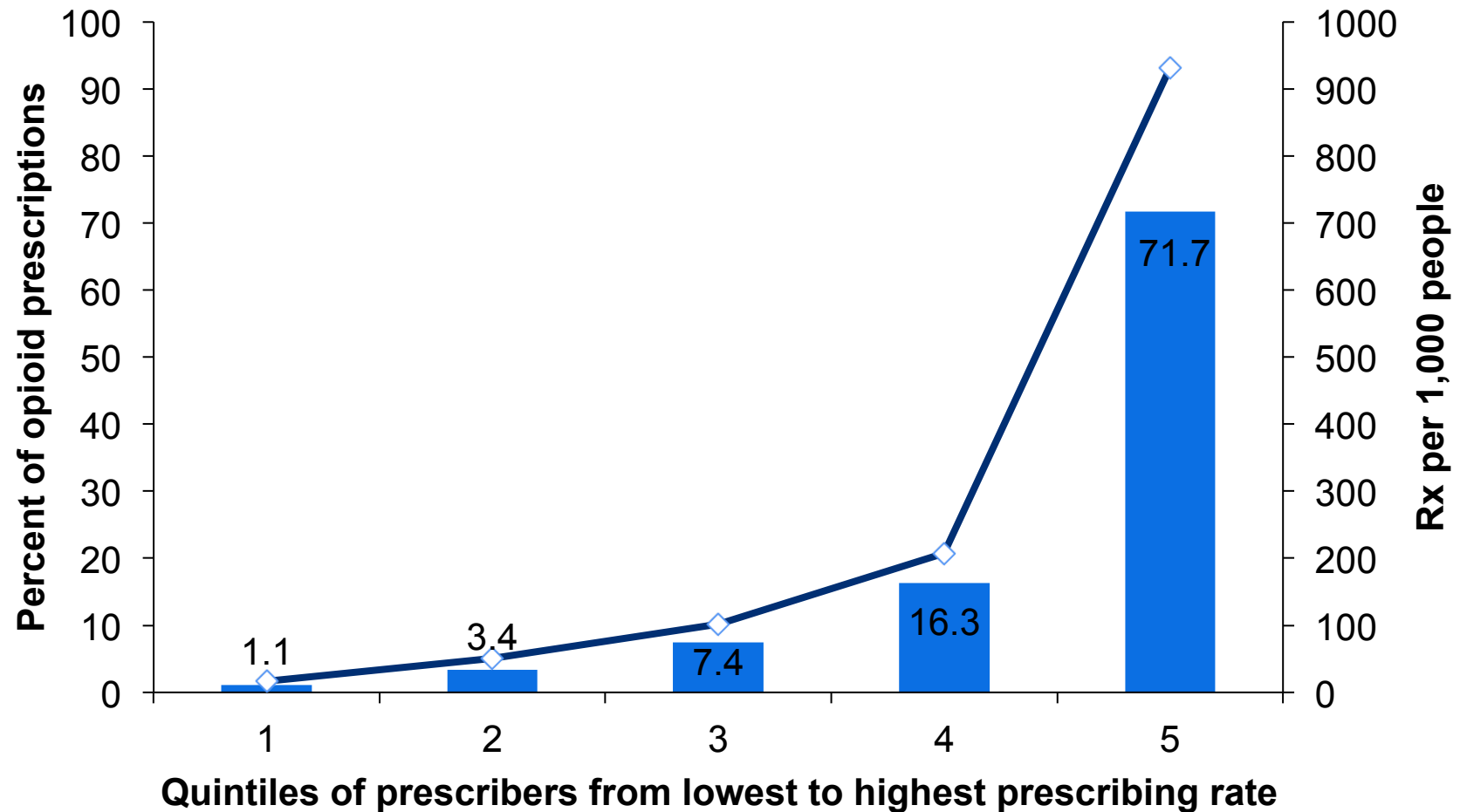
## CA Workers Compensation, 2005-2009



Swedlow et al. Prescribing patterns of schedule II opioids in California Workers' Compensation, CWCI Institute, 2011



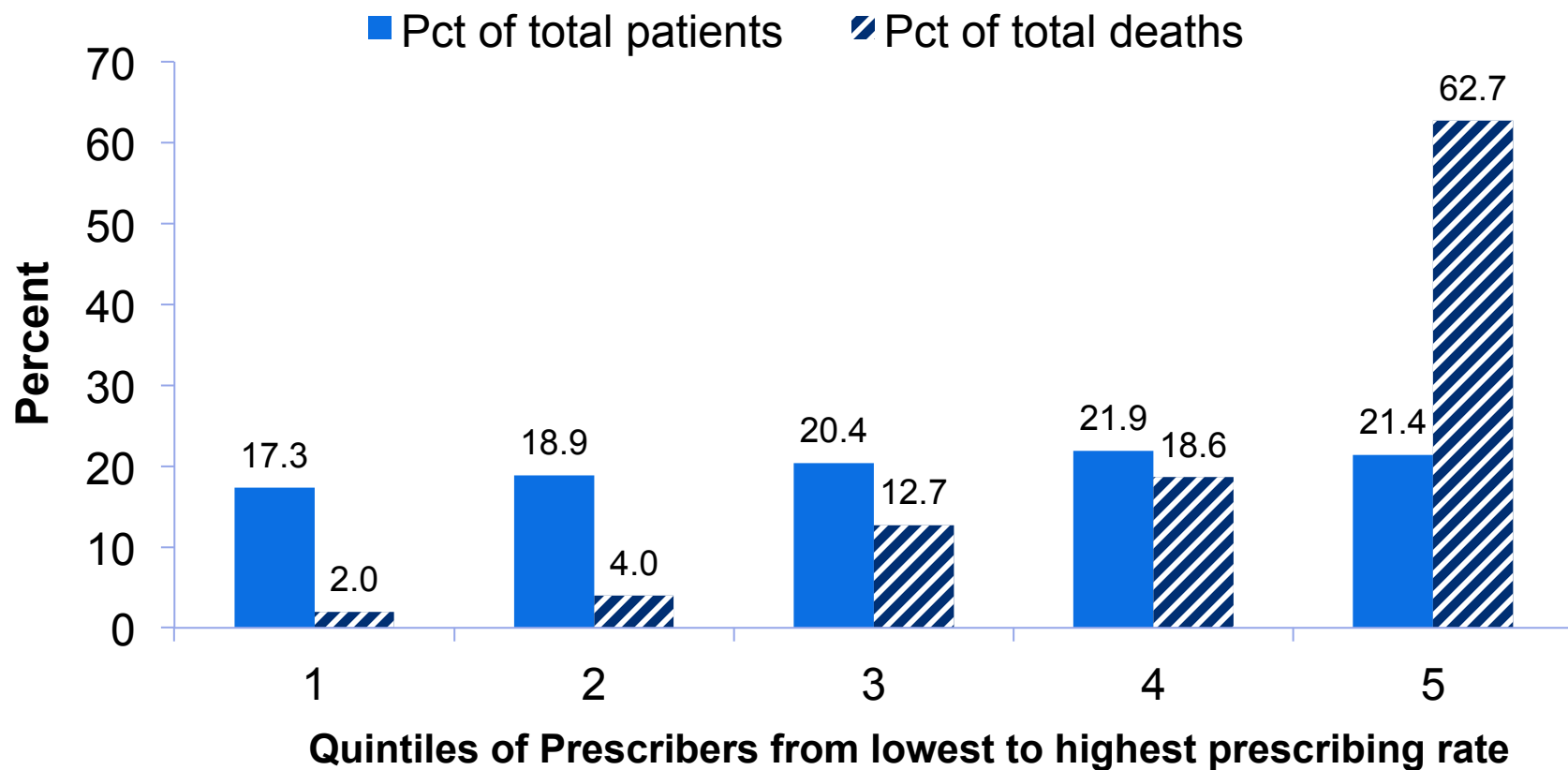
## Top 20% of prescribers account for 72% of Rxs, Public Drug Program, Ontario, Canada, 2006



Dhalla, IA et al. Clustering of opioid prescribing and opioid-related mortality among family physicians in Ontario. Can Fam Physician 2011;57:e92-6

# Top 20% of prescribers account for 63% of overdose deaths

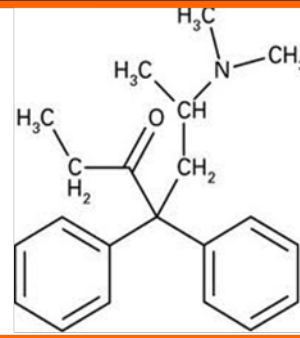
## Ontario Public Drug Program, 2006



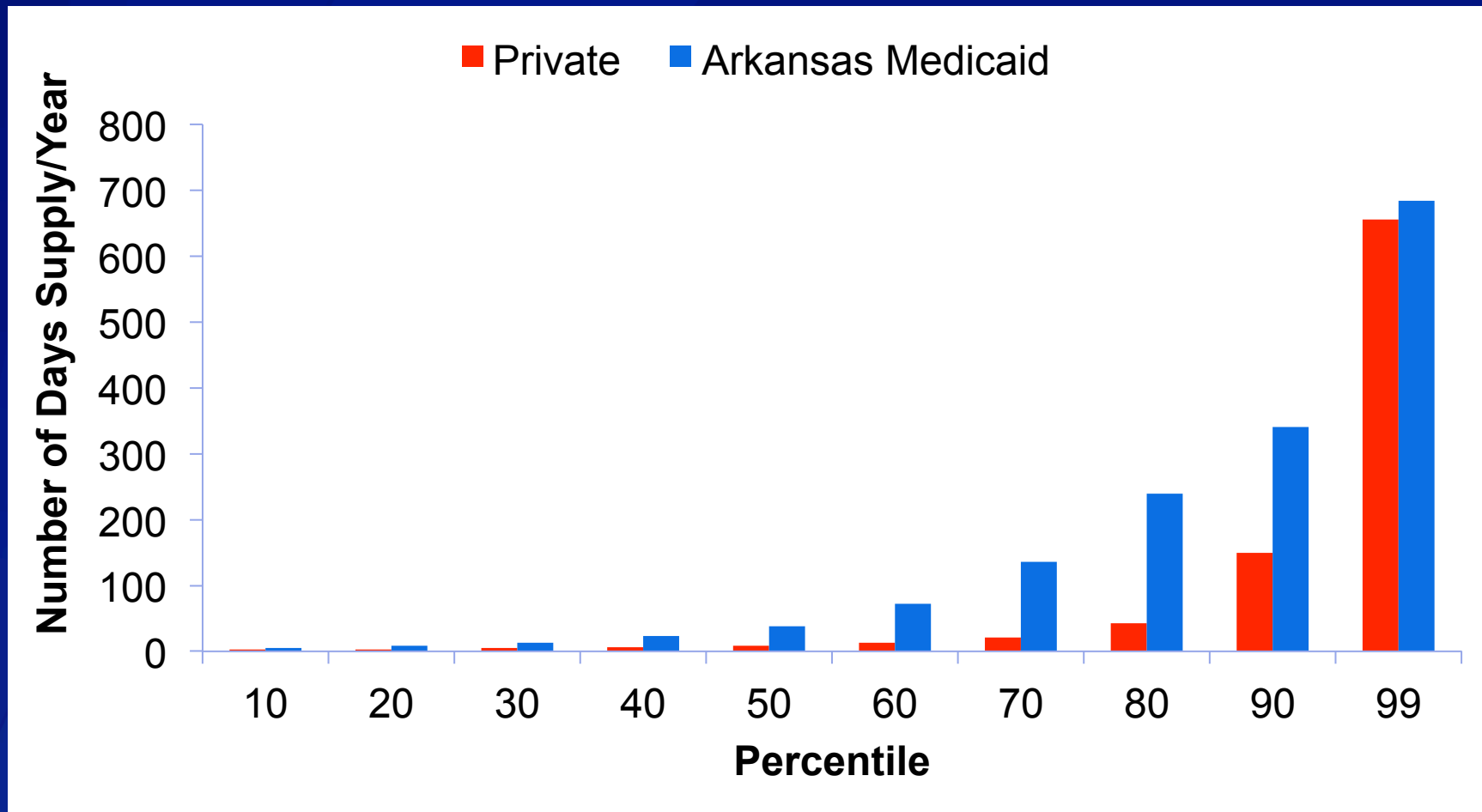
Adapted from data from Dhalla et al. Can Fam Physician 2011;57:e92-e96

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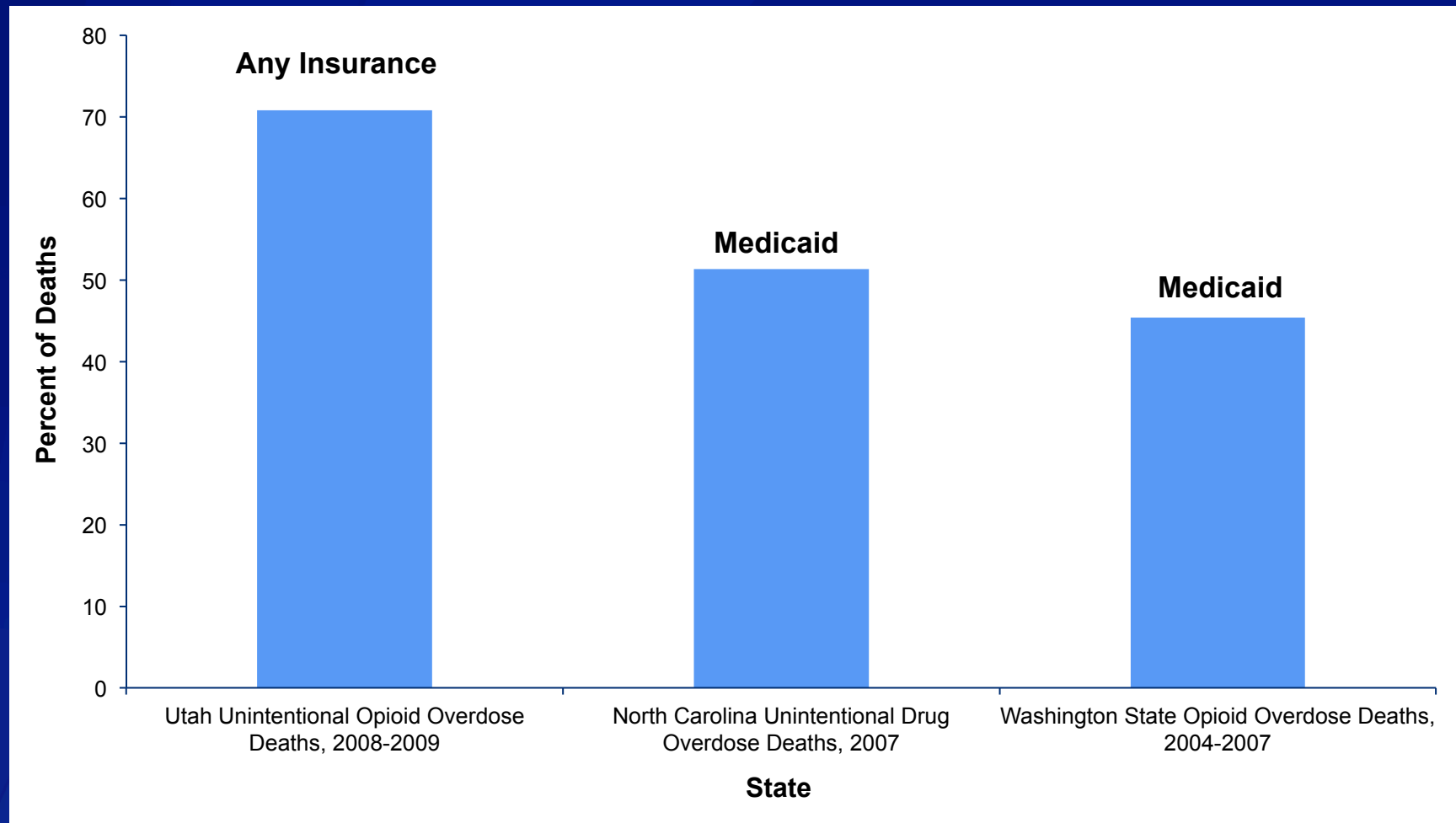


## Percentiles of opioid days supply for chronic noncancer pain, by insurance type, 2005



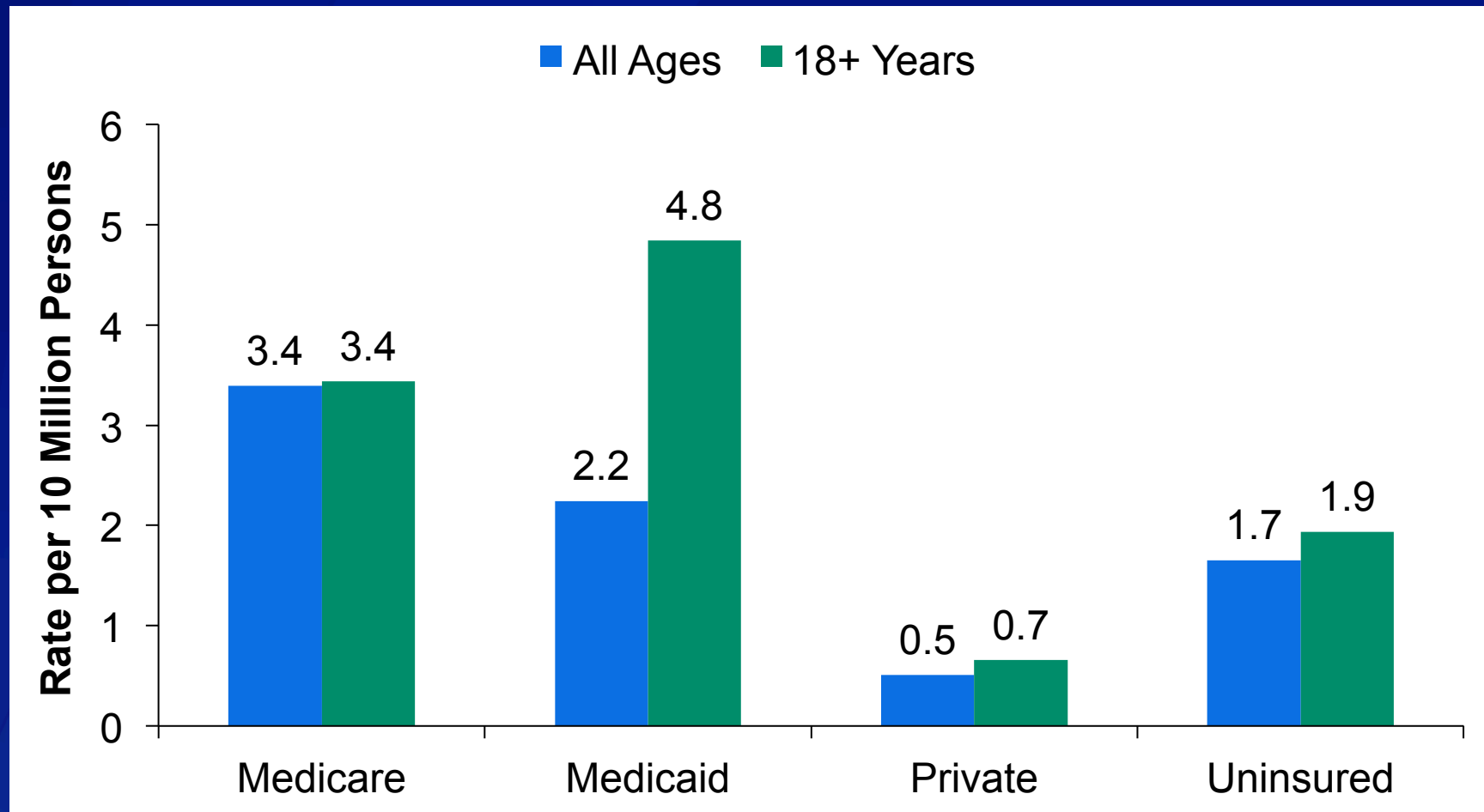
Source: Edlund et al. J Pain Symp Manage 2010;40:279289.

# Overdose deaths and insurance status



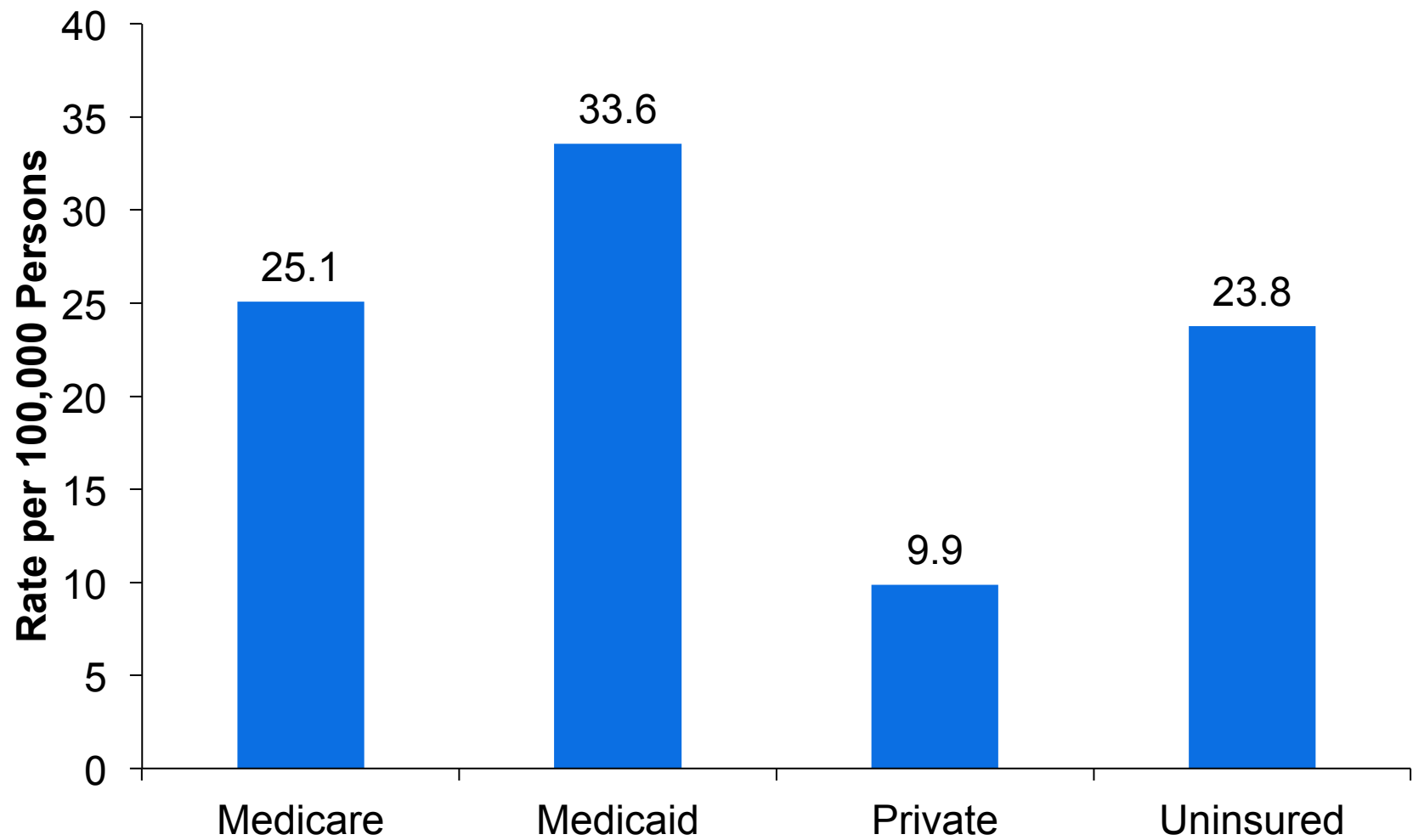
Sources: MMWR 2009;58:1171; Whitmire, North Carolina Center for Health Statistics, 2010; Johnson et al. Unintentional prescription opioid-related overdose deaths: description of decedents by next of kin or best contact, Utah, 2008-2009. J Gen Intern Med. 2012.

## Rate of hospitalization for poisoning by opiates and related narcotics by payer by age group, U.S., 2010



Source: HCUPnet. Opiate and related narcotics poisoning is defined as a first-listed diagnosis of ICD9-CM 965.0

## Rate of ED visits for drug poisoning by payer, U.S., 2009



Source: NEDS of AHRQ. Drug poisoning is defined as a first-listed diagnosis of ICD9-CM 960-979

## Risk of prenatal drug exposure and neonatal abstinence syndrome among neonates by payer, Washington State, 2000--2008

Payer	Pct. Of Unexposed Neonates	Pct. Of Drug-Exposed Neonates	OR (95% CI)	Pct. Of Neonatal Abstinence Cases	OR (95% CI)
Medicaid	39.9	79.5	1.0	80.3	1.0
HMO or third party	59.2	17.5	0.3 (0.3-0.3)	17.1	0.2 (0.2-0.2)
Self-pay	0.9	3.0	1.3 (1.2-1.5)	2.6	1.0 (0.7-1.3)
TOTAL	100.0	100.0	NA	100.0	NA

Source: Creanga et al. Obstet Gynecol 2012; 119(5):924-933



# 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.

