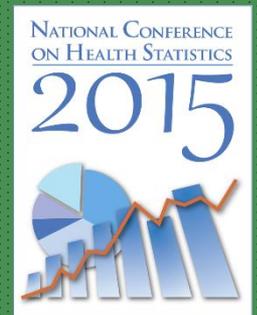


# *Health, United States* Special Feature on Prescription Drugs

## 2015 National Conference on Health Statistics

Sheila J. Franco  
Analytic Studies Branch  
Office of Analysis and Epidemiology  
National Center for Health Statistics

August 25, 2015



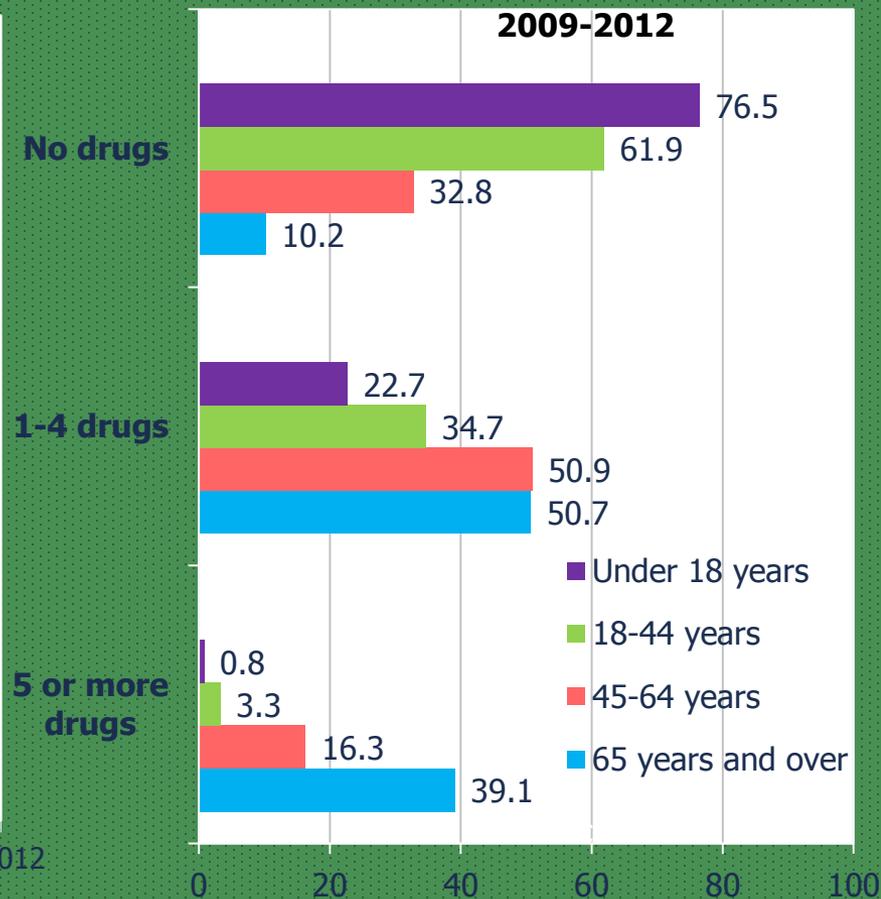
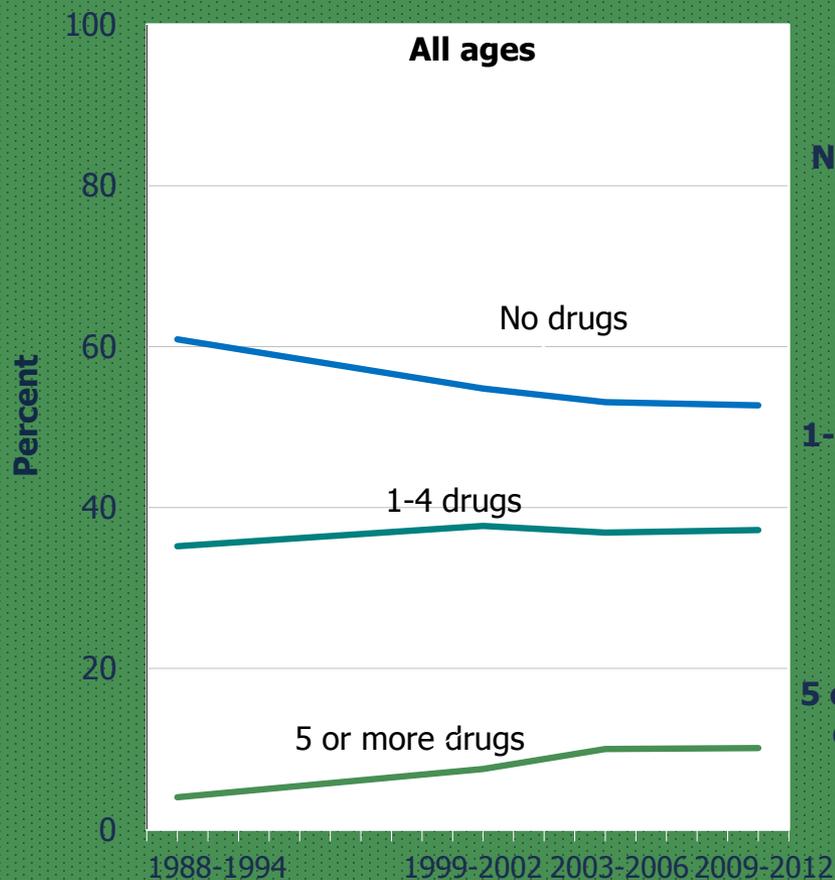
# Presentation Outline

- Prescription drug use in the past 30 days
  - Antibiotics for cold symptoms
  - Polypharmacy
  - Access to prescription drugs
- Prescription drug use by drug class
  - Statins
- Outcomes
  - HIV mortality
  - Drug poisoning deaths involving opioid analgesics
  - Drug poisoning deaths involving heroin

# PRESCRIPTION DRUGS IN THE PAST 30 DAYS



# Prescription drug use in the past 30 days, by number of drugs taken and age: United States, 1988-1994 through 2009-2012



**SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey**

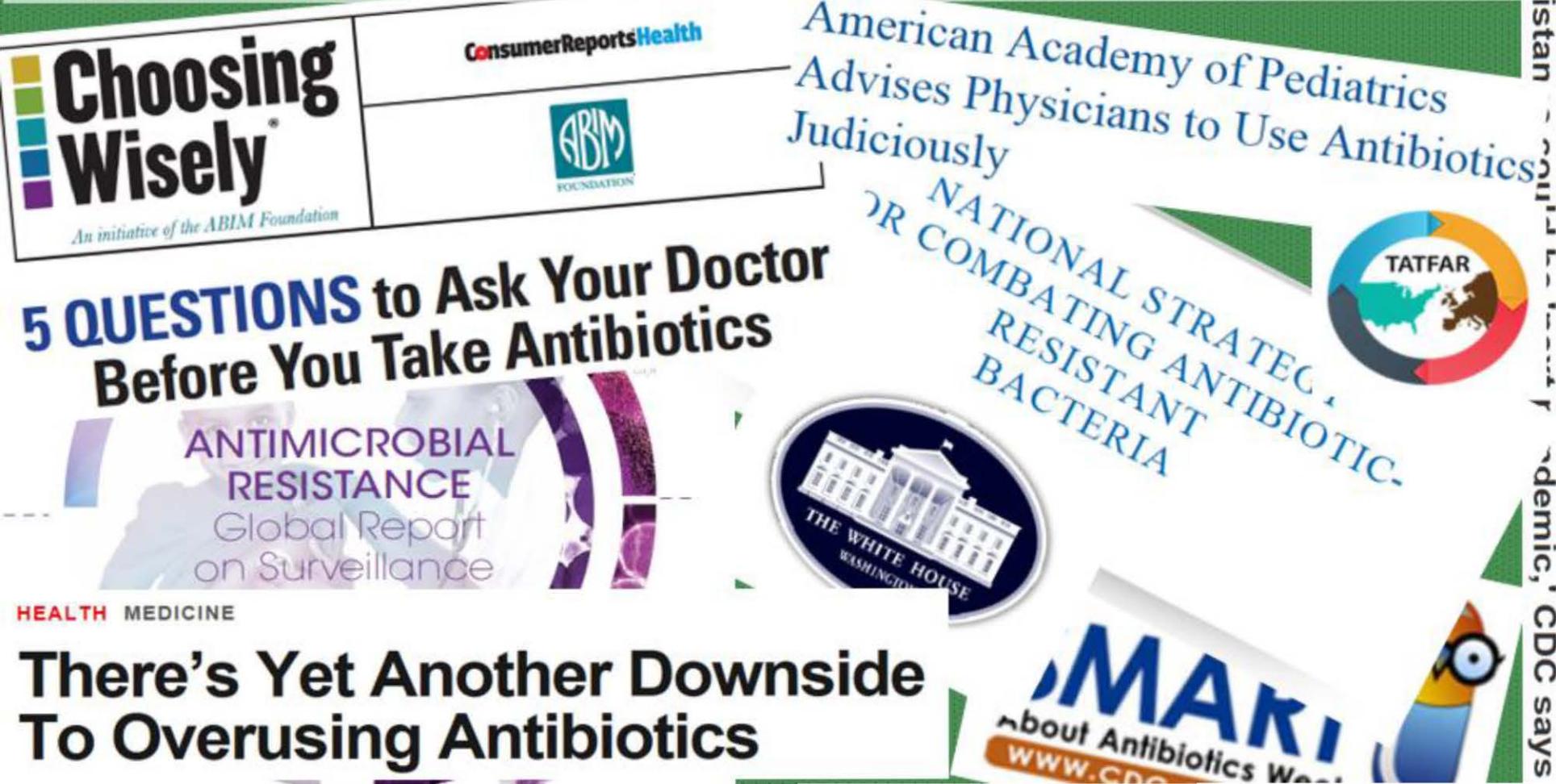
# Public Health Implications

**Does increased use of prescription drugs indicate:**

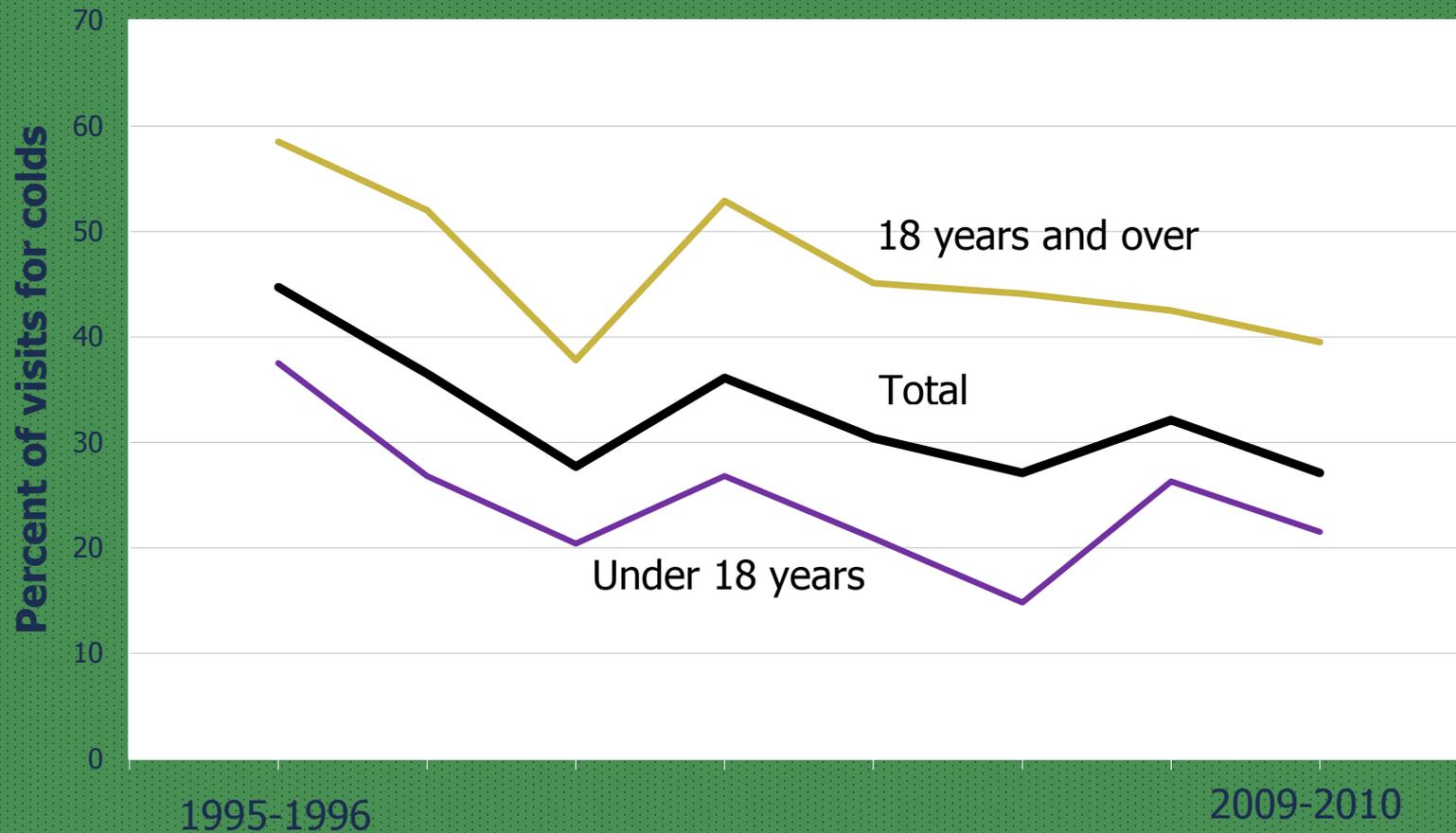
- **Appropriate use?**
- **Misuse?**
- **Overuse?**
- **Underuse?**

# Example 1: Antibiotics

“Antibiotic resistance may be the single most important infectious disease threat of our time,” according to CDC Director Tom Frieden, MD, MPH.



# Antibiotics ordered or provided during emergency department, outpatient, and physician visits for cold symptom diagnoses, by age: United States, average annual, 1995-1996 through 2009-2010

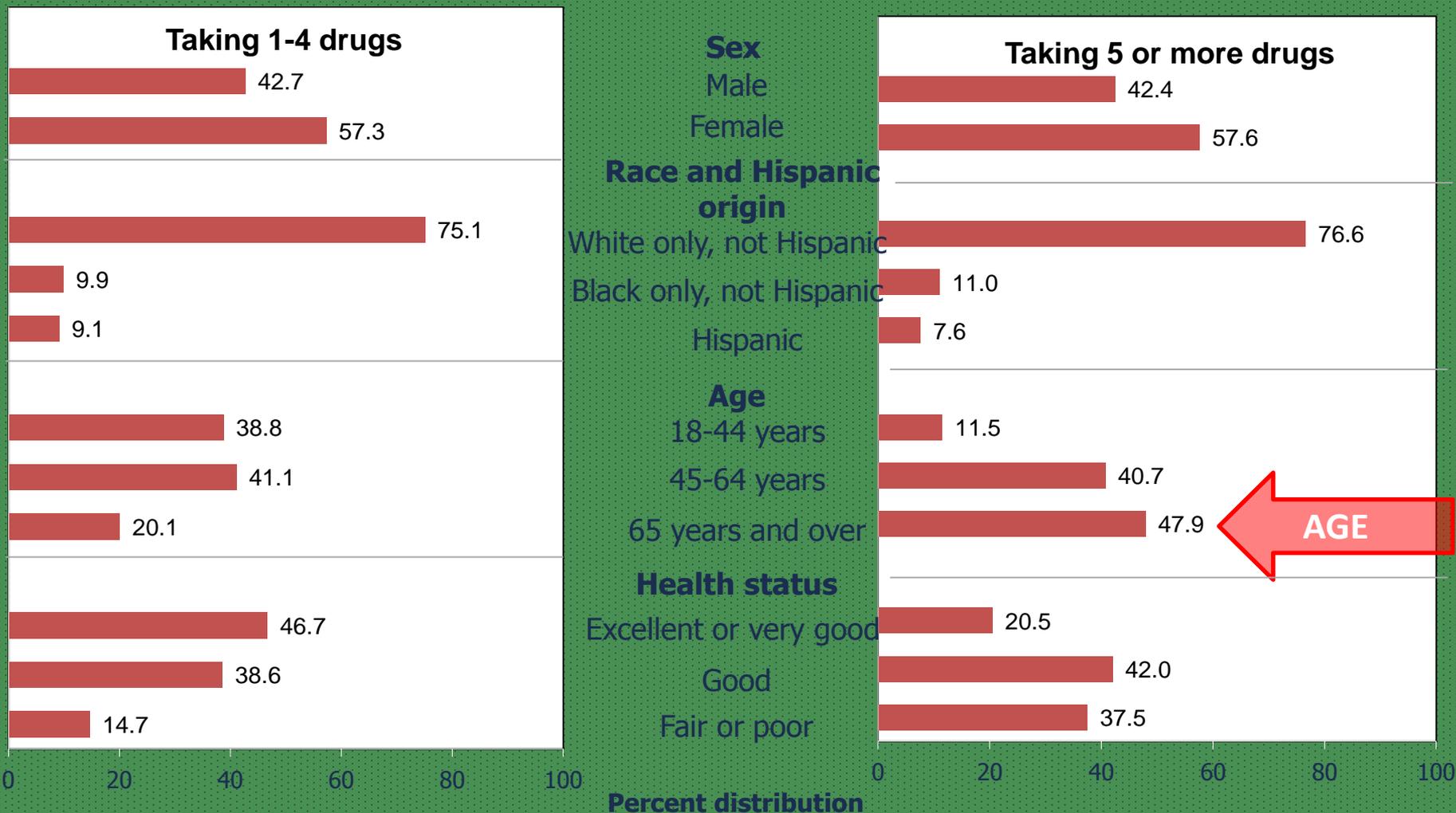


SOURCE: CDC/NCHS, National Ambulatory Medical Care Survey, National Hospital Ambulatory Medical Care Survey: Emergency Department and Outpatient Components

## Example 2: Polypharmacy



# Number of prescription drugs taken in the past 30 days among adults aged 18 and over, by selected characteristics: United States, 2009-2012



SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey

# Example 3: Access



Journal of  
General Internal Medicine

springer.com

This journal

Toc Alerts

Submit Online

Open Choice

J Gen Intern Med. 2007 Jun; 22(6): 864–871.

PMCID: PMC2219866

Published online 2007 Apr 5.

doi: [10.1007/s11606-007-0180-x](https://doi.org/10.1007/s11606-007-0180-x)

## Patients At-Risk for Cost-Related Medication Nonadherence: A Review of the Literature

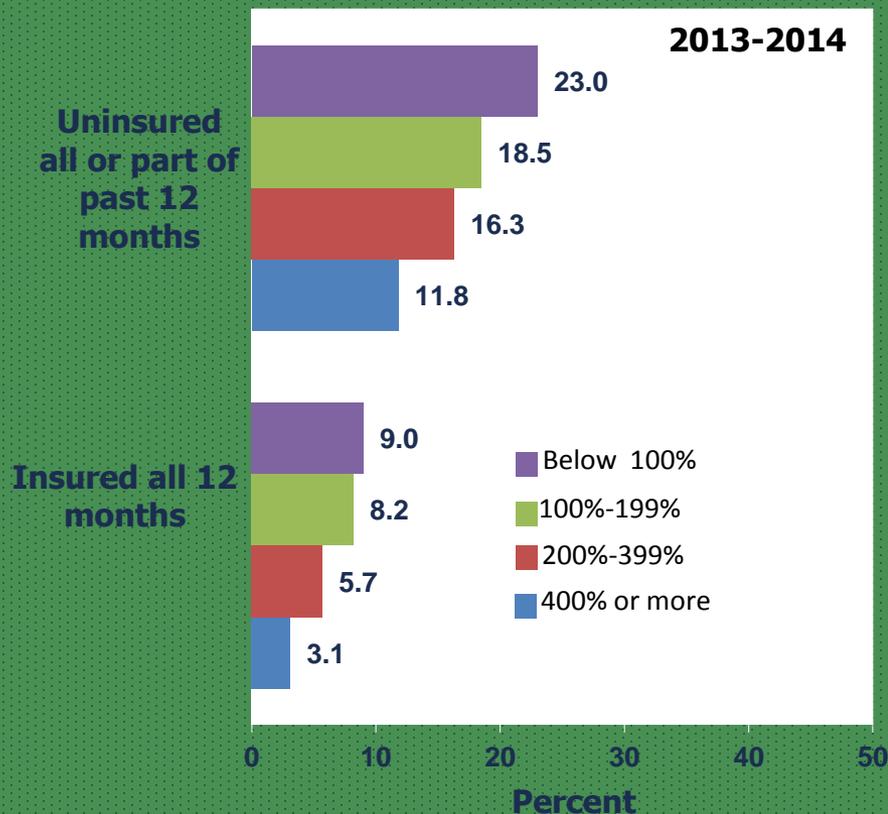
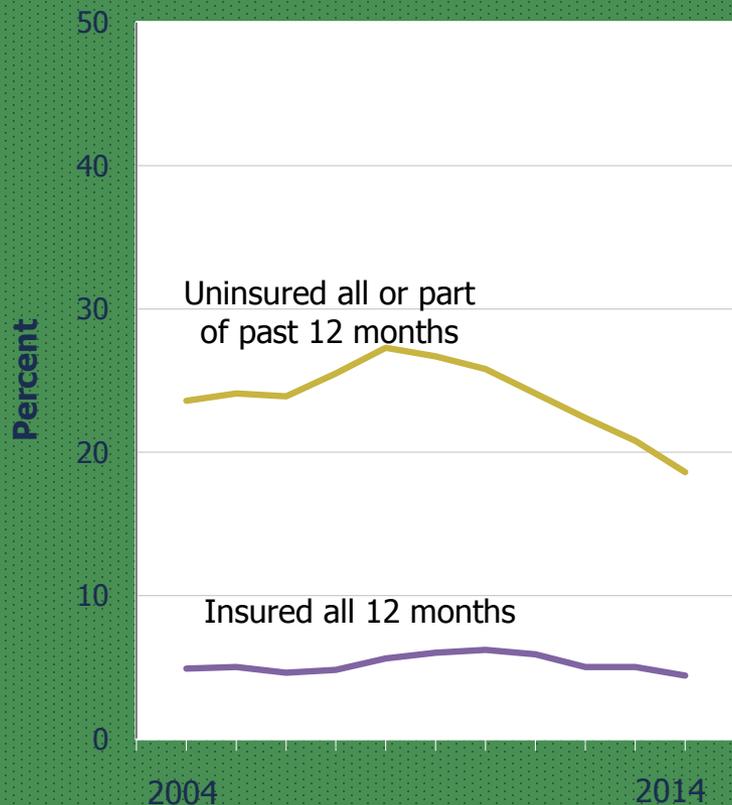
[Becky A. Briesacher](#), PhD,<sup>1</sup> [Jerry H. Gurwitz](#), MD,<sup>1</sup> and [Stephen B. Soumerai](#), ScD<sup>2</sup>

NCHS Data Brief ■ No. 184 ■ January 2015

## Strategies Used by Adults to Reduce Their Prescription Drug Costs: United States, 2013

Robin A. Cohen, Ph.D.; and Maria A. Villarroel, Ph.D.

# Nonreceipt of needed prescription drugs in the past 12 months due to cost among adults aged 18-64, by insurance status and percent of poverty level: United States, 2004-2014

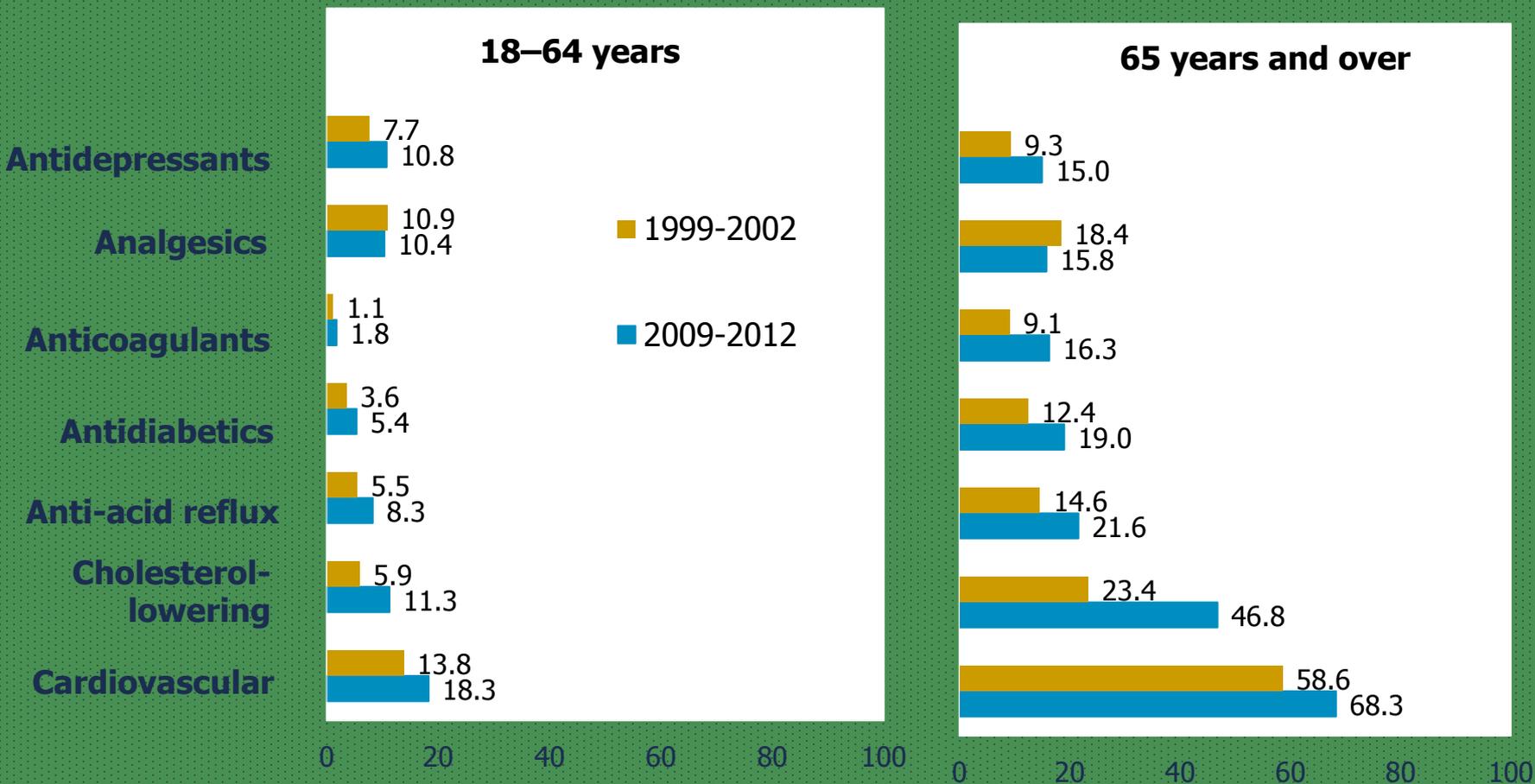


SOURCE: CDC/NCHS, National Health Interview Survey

# PRESCRIPTION DRUG USE BY DRUG CLASS



# Prescription drug use in the past 30 days among adults aged 18 and over, by age and selected drug class: United States, 1999-2002 and 2009-2012



**NOTE:** Cardiovascular agents include ACE inhibitors, beta blockers, calcium channel blockers, and diuretics.

**SOURCE:** CDC/NCHS, National Health and Nutrition Examination Survey

# Example 4: Statins

National Cholesterol Education Program

High

Detection



Third Report of the  
National Cholesterol  
Education Program (NCEP)  
Expert Panel on

Detection,  
Evaluation,  
and Treatment  
of High Blood  
Cholesterol  
in Adults  
(Adult Treatment  
Panel III)

**JAMA** The Journal of the  
American Medical Association

[Home](#) [Current Issue](#) [All Issues](#) [Online First](#) [Collections](#) [CME](#) [Multimedia](#) [C](#)

December 22, 1999, Vol 282, No. 24 >

[< Previous Article](#) [Next Article >](#)

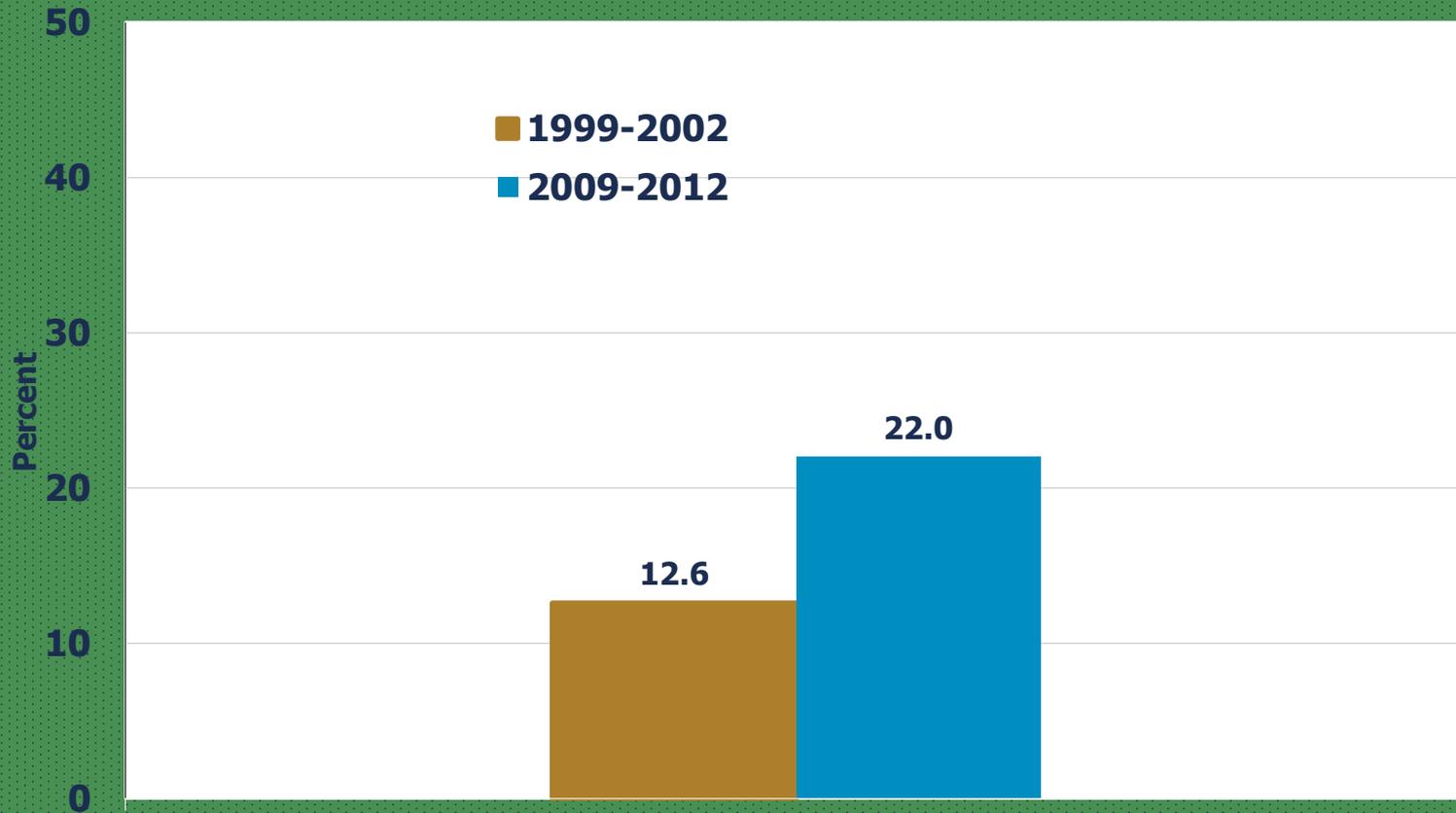
Review | December 22/29, 1999

## Effect of Statins on Risk of Coronary Disease

A Meta-analysis of Randomized Controlled Trials

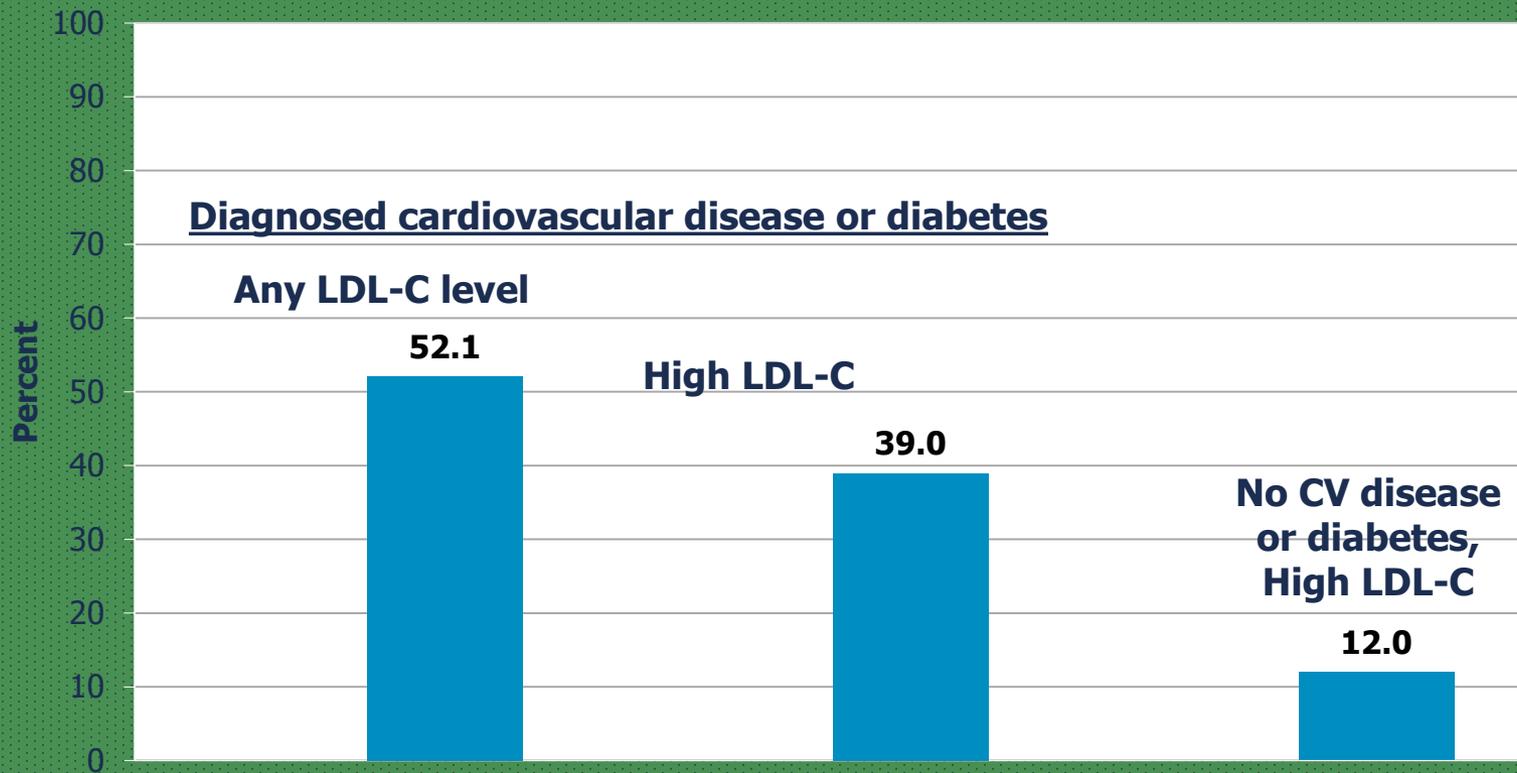
John C. LaRosa, MD; Jiang He, MD, PhD; Suma Vupputuri, MPH

# Use of statin drugs in the past 30 days, among adults aged 40-74, by age: United States, 1999-2002 and 2009-2012



SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey

# Statin drug use in the past 30 days among adults aged 40-74 years meeting the ATP III guidelines: United States, 2009-2012



**NOTE:** Diagnosed cardiovascular disease is defined as ever told by doctor that had coronary artery disease, angina, heart attack, or stroke.

**SOURCE:** CDC/NCHS, National Health and Nutrition Examination Survey

# Example 4: Statins

Stone NJ, et al.

2013 ACC/AHA Blood Cholesterol Guideline

## 2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults

### A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines

*Endorsed by the American Association of Cardiovascular and Pulmonary Rehabilitation, American Pharmacists Association, American Society for Preventive Cardiology, Association of Black Cardiologists, Preventive Cardiovascular Nurses Association, and WomenHeart: The National Coalition for Women with Cardiovascular Disease*

Editorials: *Controversies in Family Medicine*

Should Family Physicians Follow the New ACC/AHA Cholesterol Treatment Guideline?

Yes: Implementing the New ACC/AHA Cholesterol Guideline Will Improve Cardiovascular Outcomes

American Family Physician

# Example 5: Outcomes – Positive



The NEW ENGLAND  
JOURNAL of MEDICINE

March 26, 1998 Vol. 338 No.  
13

## ORIGINAL ARTICLES

Declining Morbidity and Mortality  
among Patients with Advanced  
Human Immunodeficiency Virus  
Infection

853-860

F.J. Palella, Jr., and Others

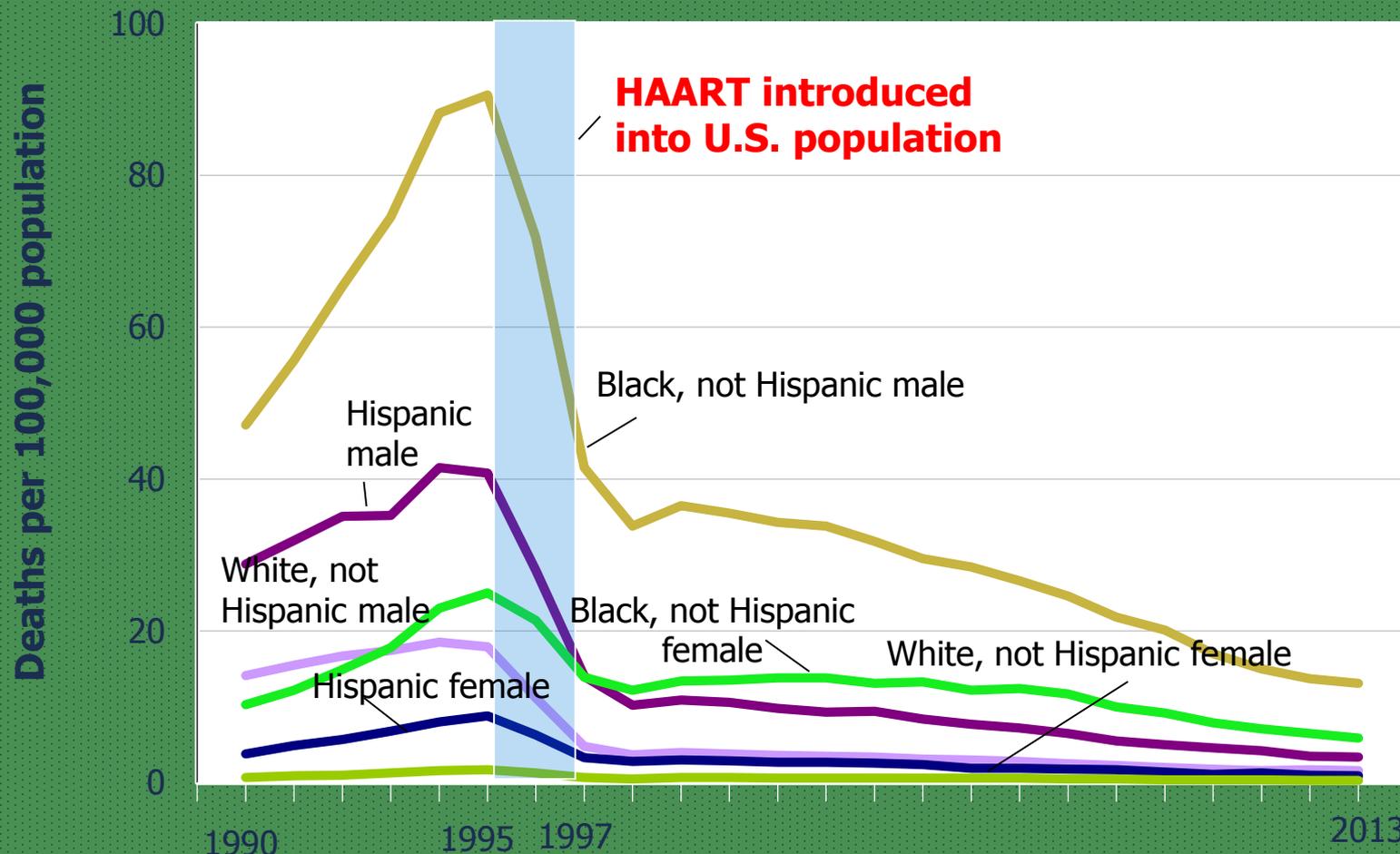


**HAART has significantly improved life expectancy—to decades rather than months**

**Achievements in Public Health: Reduction in Perinatal Transmission of HIV Infection --- United States, 1985--2005**



# Age-adjusted death rates for human immunodeficiency virus (HIV) disease for all ages, by sex and race and Hispanic origin: United States, 1990-2013



SOURCE: CDC/NCHS, National Vital Statistics System, Mortality

# Example 6: Outcomes – Problematic



## *ASPE* *ISSUE BRIEF*

Opioid Abuse in the U.S. and HHS Actions to Address Opioid-Drug Related Overdoses and Deaths

The Problem With Opioids for Chronic Pain

**USNews**  
A WORLD REPORT

**HEALTH**

The Washington Post

Prescription Opioid Overdose Deaths Triple Over Last Decade

100 Americans die of drug overdoses each day. How do we stop that?

HEALTH | VITAL STATISTICS

The New York Times

Poisoning Kills More Than Car Crashes

# Drug poisoning deaths involving opioid analgesics among persons aged 15 and over, by race and Hispanic origin, sex, and age: United States, 2000-2001 through 2012-2013



SOURCE: CDC/NCHS, National Vital Statistics System, Mortality

# Example 7: Outcomes – Unintended

HEALTH

The New York Times

***Prescription Overdose Deaths in Florida Plunge After Tougher Measures, Report Says***

The Washington Post

The heroin and opioid epidemics

N.Y. / REGION

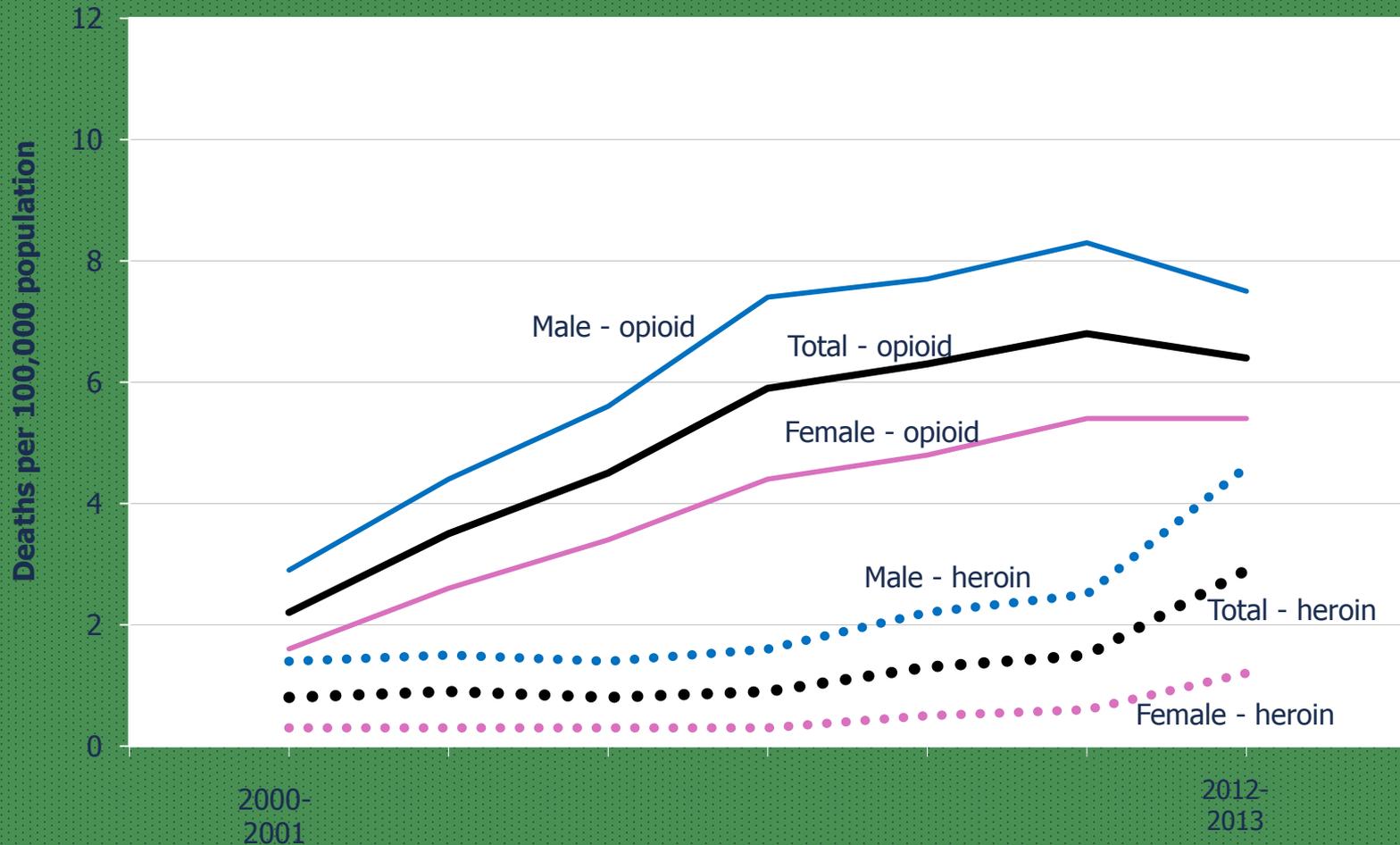
The New York Times

***Heroin's Death Toll Rising in New York, Amid a Shift in Who Uses It***

Unintended  
consequences: Why  
painkiller addicts turn to  
heroin



# Drug poisoning deaths involving opioid analgesics and heroin among persons aged 15 and over, by sex: United States, 2000-2001 through 2012-2013



SOURCE: CDC/NCHS, National Vital Statistics System, Mortality

# Future Research on Prescription Drugs

- Effects of ACA on prescription drug use
- Effect of health information technology on prescribing patterns
- Adoption of prescribing guidelines
- Impact of policy interventions regarding access to opioid analgesics and heroin on drug deaths

# Questions?

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[www.cdc.gov/nchs/hus.htm](http://www.cdc.gov/nchs/hus.htm)

