Rethinking HEALTH METRICS to Evaluate Drug Policy:
Perspective from the United States

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Overview

I. Conducting public health surveillance

II. Setting health intervention benchmarks

III. Assessing health impact of drug policy

I. What is public health surveillance for drug use?

- Primary risk = Exposure

  Drug use

      Eg, past month opioid use

- Secondary risk = Morbidity

  Drug-related injury, illness, and disease

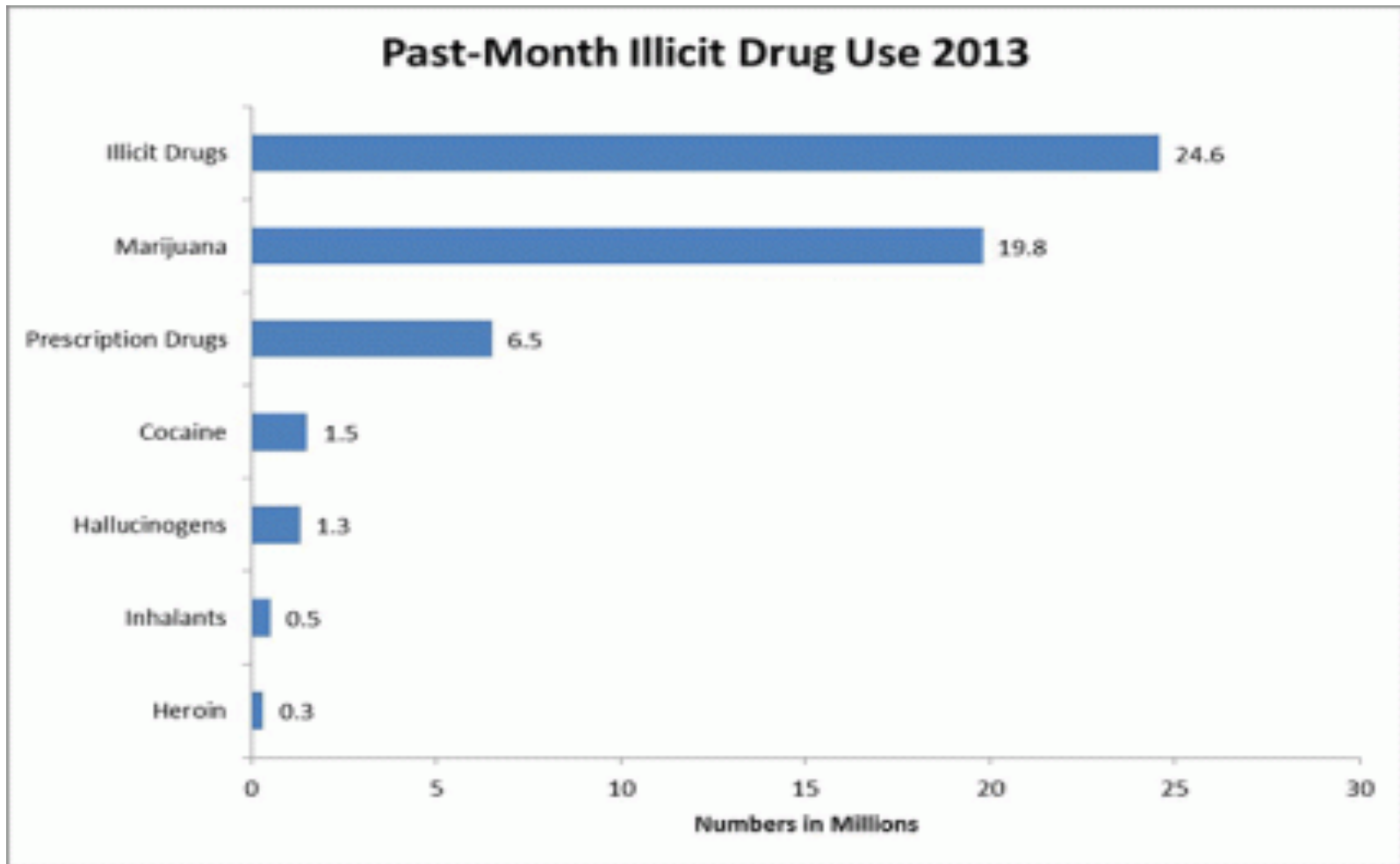   Eg, HIV infection

- Tertiary risk = Mortality

  Drug-related death

      Eg, overdose

How do we collect and report on drug-related health metrics?

- **Drug use surveys**
  - National Survey on Drug Use and Health (NSDUH)
  - Monitoring the Future (MTF)
  - Youth Risk Behavior Survey (YRBS)
- **Drug-related injury, illness, and disease**
  - Infectious disease screening and surveillance
  - Emergency department visits, hospitalizations
- **Drug-related death**
 - Vital statistics (drug poisoning deaths)

Exposure: Survey data describes drug use, how often, by whom

Past-Month Illicit Drug Use 2013

Drug	Numbers in Millions
Illicit Drugs	24.6
Marijuana	19.8
Prescription Drugs	6.5
Cocaine	1.5
Hallucinogens	1.3
Inhalants	0.5
Heroin	0.3

Source: SAMHSA NSDUH, 2013.

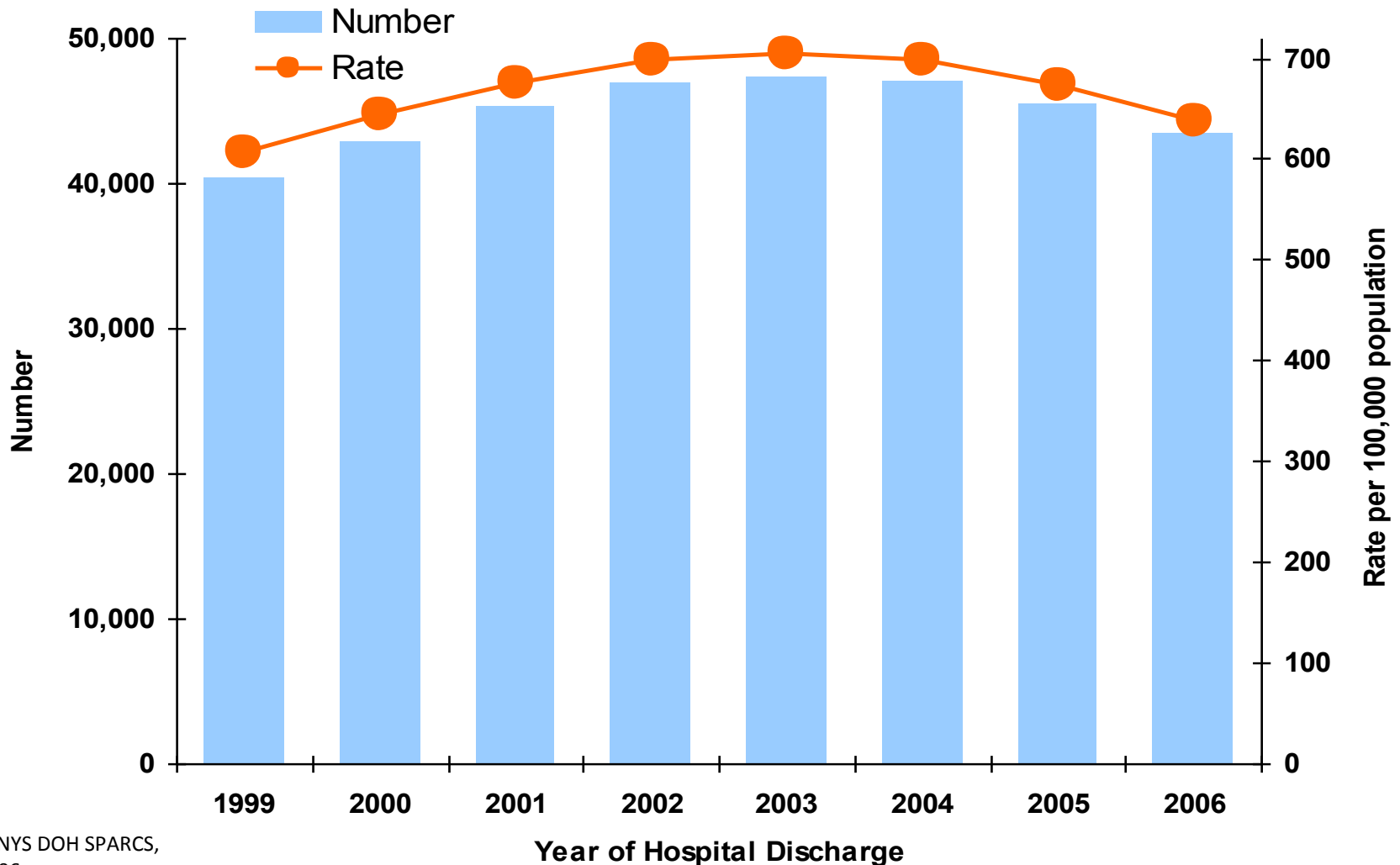# Morbidity: Hospital data captures drug-related emergency visits

Number of Emergency Department Visits by Selected Drug Type, US (2004-2010)
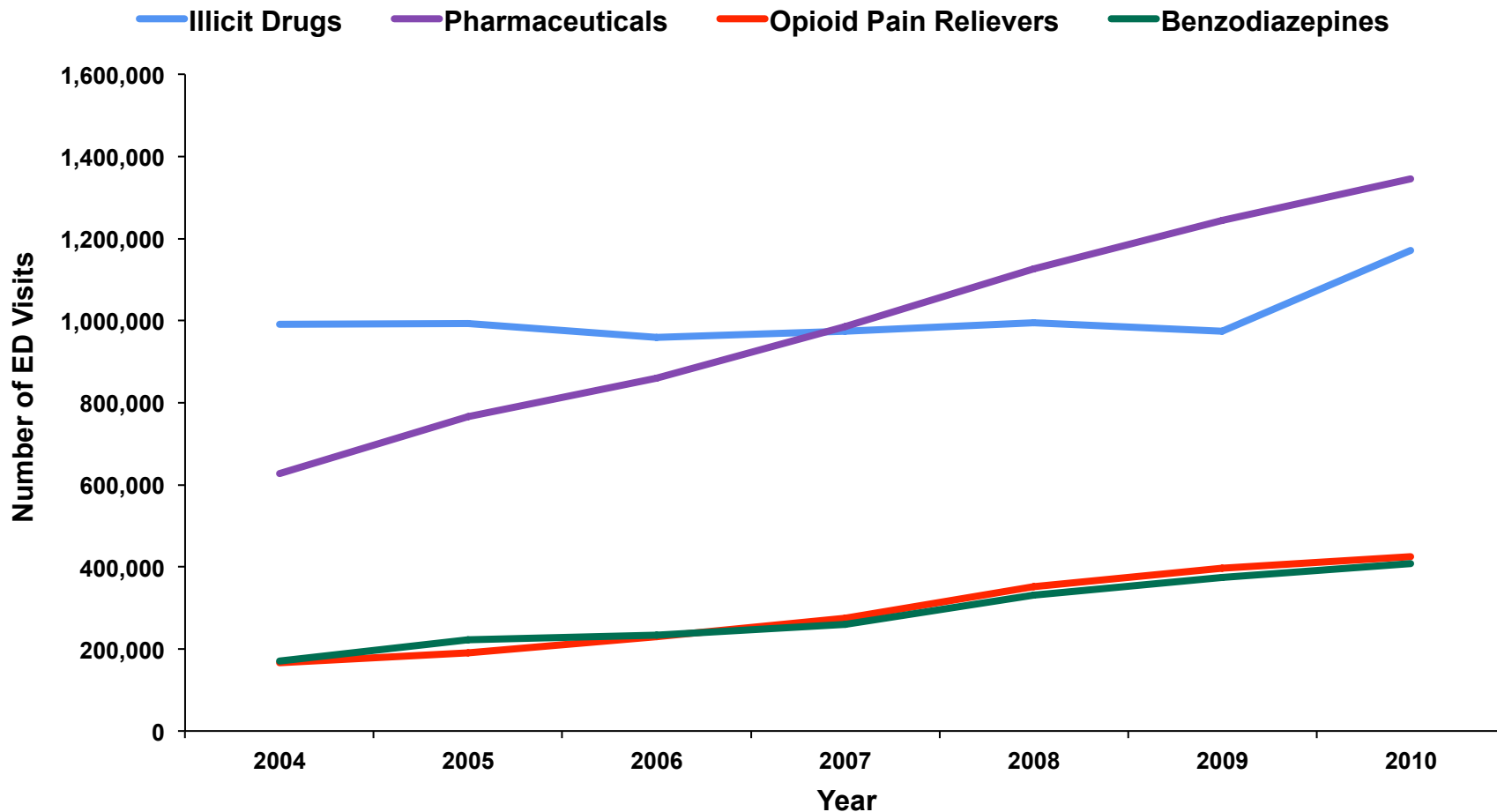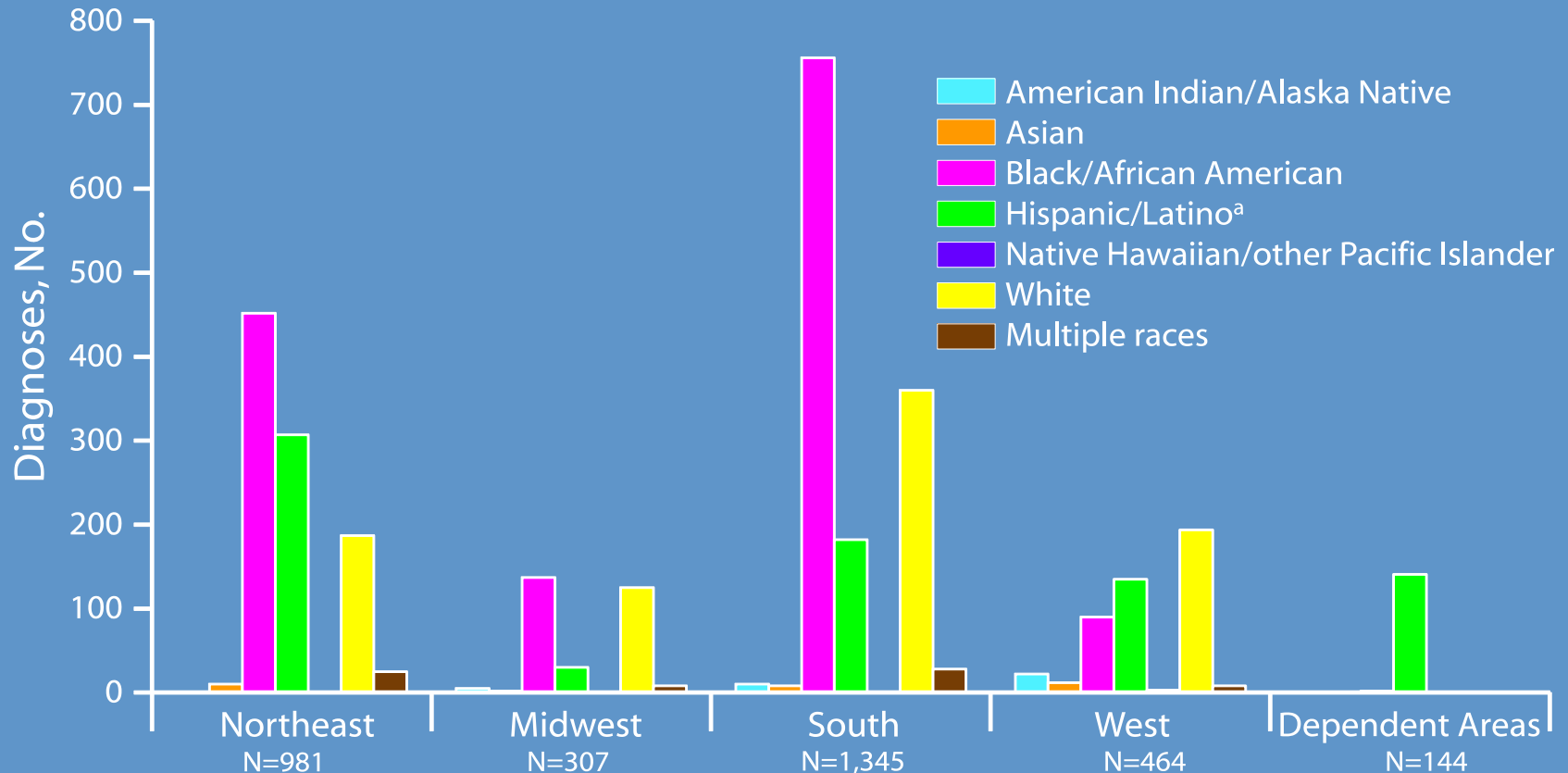

Source: SAMHSA DAWN, 2011.

Morbidity: Hospital data captures drug-related hospitalizations

Number and Rate of Opioid-related hospital discharges, NYC (1999-2006)

Morbidity: Notifiable disease reporting gives a profile of infection risk

HIV Diagnoses Among Persons Who Inject Drugs, by Region and Race/Ethnicity, 2013 (US & 6 dependent areas)

Legend:
- American Indian/Alaska Native
- Asian
- Black/African American
- Hispanic/Latino[a]
- Native Hawaiian/other Pacific Islander
- White
- Multiple races

Y-axis: Diagnoses, No. (0–800)

X-axis:
- Northeast N=981
- Midwest N=307
- South N=1,345
- West N=464
- Dependent Areas N=144

Note. Data include persons with a diagnosis of HIV infection regardless of stage of disease at diagnosis. All displayed data have been statistically adjusted to account for reporting delays and missing transmission category, but not for incomplete reporting. Data exclude men with HIV infection attributed to male-to-male sexual contact *and* injection drug use.
[a] Hispanics/Latinos can be of any race.

Source: Centers for Disease Control

Mortality: Vital statistics highlight drug-related causes of death

Age-adjusted rate of drug overdose deaths and drug overdose deaths involving opioids — US, 2000–2014
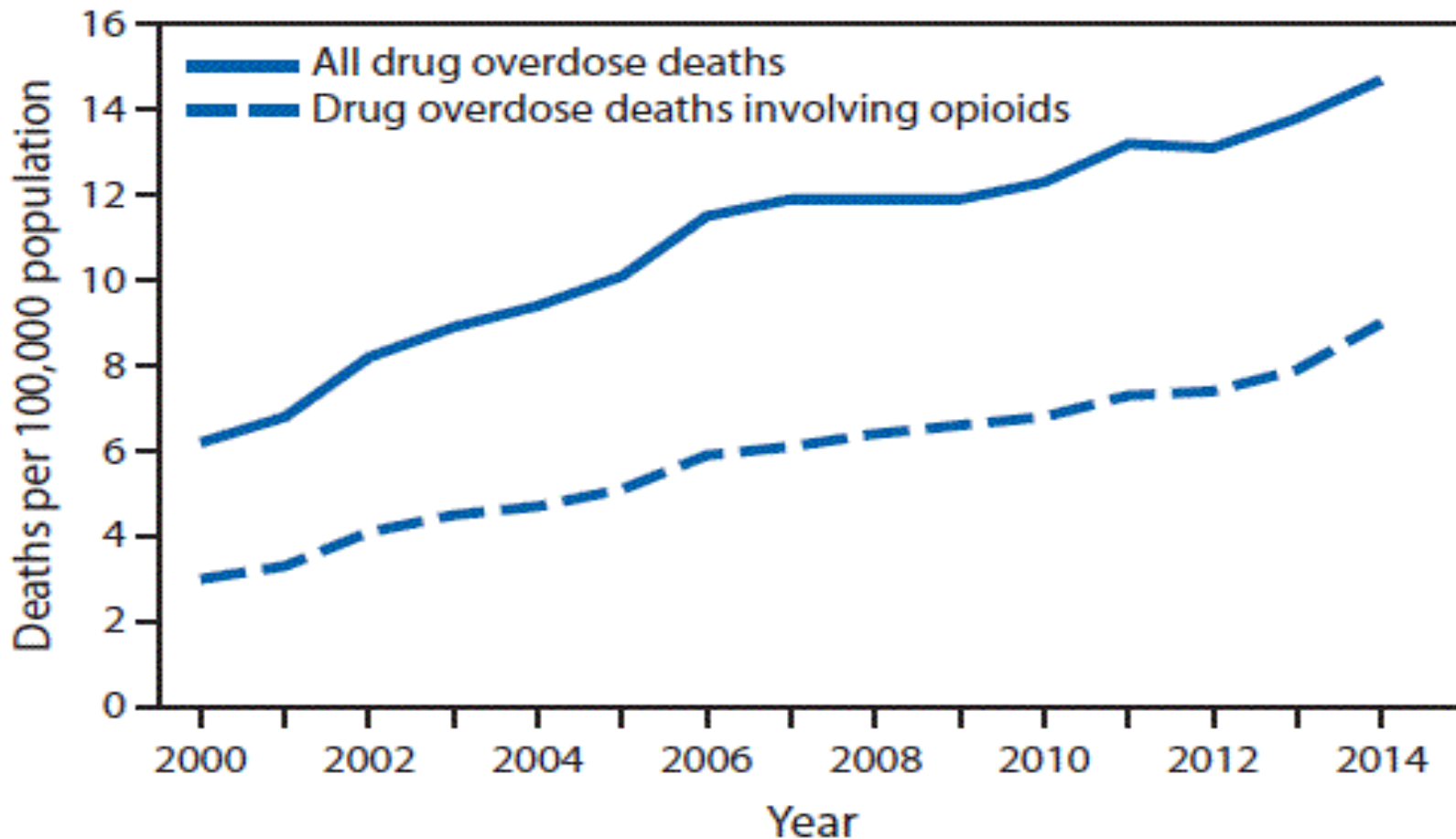
Source: *National Vital Statistics System, Mortality file*

We have the metrics to conduct public health surveillance of drug use

- Standardize information across categories
  - By age group
  - By racial/ethnic group
  - By geographic region
  - By drug class/type
  - By modality of use
- Compile, present, and update as a unified report

II. Historically, US drug policy has not focused on health

- Criminal justice approach has dominated US drug policy past 50 years

    – Health impact assessments expose the problem

- Drug policy is not a population health priority

    Need for benchmarks to scale up interventions

    Eg, Healthy People 2020

Health intervention benchmarks would guide government action

Increase sterile syringe coverage

- Estimated total syringe coverage 18% of drug injections, including 2.8 % coverage by NSPs (Nguyen et al, 2014)

- Financing makes a difference

  - Additional US$10M in one year would avert ~194 HIV infections, avoid US$75.8M in lifetime HIV treatment costs = savings US$65.8M or 7.58 rate of financial return (Nguyen et al, 2014)

 - Government funding for NSP contributes to better NSP coverage (Tempalski et al, 2008)

Health intervention benchmarks would promote structural access

Expand opioid substitution treatment (OST) availability

- Only 8% of all US drug treatment programs provide OST, including methadone or buprenorphine (SAMHSA N-SSATS, 2010)

- Increasing availability of OST can dramatically reduce fatal overdoses (Schwartz et al, 2013)

- Financing makes a difference
  - US healthcare reform (2010 Affordable Care Act) requires coverage for behavioral healthcare (including substance use disorder services)

Health intervention benchmarks would highlight disparities and focus response

Number and location of local drug overdose prevention programs providing naloxone to laypersons (6/2014) & **age-adjusted rates of drug overdose deaths** in 2013, US
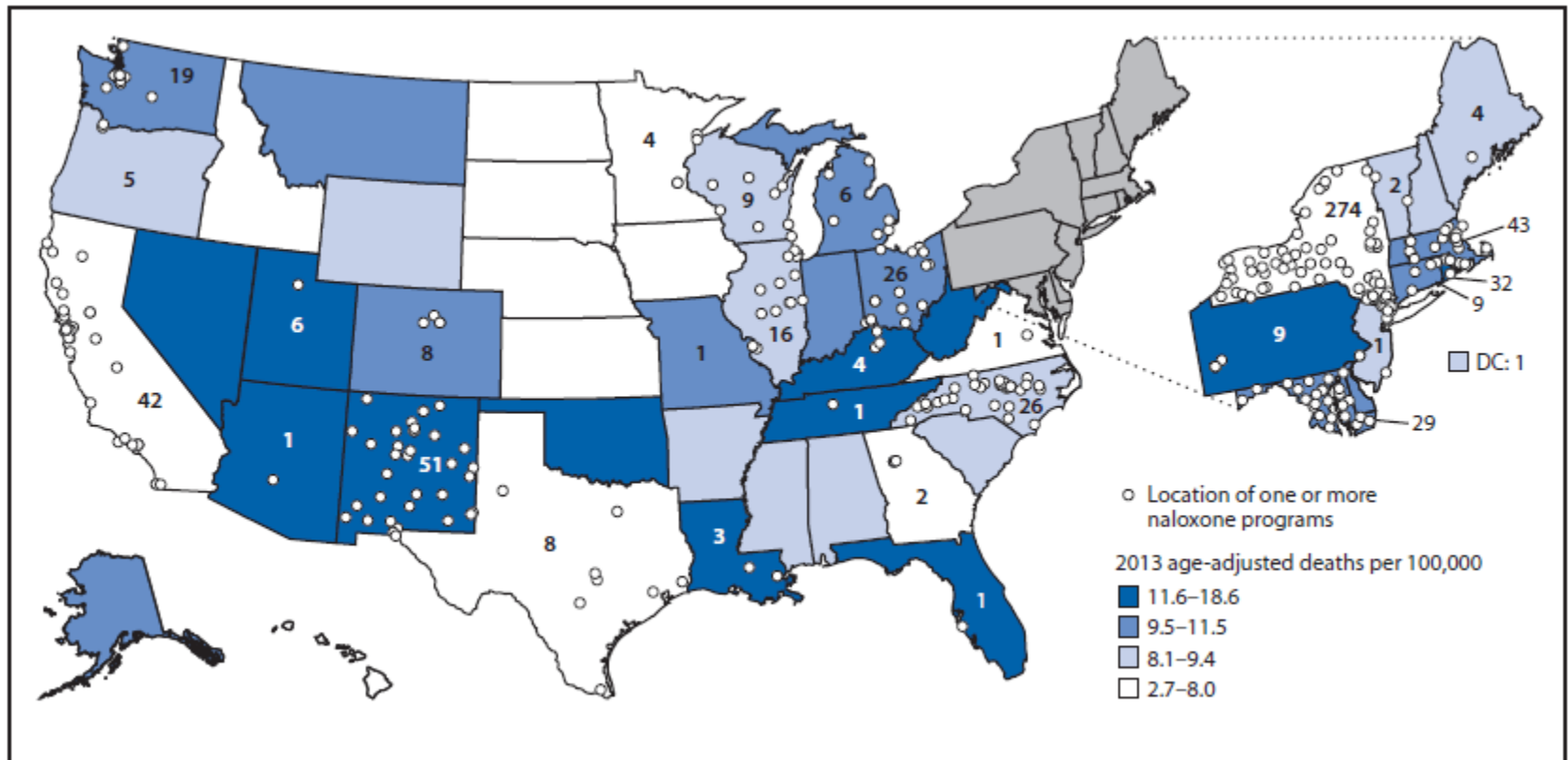
* Total N = 644; numbers on map indicate the total number of programs within each state.

Source: Wheeler, CDC MMWR 2015

III. How to develop metrics assessing the health impact of drug policy?

1. Address the <u>**variable health risks**</u> related to different kinds of drug use

   - Drug class or type
   - Modality of drug use

How to develop metrics assessing the health impact of drug policy?

2. Consider the

Spectrum of Psychoactive Substance Use

Casual/Non-problematic Use

- recreational, casual or other use that has negligible health or social effects

Chronic Dependence

- Use that has become habitual and compulsive despite negative health and social effects

Beneficial Use

- use that has positive health, spiritual or social impact:
- e.g. medical pharmaceuticals; coffee/tea to increase alertness; moderate consumption of red wine; sacramental use of ayahuasca or peyote

Problematic Use

- use that begins to have negative consequences for individual, friends/family, or society
- e.g. impaired driving; binge consumption; harmful routes of administration

How to develop metrics assessing the health impact of drug policy?

3. **Prioritize <u>evidence-based</u> health interventions**
   – Pragmatic
   – Scientific basis

4. **Make <u>equity</u> the primary lens**
   – Impact on disadvantaged/socially excluded groups (eg, racial, ethnic, religious, gender, class, sexual id)
   – Health as a human right
   – Prevent/eliminate disparities among groups

Summary guidance for assessing the health impact of drug policy

1. **Variable health risks of drug use**

2. **Spectrum of drug use**

3. **Evidence-based health interventions**

4. **Equity is the primary lens**

Human beings have always used psychoactive drugs / Drug policies based in health and human rights will yield the greatest benefits for everyone

THANK YOU

QUESTIONS / COMMENTS / FOLLOW-UP

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