Evaluating surveillance indicators of prescription and illicit drug use: RADARS® System Survey of Non-Medical Use of Prescription Drugs Program

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Disclosure

The RADARS System is supported by subscriptions from pharmaceutical manufacturers, government, and non-government agencies for surveillance, research, and reporting services. RADARS System is the property of Denver Health and Hospital Authority, a political subdivision of the State of Colorado. Denver Health retains exclusive ownership of all data, databases and systems. Subscribers do not participate in data collection nor do they have access to the raw data.

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Background

- **Problem**
  - Rapidly changing drug use environment
  - Lack of flexible data sources to accommodate change
    - Timeliness
    - Inadequate sample size for state-level analyses

- **Need for real time surveillance**

- **CSTE Indicators 2015**
  - The Council of State and Territorial Epidemiologists (CSTE) developed 18 surveillance indicators to monitor substance abuse and mental health.[1]

1. Council for State and Territorial Epidemiologists. (2016). *Recommended CSTE Surveillance Indicator for Substance Abuse & Mental Health.* Retrieved from http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/CrossCuttingI/Recommended_CSTE _Surveillanc.pdf

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CSTE Indicators: Other Drugs

- **Indicator 9: Drug or alcohol dependence or abuse in the last year — summary**
    - Marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, and methamphetamines, and non-medical use of prescription pain relievers, tranquilizers, stimulants, or sedatives
    - Identified data source: National Survey of Drug Use and Health

- **Indicator 10: Prevalence of use of selected prescription and illicit drugs**
    - Past month use: any illicit drug, marijuana, illicit drugs other than marijuana
    - Past year: marijuana, cocaine, non-medical use of pain relievers
    - Identified data Source: National Survey of Drug Use and Health

Any illicit: marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or prescription-type psychotherapeutics used nonmedically.

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Objective

- **Utilize NMURx data to report national prevalence estimates aligned with CSTE monitoring indicators 9 and 10.**

- **Demonstrate how NMURx can be used to monitor these state-based surveillance indicators.**

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NMURx Program: Methods

- **Study Design**
    - Semi-annual repeated, cross-sectional online survey

- **Population/Sampling**
    - General population of adults
    - Recruitment: survey panels
    - Quota sampling proportional to census region and 50:50 male/female

- **Sample size**
    - 30,000/launch in the US twice a year

- **Definition/Type of Cases**
    - Non-medical: use of a medication without a doctor's prescription or for any reason other than what was recommended by a doctor.
    - Prescription drugs: opioids indicated for pain, sedatives, stimulants, tranquilizers

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Analytical Methods

- **Post-stratification Weighting**
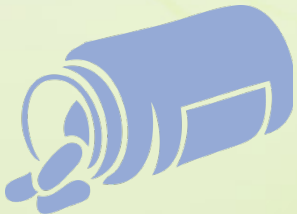 - Weights are applied to reflect distribution of adults in the US
    - Census region (Northeast, Midwest, South, West)
    - Gender
    - Age categories (18-24, 25-34, 35-44, 45-54, 55-64, 65+)
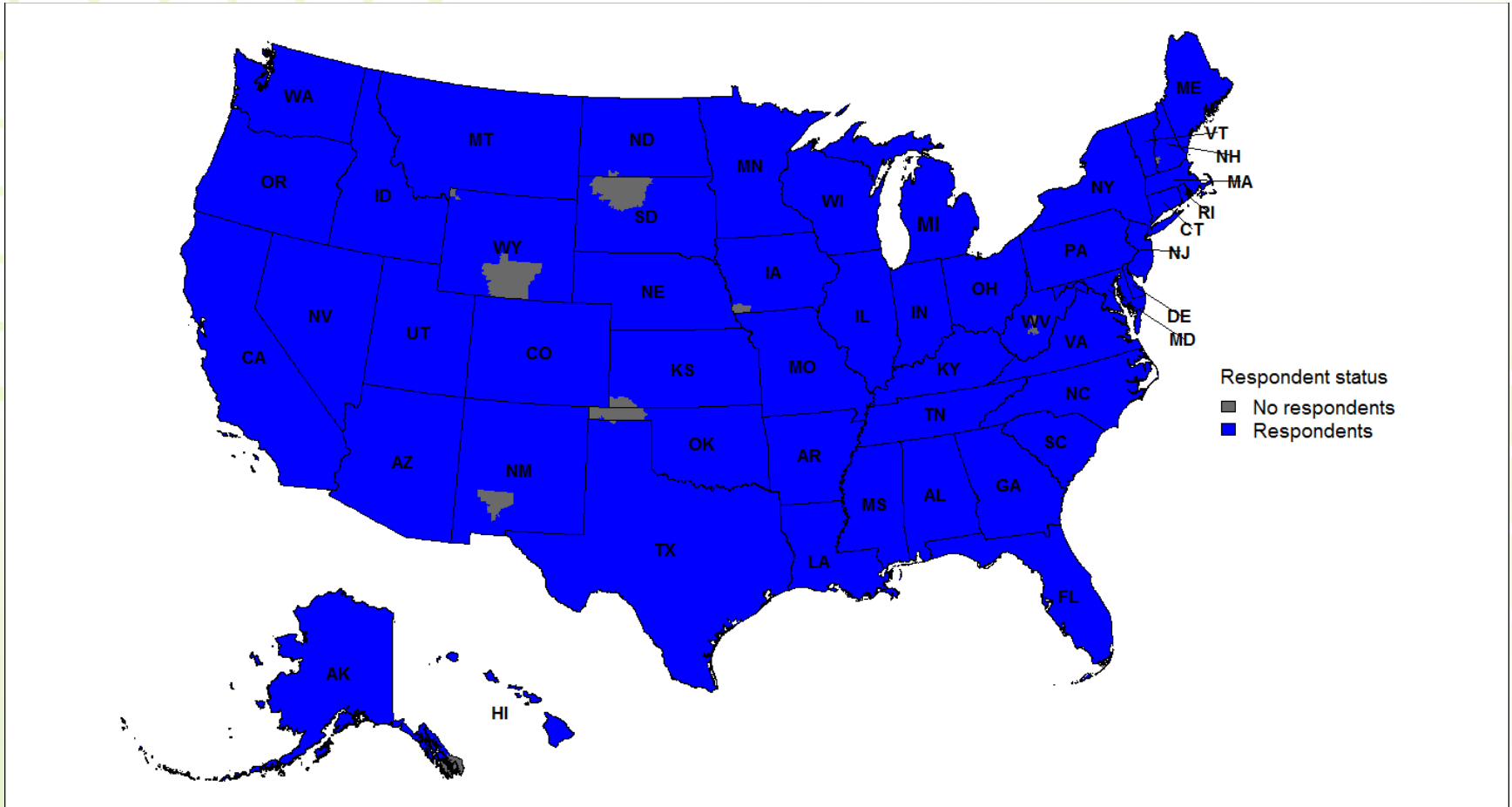
- **Prevalence Estimates**
  - National estimates and 95% Confidence Intervals (CI)
  - Stratified by census region

- **Population-Based Rates Heat Maps**
  - Weighted estimate of the number of adults for each measure per 100,000 adult population
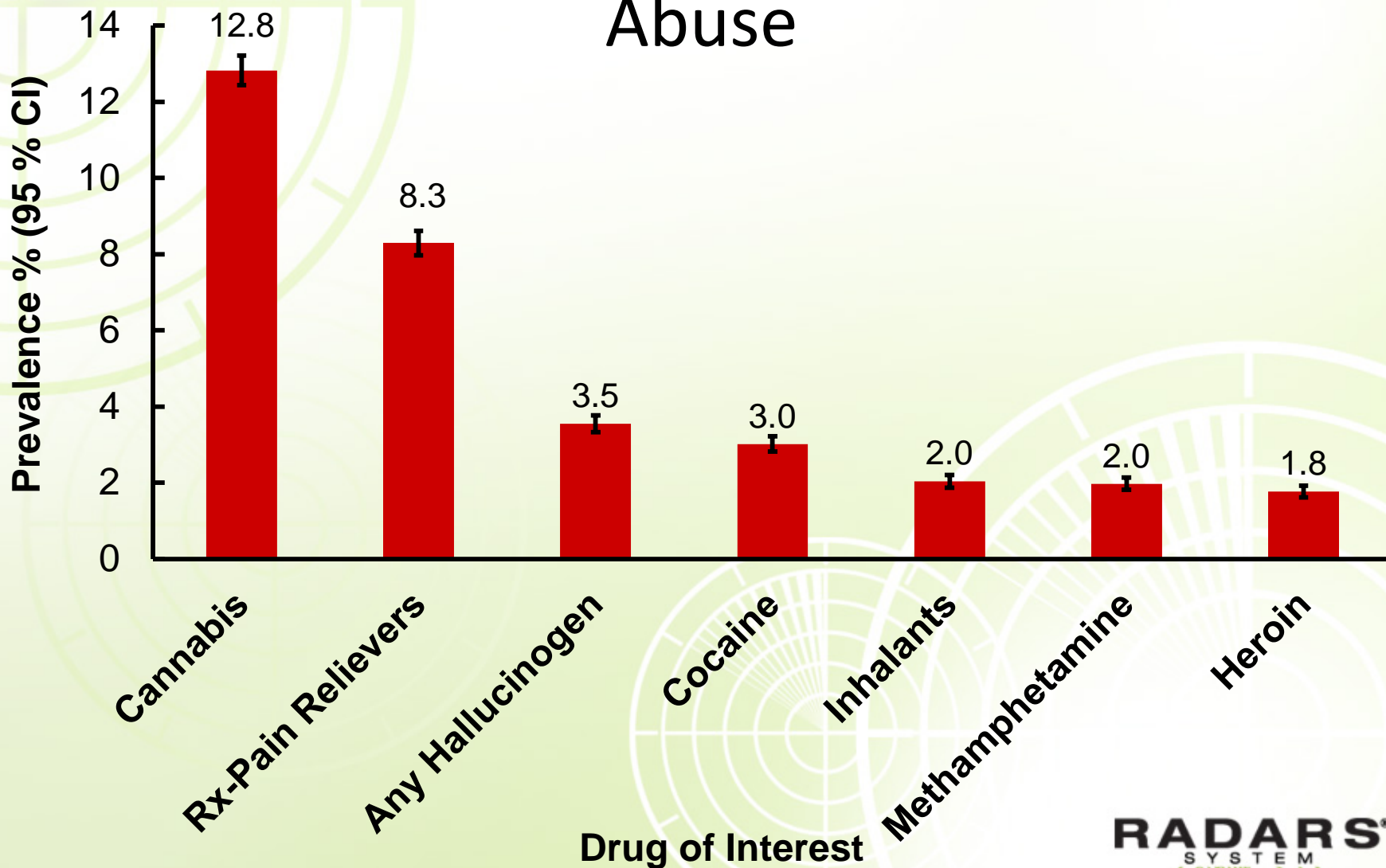 - Stratified by state

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3rd Quarter 2017

30,010 surveys
Representing 249,485,228 adults
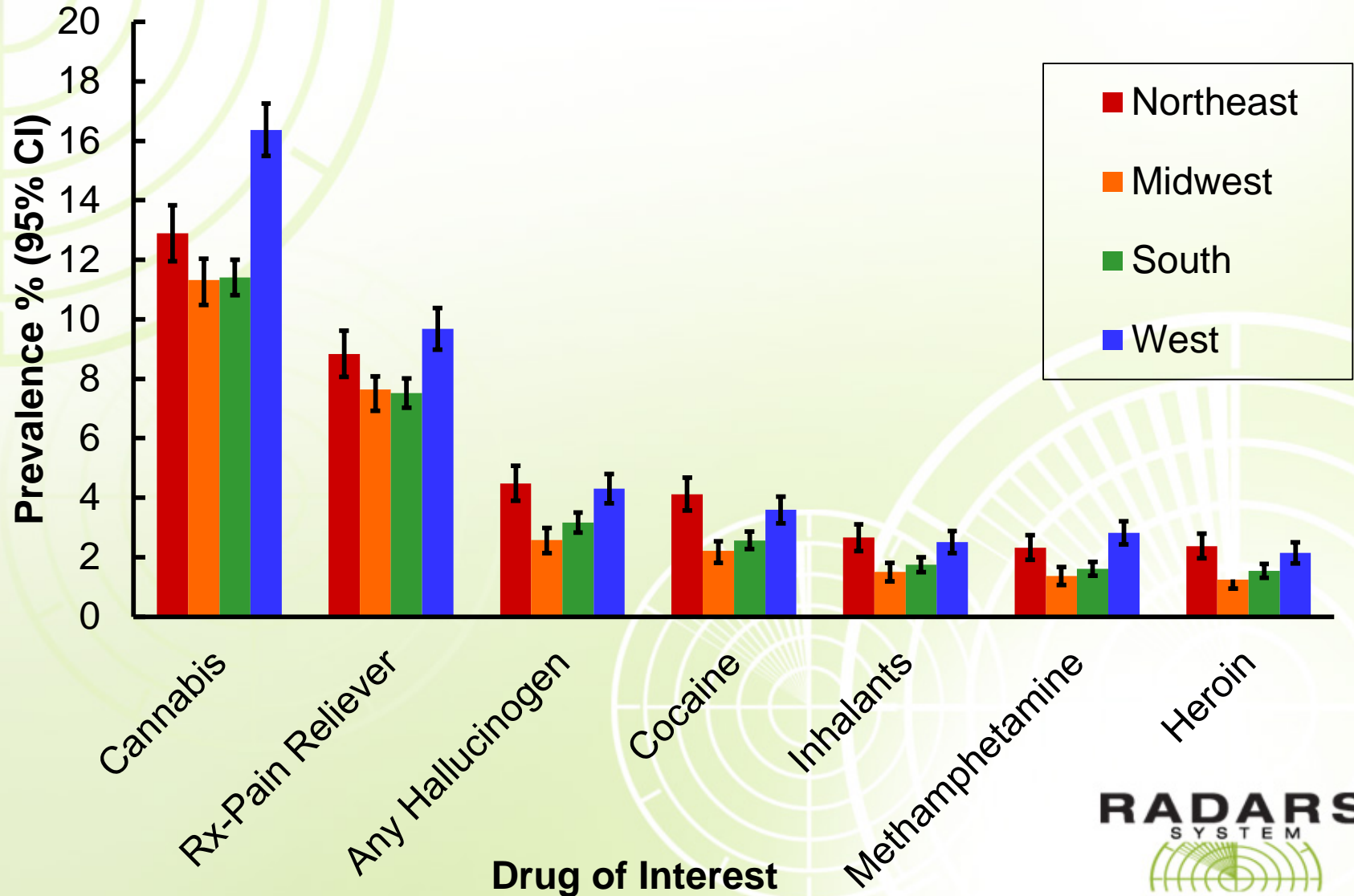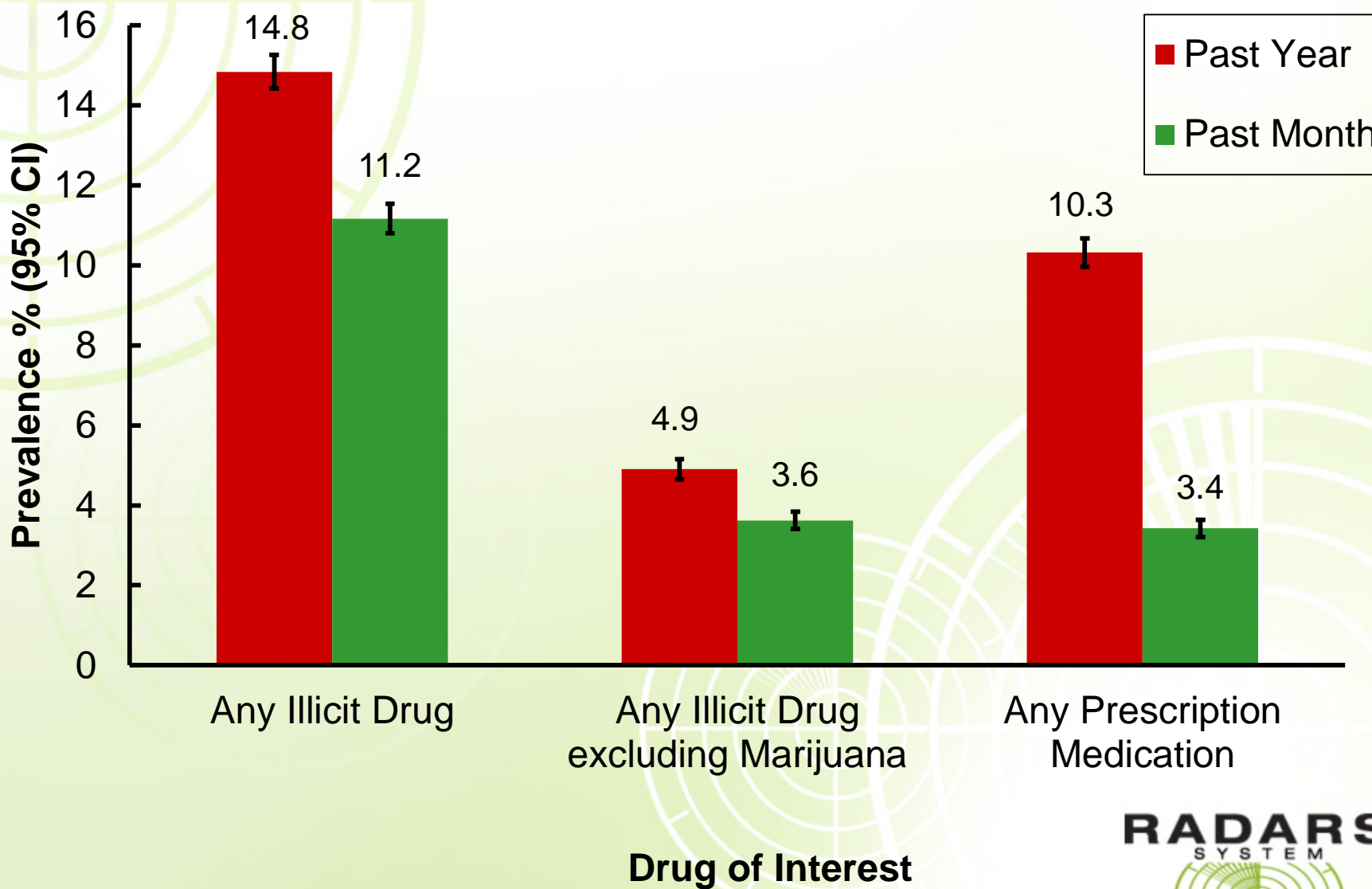
National Prevalence of Past Year Drug Abuse
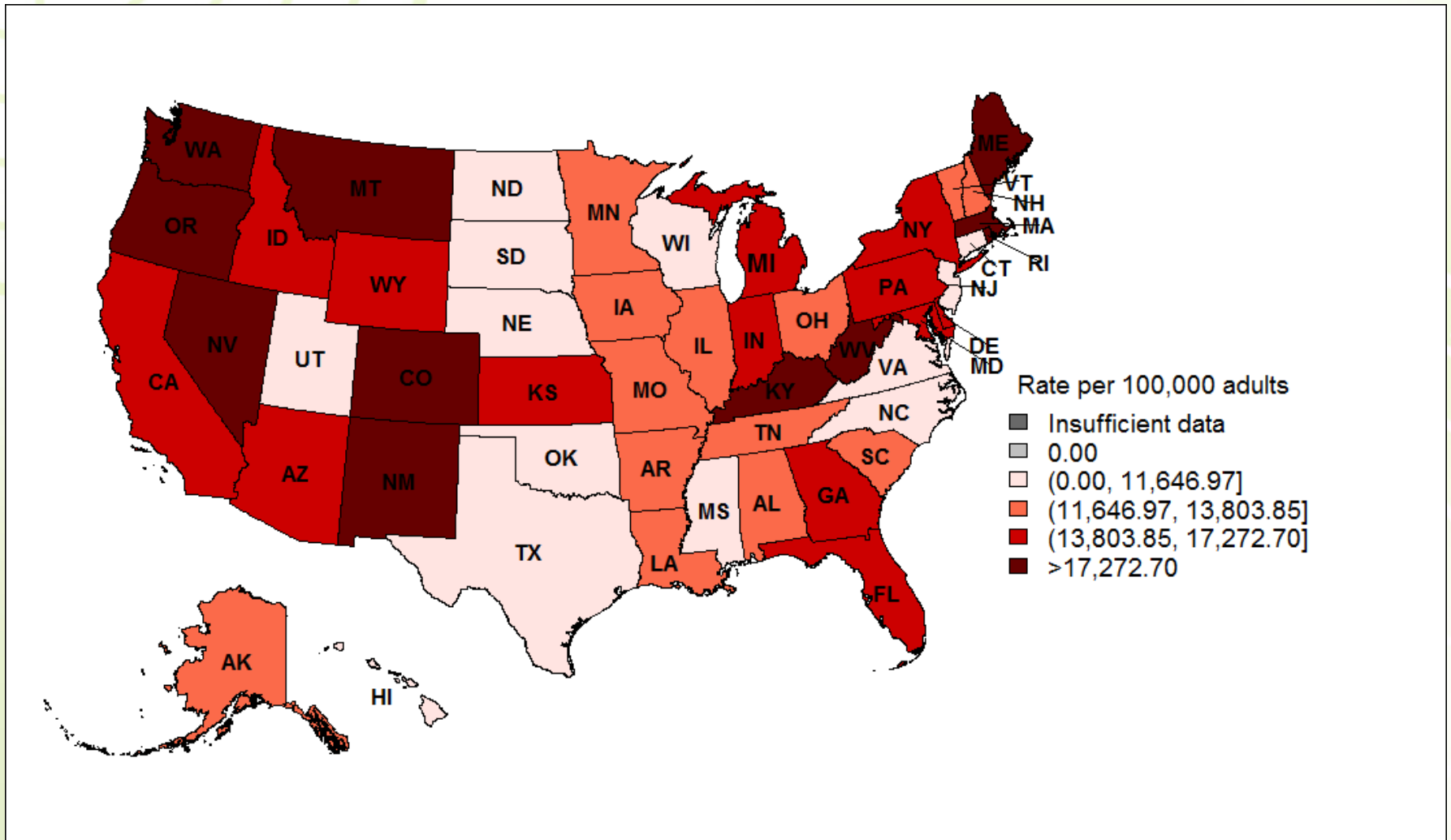
Past Year Drug Abuse by Census Region
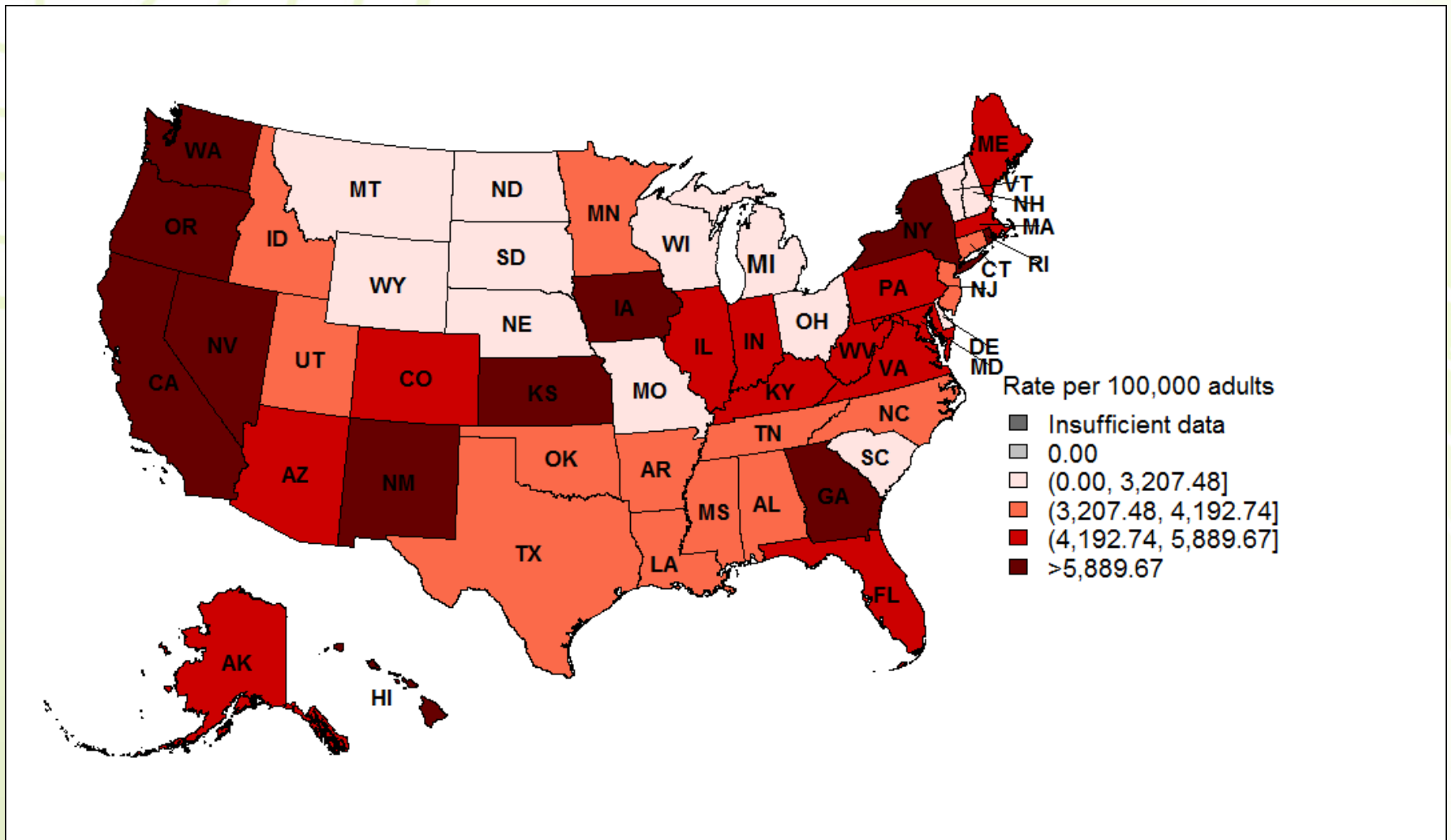
National Prevalence of Recent Abuse

Any Illicit Drug Use Past Year

Population based rates per 100,000 adults
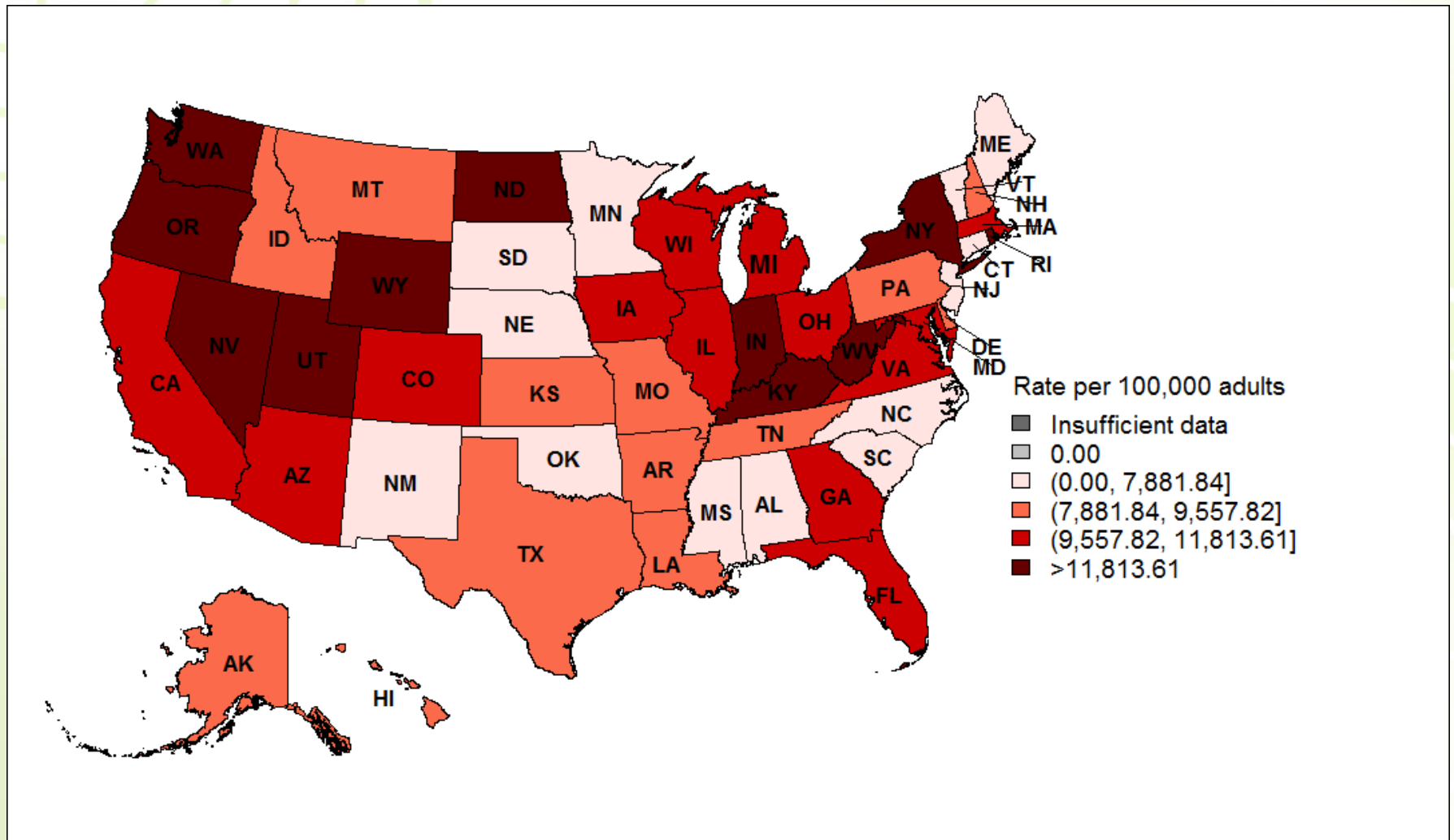
Any Illicit Drug Use exc. Marijuana Past Year

Population based rates per 100,000 adults

Rate per 100,000 adults

- Insufficient data
- 0.00
- (0.00, 3,207.48]
- (3,207.48, 4,192.74]
- (4,192.74, 5,889.67]
- >5,889.67

Any Rx-Medication Nonmedical Use Past Year

Population based rates per 100,000 adults

Rate per 100,000 adults

- Insufficient data
- 0.00
- (0.00, 7,881.84]
- (7,881.84, 9,557.82]
- (9,557.82, 11,813.61]
- >11,813.61

Disparities of Interest

- Gender
- Geographic Region
- Age
- Race/Ethnicity
- Income
- Marital Status
- Education
- Student Status

- Veteran Status
- Healthcare Professional Status
- Pregnancy
- Chronic/Acute Pain History
- DAST-10 Score

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Conclusions

- Prescription drug nonmedical use remains more common than use of individual illicit substances, except marijuana.

- A future use of this program is to allow state representatives the opportunity to query NMURx data.
  - National- and state-level surveillance possibilities.
  - Timely, semiannual, and various disparities of interest.

Questions