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

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Thursday January 21, 2016
United Nations University
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**

- Illicit Drugs: 24.6 million
- Marijuana: 19.8 million
- Prescription Drugs: 6.5 million
- Cocaine: 1.5 million
- Hallucinogens: 1.3 million
- Inhalants: 0.5 million
- Heroin: 0.3 million

**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)

Source: NYS DOH SPARCS, 1999-2006
HIV Diagnoses Among Persons Who Inject Drugs, by Region and Race/Ethnicity, 2013 (US & 6 dependent areas)

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.

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 **variable health risks** 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 **evidence-based** health interventions
   - Pragmatic
   - Scientific basis

4. Make **equity** 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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