Addressing racial inequities in the effectiveness of harm reduction services

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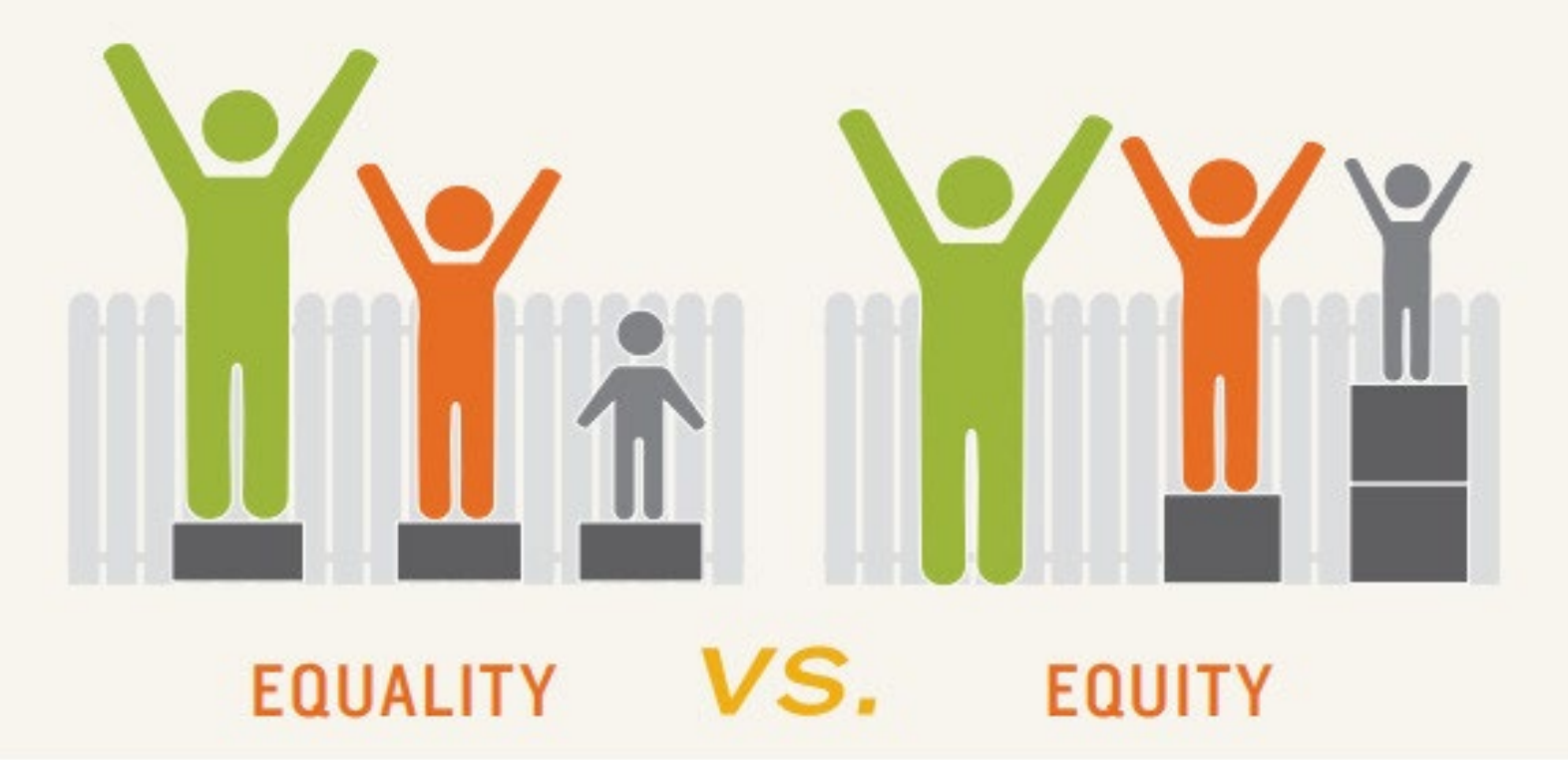
Disclosures

- My current research activities are funded by NIDA, NIA, NIAAA, & NIJ (through LA County).
- Co-founded and ran the Oakland SSP in the 1990s.
- Founding board member of the National Harm Reduction Coalition

Address 3 questions

- Are there racial inequities in substance use related harms?
- Are there racial inequities in harm reduction services?
- How do we achieve racial equity in harm reduction services?

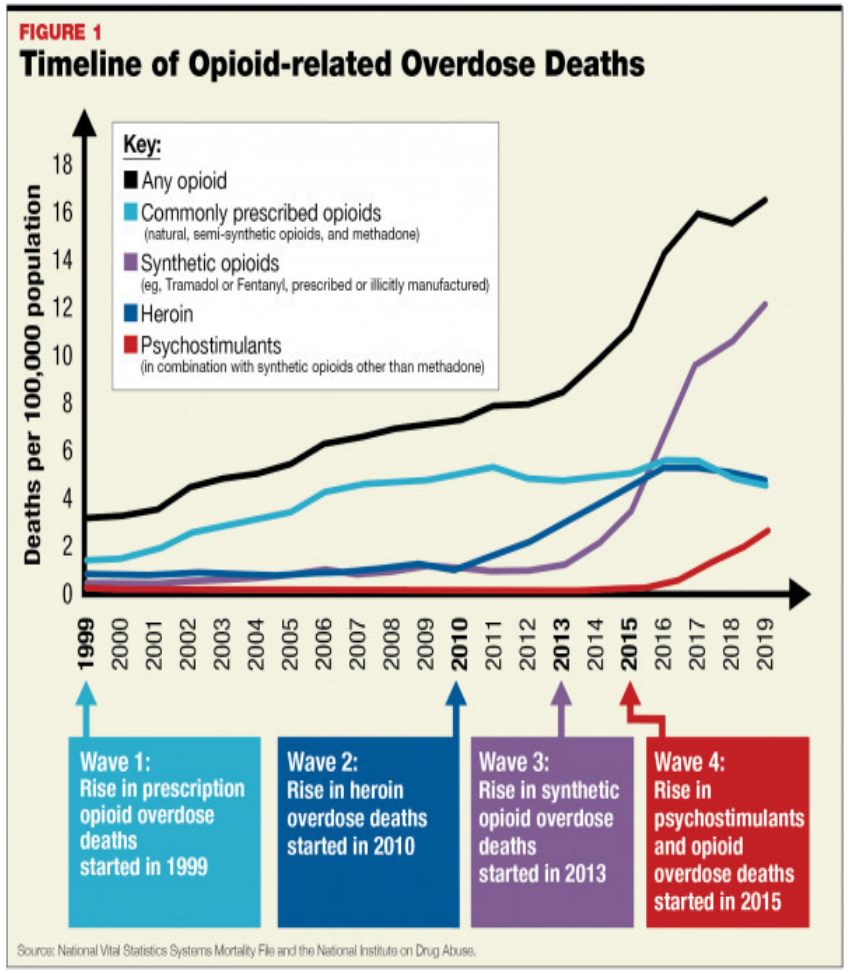
What is equity?

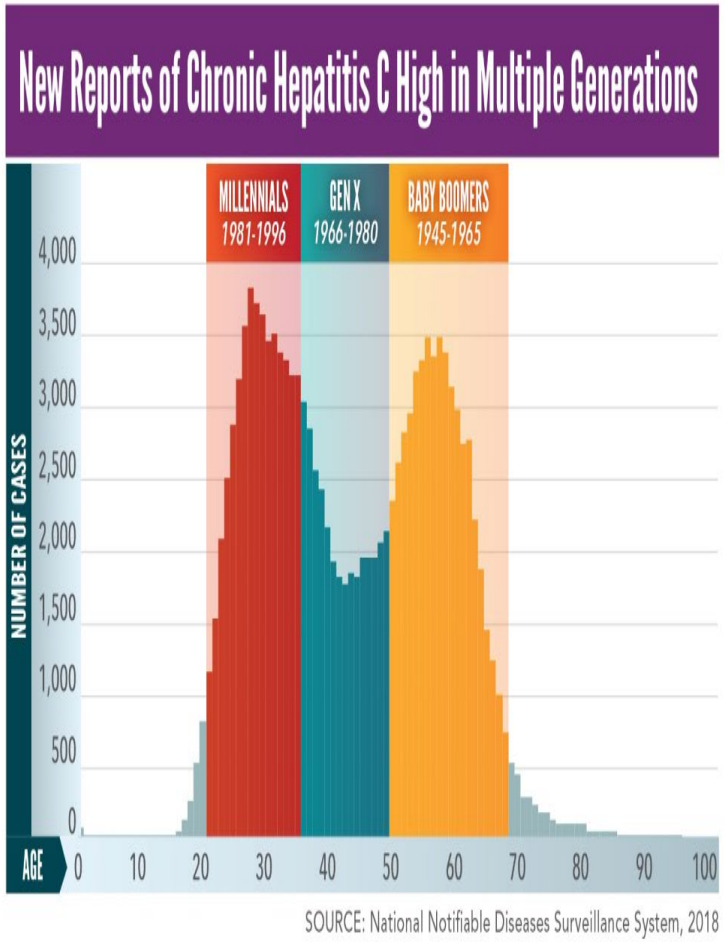


Courtesy of Annie E. Casey Foundation

Racial inequities in substance use related health problems

Health outcomes are worsening people who use drugs





Clinical Infectious Diseases

MAJOR ARTICLE

Bacterial Infections Associated With Substance Use Disorders, Large Cohort of United States Hospitals, 2012–2017

Natalie L. McCarthy, James Baggs, Isaac See, Sujan C. Reddy, John A. Jernigan, Runa H. Gokhale, and Anthony E. Fiore

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Background. Rises in the incidence of bacterial infections, such as infective endocarditis (IE), have been reported in conjunction with the opioid crisis. However, recent trends for IE and other serious infections among persons with substance use disorders (SUDs) are unknown.

Methods. Using the Premier Healthcare Database, we identified hospitalizations from 2012 through 2017 among adults with primary discharge diagnoses of bacterial infections and secondary SUD diagnoses, using *International Classification of Diseases, Clinical Modification Ninth and Tenth Revision* codes. We calculated annual rates of infections with SUD diagnoses and evaluated temporal trends. Blood and cardiac tissue specimens were identified from IE hospitalizations to describe the microbiology distribution and temporal trends among hospitalizations with and without SUDs.

Results. Among 72 481 weighted IE admissions recorded, SUD diagnoses increased from 19.9% in 2012 to 39.4% in 2017 ($P < .0001$). Hospitalizations with SUDs increased from 1.1 to 2.1 per 100 000 persons for IE, 1.4 to 2.4 per 100 000 persons for osteomyelitis, 0.5 to 0.9 per 100 000 persons for central nervous system abscesses, and 24.4 to 32.9 per 100 000 persons for skin and soft tissue infections. For adults aged 18–44 years, IE-SUD hospitalizations more than doubled, from 1.6 in 2012 to 3.6 in 2017 per 100 000 persons. Among all IE-SUD hospitalizations, 50.3% had a *Staphylococcus aureus* infection, compared with 19.4% of IE hospitalizations without SUDs.

Conclusions. Rates of hospitalization for serious infections among persons with SUDs are increasing, driven primarily by younger age groups. The differences in the microbiology of IE hospitalizations suggest that SUDs are changing the epidemiology of these infections.

Keywords. substance use; bacterial infection; injection drug use; opioid; endocarditis.

HIV outbreaks have returned

- Sex work, prescription opioids, and inadequate HIV prevention in the HIV outbreak in Scott County, Indiana
- Intersections of homelessness, drug injection and the HIV outbreak in Seattle, Washington
- HIV outbreaks in West Virginia, Northern Kentucky, Miami, FL and Duluth, MI all related to drug injection

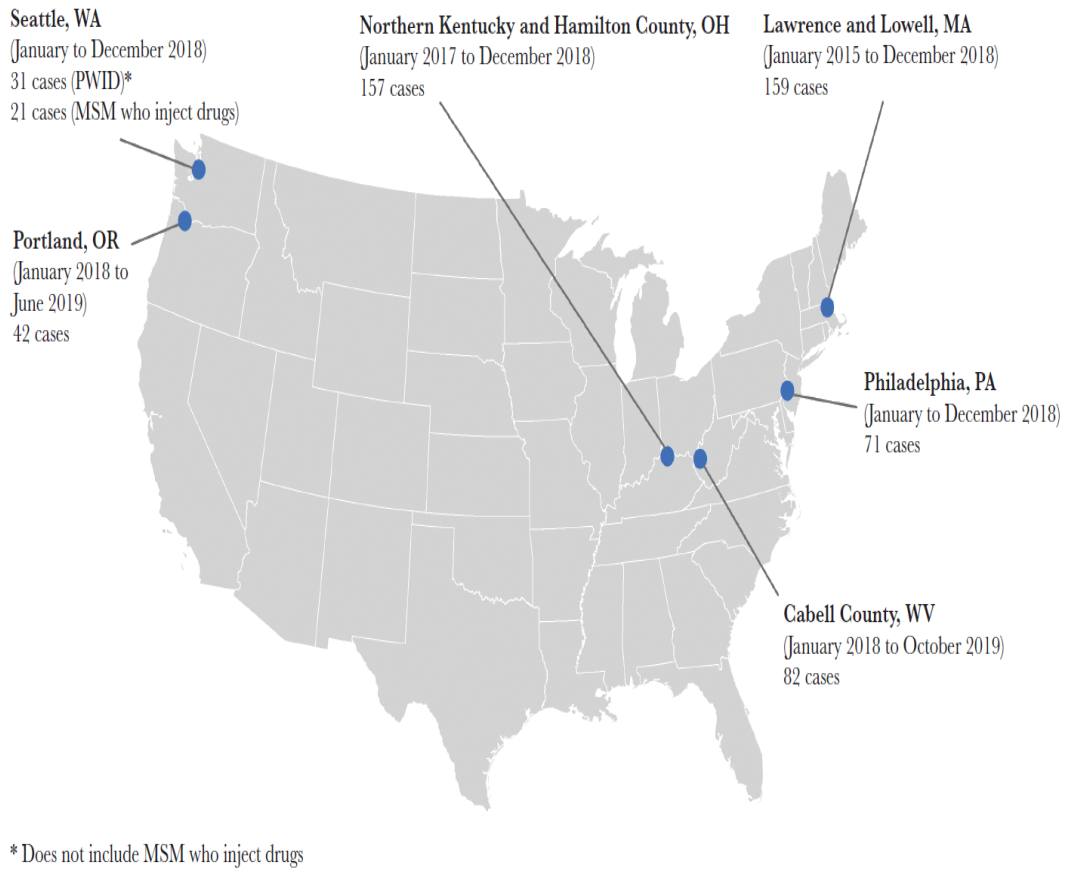


Figure 1. Human immunodeficiency virus outbreaks among persons who inject drugs (United States, 2016–2019). Abbreviations: MSM, men who have sex with men; PWID, persons who inject drugs.

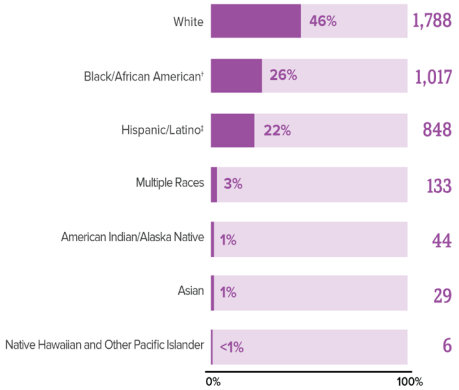
Lyss, S.B., Buchacz, K., McClung, R.P., Asher, A., Oster, A.M., 2020. Responding to Outbreaks of Human Immunodeficiency Virus Among Persons Who Inject Drugs—United States, 2016–2019: Perspectives on Recent Experience and Lessons Learned. The Journal of Infectious Diseases 222(Supplement_5), S239-S249.

Substance use related harms disproportionately impacts BIPOC

Recent data and studies confirm that Black and Indigenous People of Color are at elevate risk for common health problems associated with drug use including HIV and HCV.

New HIV Diagnoses Among People Who Inject Drugs in the US and Dependent Areas by Race/Ethnicity, 2018*

White people accounted for the highest number of new HIV diagnoses among people who inject drugs.



* Includes infections attributed to male-to-male sexual contact *and* injection drug use (men who reported both risk factors).
† *Black* refers to people having origins in any of the Black racial groups of Africa. *African American* is a term often used for people of African descent with ancestry in North America.
‡ Hispanic/Latino people can be of any race.

Source: CDC. Diagnoses of HIV infection in the United States and dependent areas, 2018 (updated). *HIV Surveillance Report* 2020;31.

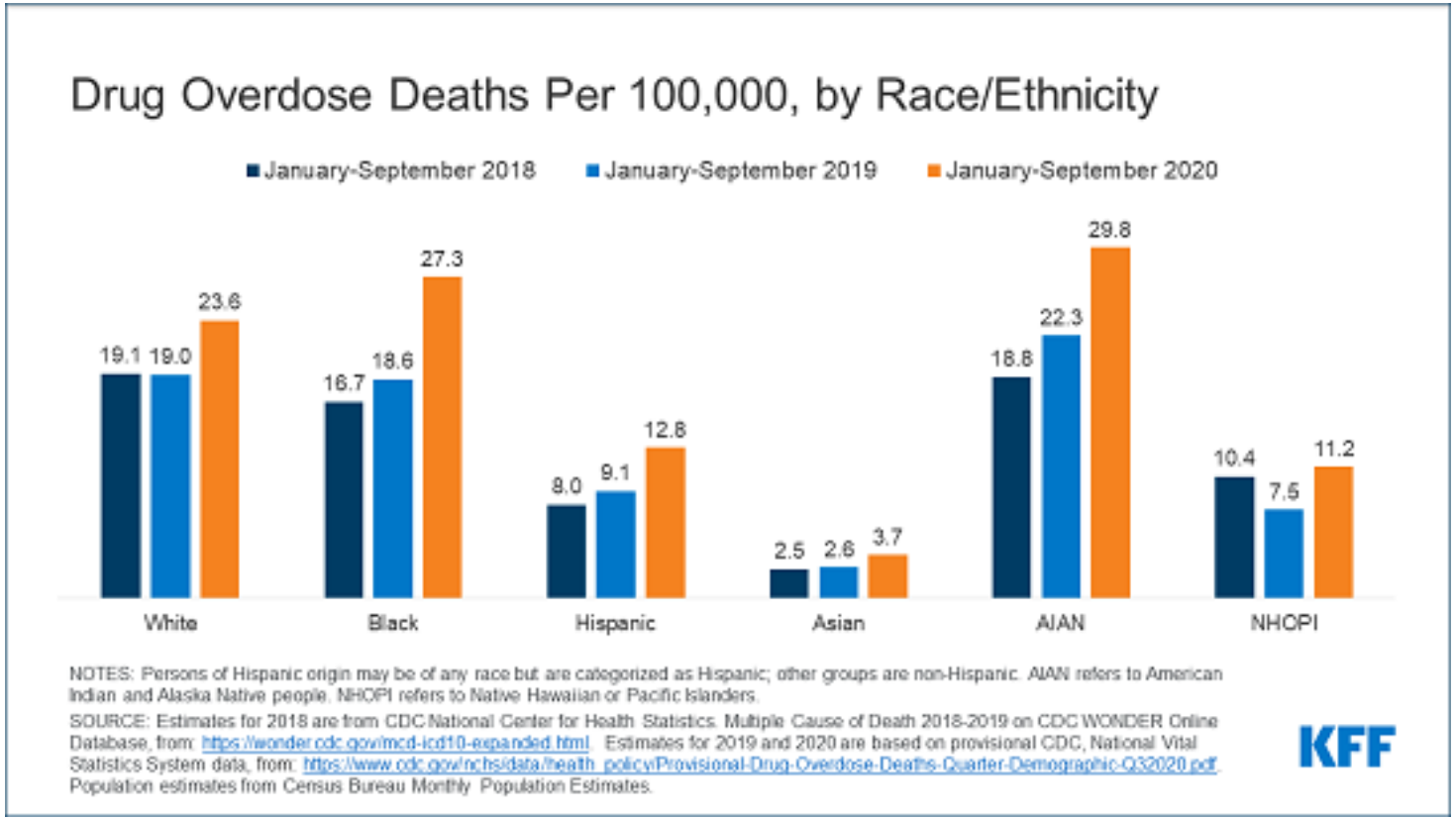
TABLE 3. ESTIMATED PREVALENCE OF HEPATITIS C BY RACE/ETHNICITY, U.S. STATES, AND DISTRICT OF COLUMBIA, 1999-2016

	Prevalence (per 100)	95% Confidence Interval	
Hispanic	0.82	0.60	1.11
Non-Hispanic white	1.00	0.85	1.17
Non-Hispanic black	2.29	1.94	2.70
Other race/ethnicity	0.73	0.45	1.17

rates of acute hepatitis C clearance,[26-28] higher rates of incarceration,[29-33] and less access to effective treatment services.[34-36] Clinical evidence suggested that interferon-based therapies were less effective for treating genotype 1 HCV infection among non-Hispanic black versus persons of other race/ethnicities, but newer direct-acting antiviral medications provide equally effective treatment across racial groups.[37] Efforts are urgently needed to reduce racial disparities in hepatitis C burden by increasing treatment

Bradley, H., Hall, E. W., Rosenthal, E. M., Sullivan, P. S., Ryerson, A. B., & Rosenberg, E. S. (2020). Hepatitis C Virus Prevalence in 50 U.S. States and D.C. by Sex, Birth Cohort, and Race: 2013-2016. *Hepatol Commun, 4*(3), 355-370. doi:10.1002/hep4.1457

Overdose deaths now harming American Indians and Blacks at higher rates



Where do racial inequities appear in harm reduction services

- Who has access?
- Who uses the program?
- How adherent are programs to harm reduction principles?
- What resources do participants receive?

Geographic availability of harm reduction services has not historically been driven by need - SSPs

FRAMING HEALTH MATTERS

Social and Political Factors Predicting the Presence of Syringe Exchange Programs in 96 US Metropolitan Areas

Barbara Tempalski, PhD, MPH, Peter L. Flom, PhD, Samuel R. Friedman, PhD, Don C. Des Jarlais, PhD, Judith J. Friedman, PhD, Courtney McKnight, MPH, and Risa Friedman, MPH

Community activism can be important in shaping public health policies. For example, political pressure and direct action from grassroots activists have been central to the formation of syringe exchange programs (SEPs) in the United States.

We explored why SEPs are present in some localities but not others, hypothesizing that programs are unevenly distributed across geographic areas as a result of political, socioeconomic, and organizational characteristics of localities, including needs, resources, and local opposition. We examined the effects of these factors on whether SEPs were present in different US metropolitan statistical areas in 2000.

Predictors of the presence of an SEP included percentage of the population with a college education, the existence of local AIDS Coalition to Unleash Power (ACT UP) chapters, and the percentage of men who have sex with men in the population. Need was not a predictor. (*Am J Public Health.* 2007;97:437–447. doi:10.2105/AJPH.2005.065961)

Some of the first SEPs in the United States were established by activists on their own initiative, and some of these programs later gained legitimacy and funding from local city government and public health programs. Currently, more than half of the country's SEPs are nongovernmental programs established by independent local actors.[18]

Social and political processes are important determinants of social change and actions that affect health policy, epidemiology, and prevention services. We explored the effects of place characteristics, including need for services, local resources, community opposition, and

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Substance Abuse Treatment, Prevention, and Policy

RESEARCH Open Access

Predictors of historical change in drug treatment coverage among people who inject drugs in 90 large metropolitan areas in the USA, 1993–2007

Barbara Tempalski[1*], Leslie D. Williams[1], Brooke S. West[2], Hannah L. F. Cooper[3], Stephanie Beane[3], Umedjon Ibragimov[3] and Samuel R. Friedman[4,5]

Abstract

Background: Adequate access to effective treatment and medication assisted therapies for opioid dependence has led to improved antiretroviral therapy adherence and decreases in morbidity among people who inject drugs (PWID), and can also address a broad range of social and public health problems. However, even with the success of syringe service programs and opioid substitution programs in European countries (and others) the US remains historically low in terms of coverage and access with regard to these programs. This manuscript investigates predictors of historical change in drug treatment coverage for PWID in 90 US metropolitan statistical areas (MSAs) during 1993–2007, a period in which, overall coverage did not change.

Methods: Drug treatment coverage was measured as the number of PWID in drug treatment, as calculated by treatment entry and census data, divided by numbers of PWID in each MSA. Variables suggested by the Theory of Community Action (i.e., need, resource availability, institutional opposition, organized support, and service symbiosis) were analyzed using mixed-effects multivariate models within dependent variables lagged in time to study predictors of later change in coverage.

Results: Mean coverage was low in 1993 (6.7%; SD 3.7), and did not increase by 2007 (6.4%; SD 4.5). Multivariate results indicate that increases in baseline unemployment rate ($\beta = 0.312$; *pseudo-p* < 0.0002) predict significantly higher treatment coverage; baseline poverty rate ($\beta = -0.486$; *pseudo-p* < 0.0001), and baseline size of public health and social work workforce ($\beta = 0.425$; *pseudo-p* < 0.0001) were predictors of later mean coverage levels, and baseline HIV prevalence among PWID predicted variation in treatment coverage trajectories over time (baseline HIV * Time: $\beta = 0.039$; *pseudo-p* < 0.001). Finally, increases in black/white poverty disparity from baseline predicted significantly higher treatment coverage in MSAs ($\beta = 1.269$; *pseudo-p* < 0.0001).

Conclusions: While harm reduction programs have historically been contested and difficult to implement in many US communities, and despite efforts to increase treatment coverage for PWID, coverage has not increased. Contrary to our hypothesis, epidemiologic need, seems not to be associated with change in treatment coverage over time. Resource availability and institutional opposition are important predictors of change over time in coverage. These findings suggest that new ways have to be found to increase drug treatment coverage in spite of economic changes and belt-tightening policy changes that will make this difficult.

Keywords: Injection drug use, Predictors, Drug treatment coverage, Longitudinal, Mixed-effects multivariate models, Metropolitan areas, Drug policy, Theory of community action

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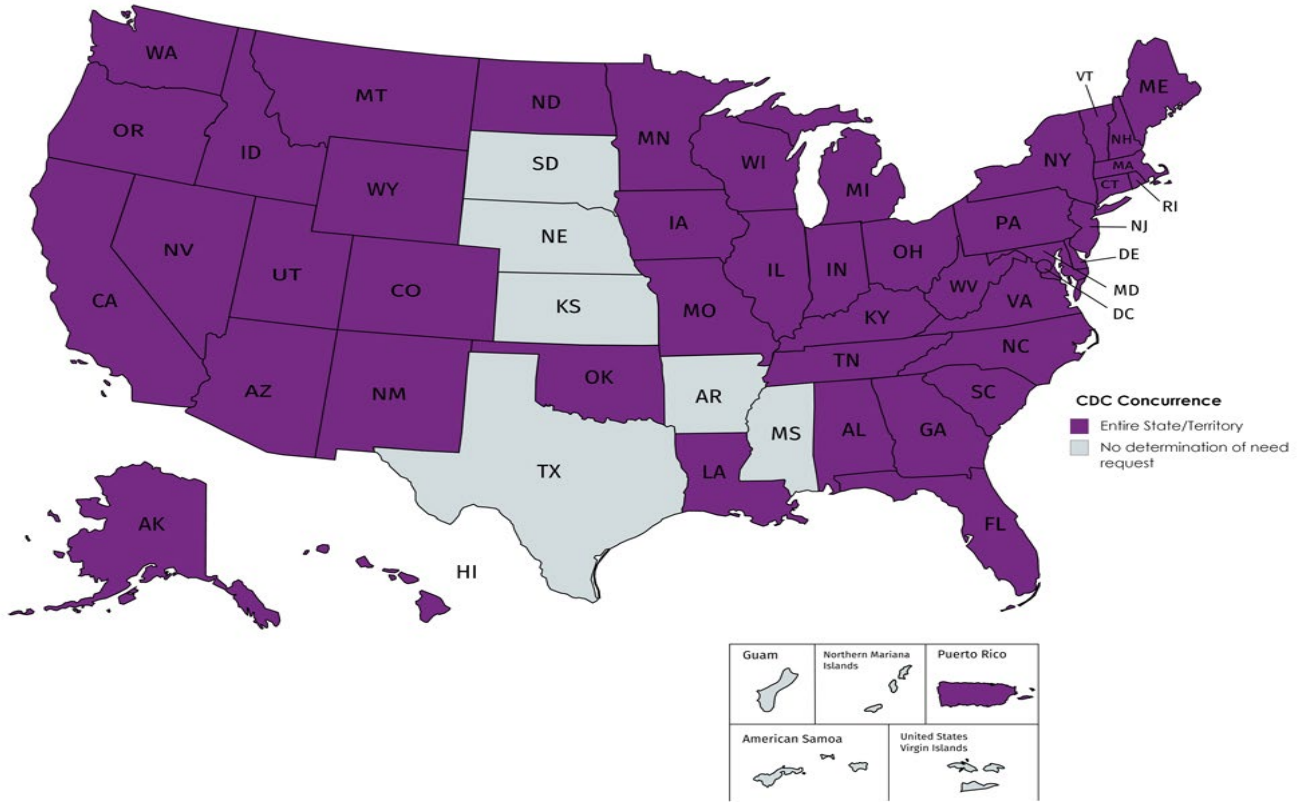
SSP geographic availability is still hampered

Needs SSP



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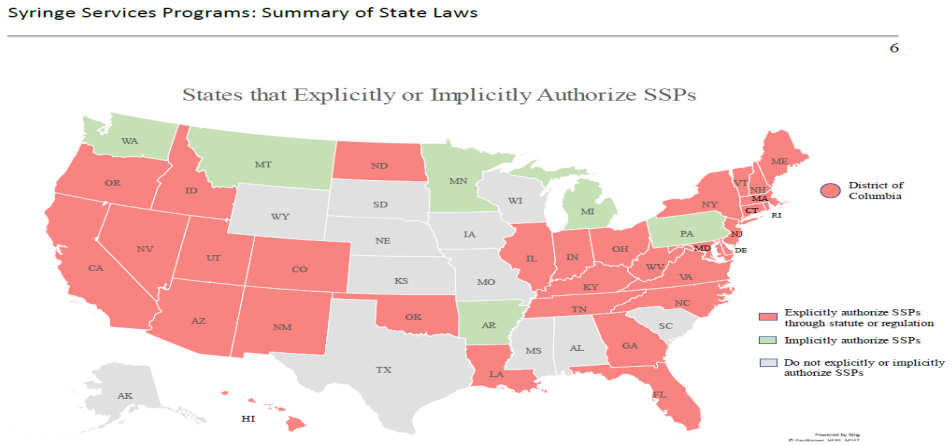
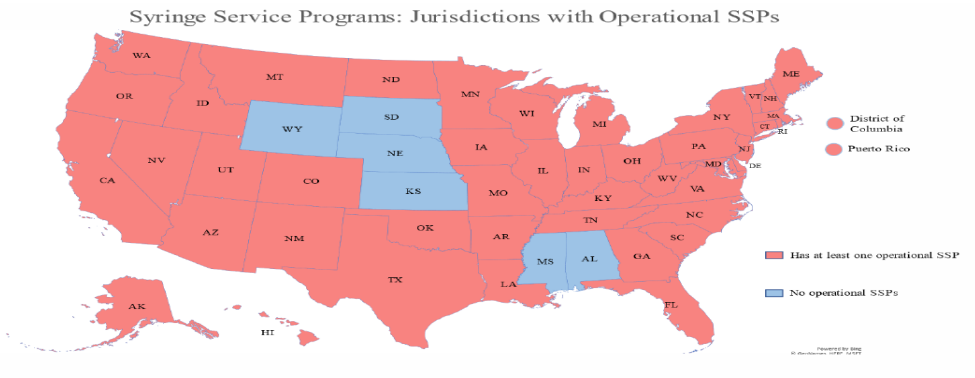


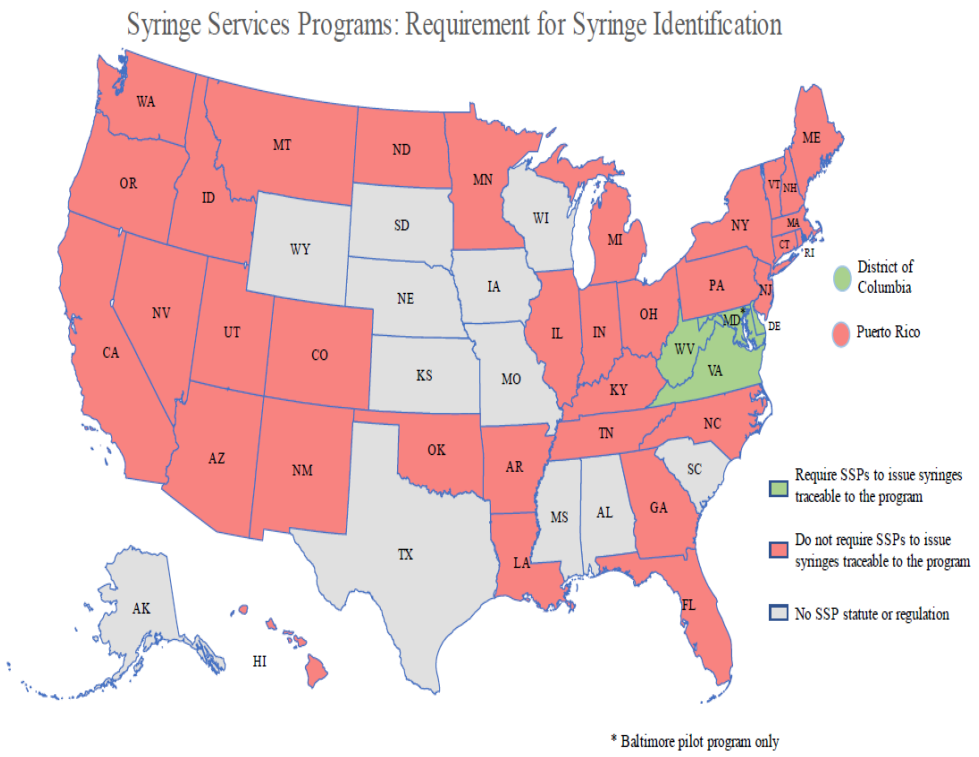


https://legislativeanalysis.org/wp-content/uploads/2022/06/Syringe-Services-Programs-Summary-of-State-Laws.pdf

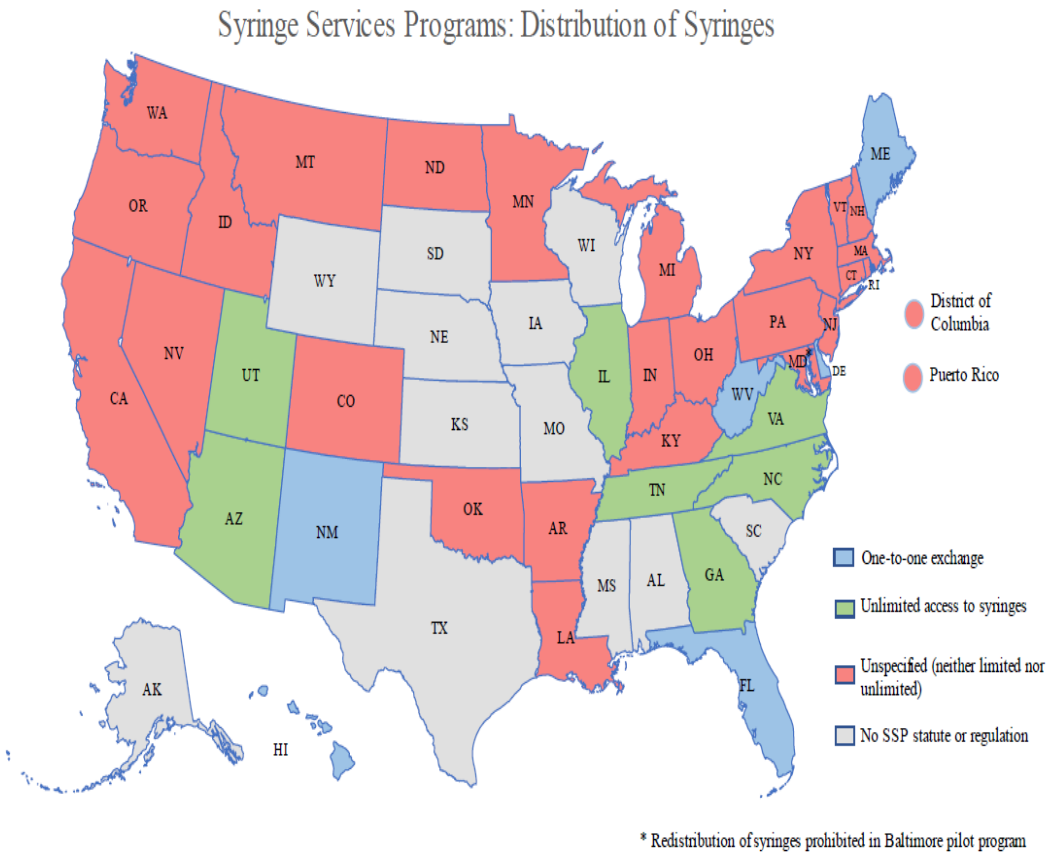
SSP regulations are also an issue

Syringe Services Programs: Summary of State Laws

10



* Baltimore pilot program only



* Redistribution of syringes prohibited in Baltimore pilot program

Disparities in access to harm reduction services exist - MOUD

156 (2024) 209193

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Journal of Substance Use and Addiction Treatment

journal homepage: www.journals.elsevier.com/journal-of-substance-use-and-addiction-treatment

Disparities in access to opioid treatment programs and buprenorphine providers by race and ethnicity in the contiguous U.S.

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ABSTRACT

Background: The burden of drug overdose mortality varies by race and ethnicity, with American Indian/Alaska Native (AI/AN), Black, and White people experiencing the largest burden. We analyzed census block group data to evaluate differences in travel distance to opioid treatment programs (OTP) and buprenorphine providers by race and ethnicity.
Methods: The Substance Abuse and Mental Health Services Administration provided the addresses of OTPs and buprenorphine providers. The study classified block groups as majority (≥50 %) AI/AN, Black, Asian, White, no single racial majority, or Hispanic. We classified deprivation and rurality using the Area Deprivation Index and Rural-Urban Commuting Area codes. The study applied generalized linear mixed models.
Results: Among all block groups, the median road distance to the nearest OTPs and buprenorphine providers was 8 and 2 miles, respectively. AI/AN-majority block groups had the longest median distances to OTPs (88 miles versus 4–10 miles) and buprenorphine providers (17 miles versus 1–3 miles) compared to other racial or ethnic majority block groups. For OTPs and buprenorphine providers, travel distances were slightly greater in more deprived block groups compared to less deprived block groups. The median distance to the nearest OTPs and buprenorphine providers were larger in micropolitan and small town/rural block groups compared to metropolitan areas.
Conclusions: Disparities exist in travel distance to OTPs and buprenorphine providers. People in block groups with AI/AN-majority, nonmetropolitan, or more deprived designation experience travel disparities accessing treatment. Future research should develop targeted interventions to reduce access to care disparities for individuals with opioid use disorder.

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Racial and ethnic disparities in medication for opioid use disorder access, use, and treatment outcomes in Medicare

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ABSTRACT

Introduction: Overdose deaths are increasing disproportionately for minoritized populations in the United States. Disparities in substance use disorder treatment access and use have been a key contributor to this phenomenon. However, little is known about the magnitude of these disparities and the role of social determinants of health (SDOH) and provider characteristics in driving them. Our study measures the association between race and ethnicity and visits with Medication for Opioid Use Disorder (MOUD) providers, MOUD treatment conditional on a provider visit, and opioid overdose following MOUD treatment in Medicare. We also evaluate the role of social determinants of health and provider characteristics in modifying disparities.
Methods: Using a population of 230,198 US Medicare fee-for-service beneficiaries diagnosed with opioid use disorder (OUD), we estimate logistic regression models to quantify the association between belonging to a racial or ethnic group and the probability of visiting a buprenorphine or naltrexone provider, receiving a prescription or medication administration during or after a visit, and experiencing an opioid overdose after treatment with MOUD. Data included Medicare claims data and the Agency for Health Research and Quality Social Determinants of Health Database files between 2013 and 2017.
Results: Compared to Non-Hispanic White Medicare beneficiaries, Asian/Pacific Islander, American Indian/Alaska Native, Black, Hispanic, and Other/Unknown Race beneficiaries were between 3.0 and 9.3 percentage points less likely to have a visit with a buprenorphine or naltrexone provider. Conditional on having a buprenorphine or naltrexone provider visit, Asian/Pacific Islander, American Indian/Alaska Native, Black, Hispanic, and Other/Unknown Race were between 2.6 and 8.1 percentage points less likely to receive buprenorphine or naltrexone than white beneficiaries. Controlling for provider characteristics and SDOH increased disparities in visits and MOUD treatment for all groups besides American Indians/Alaska Natives. Conditional on treatment, only Black Medicare beneficiaries were at greater associated risk of overdose than non-Hispanic white beneficiaries, although differences became statistically insignificant after controlling for SDOH and including provider fixed effects.
Conclusion: Ongoing equity programming and measurement efforts by CMS should include explicit consideration for disparities in access and use of MOUD. This may help ensure greater MOUD utilization by minoritized Medicare beneficiaries and reduce rising disparities in overdose deaths.

Meta-analysis confirms disparity

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Research in Social and Administrative Pharmacy

journal homepage: www.elsevier.com/locate/rsap

Is there a disparity in medications for opioid use disorder based on race/ethnicity and gender? A systematic review and meta-analysis

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ARTICLE INFO

Keywords:
Medication-assisted treatment
Inequity
Disparity
Buprenorphine
Methadone
Race

ABSTRACT

Background: Access to medications for opioid use disorder (MOUD) among racial/ethnic minorities is a growing concern.
Objectives: Inequalities in receiving MOUD among gender and racial/ethnic groups were examined in this systematic review.
Methods: Studies were retrieved by searching various databases and reference lists of reviews and selected full texts. Adjusted Odds Ratios (AORs) comparing MOUDs among racial/ethnic minorities to Whites were extracted or estimated from their findings. Meta-analysis was performed using STATA 17.
Results: After screening 2438 records, 19 studies were included in this review in two categories. The first category consists of 11 studies comparing receiving MOUD between different races/ethnicities and genders at the individual level. The meta-analysis regarding AORs comparing Blacks, Hispanics, Asians, Native Americans/Alaska-Natives, Hawaiians, and mixed-race patients with Whites were 0.56 (95 % CI: 0.45–0.68), 0.72 (95 % CI: 0.55–0.94), 0.85 (95 % CI: 0.72–0.99), 0.88 (95%CI: 0.73–1.04), 0.27 (95 % CI: 0.03–2.18), and 0.97 (95 % CI: 0.81–1.16), respectively. The AOR of receiving MOUD for all minorities compared to Whites was 0.70 (95 % CI: 0.61–0.80). Overall AOR comparing MOUD for females to males was 0.95 (95 % CI: 0.87–1.04). The second category of articles compared buprenorphine and methadone treatment among ethnic/racial minorities and Whites.
Conclusions: Compared to Whites, Blacks, Hispanics, and Asians have limited access to MOUD. The findings suggest that methadone is the predominant medication for racial/ethnic minorities, while Whites and high-income communities receive buprenorphine more. It is crucial to re-design policies to bridge the gap in access to MOUD.

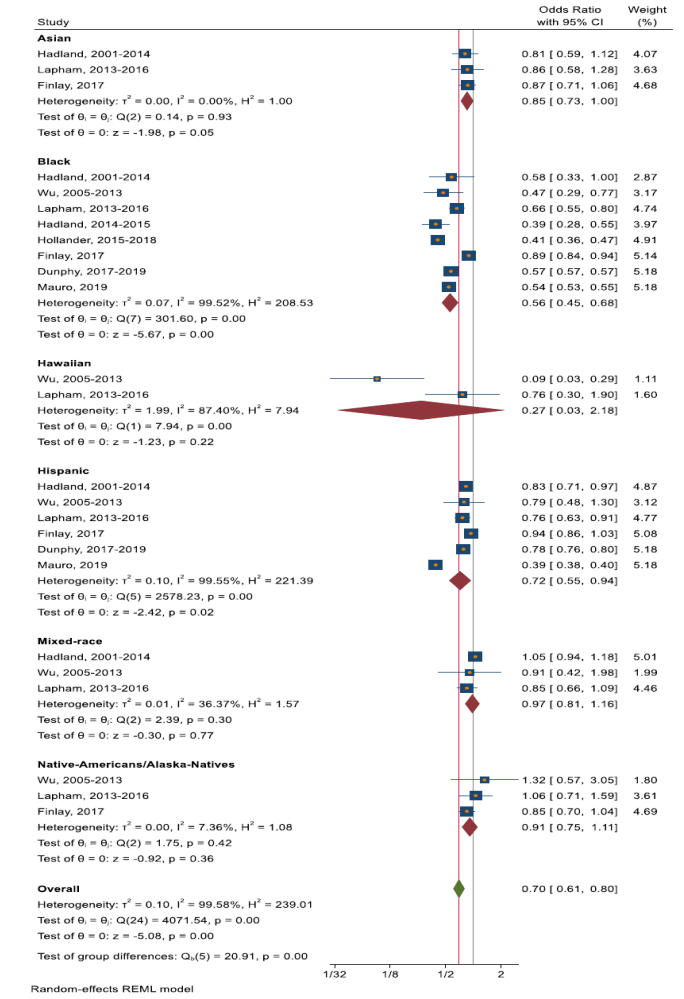

Fig. 2. Forest plot of AORs of studies that compare MOUDs between racial/ethnic minorities and Whites through random effects meta-analysis.

Naloxone access for minoritized individuals could improve

Drug and Alcohol Dependence 225 (2021) 108759

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Drug and Alcohol Dependence

journal homepage: www.elsevier.com/locate/drugalcdep

The naloxone delivery cascade: Identifying disparities in access to naloxone among people who inject drugs in Los Angeles and San Francisco, CA

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ARTICLE INFO

Keywords:
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ABSTRACT

Background: Opioid overdoses are a leading cause of injury death in the United States. Providing people who inject drugs (PWID) with naloxone is essential to preventing deaths. However, research regarding gaps in naloxone delivery is limited.

Methods: We interviewed 536 PWID in San Francisco and Los Angeles, California from 2017 to 2018. We described naloxone engagement and re-engagement cascades, and identified factors associated with receiving naloxone in the past six months and currently owning naloxone.

Results: The engagement cascade showed 72 % of PWID ever received naloxone, 49 % received it in the past six months, and 35 % currently owned naloxone. The re-engagement cascade showed, among PWID who received naloxone in the past six months, 74 % used and/or lost naloxone, and 67 % refilled naloxone. In multivariable analyses, identifying as Latinx (aRR = 0.53; 95 % CI: 0.39, 0.72) and Black (aRR = 0.73; 95 % CI: 0.57, 0.94) vs White were negatively associated with receiving naloxone in the past six months, while using opioids 1–29 times (aRR = 1.35; 95 % CI: 1.04, 1.75) and 30+ times (aRR = 1.52; 95 % CI: 1.17, 1.99) vs zero times in the past 30 days and witnessing an overdose in the past six months (aRR = 1.69; 95 % CI: 1.37, 2.08) were positively associated with receiving naloxone in the past six months. In multivariable analyses, being unhoused vs housed (aRR = 0.82; 95 % CI: 0.68, 0.99) was negatively associated with currently owning naloxone.

Conclusions: Our study adds to the literature by developing naloxone engagement and re-engagement cascades to identify disparities. Naloxone scale-up should engage populations facing inequitable access, including people of color and those experiencing homelessness.

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Harm Reduction Journal

BRIEF REPORT Open Access

Racial/ethnic differences in receipt of naloxone distributed by opioid overdose prevention programs in New York City

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Abstract

Introduction We evaluated racial/ethnic differences in the receipt of naloxone distributed by opioid overdose prevention programs (OOPPs) in New York City (NYC).

Methods We used naloxone recipient racial/ethnic data collected by OOPPs from April 2018 to March 2019. We aggregated quarterly neighborhood-specific rates of naloxone receipt and other covariates to 42 NYC neighborhoods. We used a multilevel negative binomial regression model to assess the relationship between neighborhood-specific naloxone receipt rates and race/ethnicity. Race/ethnicity was stratified into four mutually exclusive groups: Latino, non-Latino Black, non-Latino White, and non-Latino Other. We also conducted racial/ethnic-specific geospatial analyses to assess whether there was within-group geographic variation in naloxone receipt rates for each racial/ethnic group.

Results Non-Latino Black residents had the highest median quarterly naloxone receipt rate of 41.8 per 100,000 residents, followed by Latino residents (22.0 per 100,000), non-Latino White (13.6 per 100,000) and non-Latino Other residents (13.3 per 100,000). In our multivariable analysis, compared with non-Latino White residents, non-Latino Black residents had a significantly higher receipt rate, and non-Latino Other residents had a significantly lower receipt rate. In the geospatial analyses, both Latino and non-Latino Black residents had the most within-group geographic variation in naloxone receipt rates compared to non-Latino White and Other residents.

Conclusions This study found significant racial/ethnic differences in naloxone receipt from NYC OOPPs. We observed substantial variation in naloxone receipt for non-Latino Black and Latino residents across neighborhoods, indicating relatively poorer access in some neighborhoods and opportunities for new approaches to address geographic and structural barriers in these locations.

Keywords Naloxone, Racial/ethnic disparities, Opioid overdose prevention programs, New York City

USC Institute for Addiction Science

Keck School of Medicine of USC

As long as NEED/HARM does not drive implementation, racial inequities will persistent

Opposition to syringe service programs for people who inject drugs is a political determinant of health

Federal prohibition on funding for syringe exchange programs from onset through 1998, 1999 to 2009, 2011 to 2016

↓

Drug paraphernalia laws made syringe possession illegal in many states

↓

Distribution of condoms was banned in some locales

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Even when allowed, subject to closures (latest in Orange County) and consistently underfunded

Social and material insecurity: Homelessness is increasing among PWI Contributes to HIV/HCV infection

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Trends in homelessness and injection practices among young urban and suburban people who inject drugs: 1997-2017

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ABSTRACT

Background: Among young people who inject drugs (PWID) homelessness is associated with numerous adverse psychosocial and health consequences, including risk of relapse and overdose, psychological distress and suicidality, limited treatment access, and injection practices that increase the risk of HIV and hepatitis C (HCV) transmission. Homeless PWID may also be less likely to access sterile syringes through pharmacies or syringe service programs.

Methods: This study applied random-effects meta-regression to examine trends over time in injection risk behaviors and homelessness among young PWID in Chicago and surrounding suburban and rural areas using data from 11 studies collected between 1997 and 2017. In addition, subject-level data were pooled to evaluate the effect of homelessness on risk behaviors across all studies using mixed effects logistic and negative binomial regression with random study effects.

Results: There was a significant increase in homelessness among young PWID over time, consistent with the general population trend of increasing youth homelessness. In mixed-effects regression, homelessness was associated with injection risk behaviors (receptive syringe sharing, syringe mediated sharing, equipment sharing) and exchange sex, though we detected no overall changes in risk behavior over time.

Conclusions: Increases over time in homelessness among young PWID highlight a need for research to understand factors contributing to youth homelessness to inform HIV/STI, HCV, and overdose prevention and intervention services for this population.

Homelessness, unstable housing, and risk of HIV and hepatitis C virus acquisition among people who inject drugs: a systematic review and meta-analysis

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Summary

Background People who inject drugs (PWID) are at increased risk for HIV and hepatitis C virus (HCV) infection and also have high levels of homelessness and unstable housing. We assessed whether homelessness or unstable housing is associated with an increased risk of HIV or HCV acquisition among PWID compared with PWID who are not homeless or are stably housed.

Methods In this systematic review and meta-analysis, we updated an existing database of HIV and HCV incidence studies published between Jan 1, 2000, and June 13, 2017. Using the same strategy as for this existing database, we searched MEDLINE, Embase, and PsycINFO for studies, including conference abstracts, published between June 13, 2017, and Sept 14, 2020, that estimated HIV or HCV incidence, or both, among community-recruited PWID. We only included studies reporting original results without restrictions to study design or language. We contacted authors of studies that reported HIV or HCV incidence, or both, but did not report on an association with homelessness or unstable housing, to request crude data and, where possible, adjusted effect estimates. We extracted effect estimates and pooled data using random-effects meta-analyses to quantify the associations between recent (current or within the past year) homelessness or unstable housing compared with not recent homelessness or unstable housing, and risk of HIV or HCV acquisition. We assessed risk of bias using the Newcastle-Ottawa Scale and between-study heterogeneity using the I^2 statistic and p value for heterogeneity.

Findings We identified 14 351 references in our database search, of which 392 were subjected to full-text review alongside 277 studies from our existing database. Of these studies, 55 studies met inclusion criteria. We contacted the authors of 227 studies that reported HIV or HCV incidence in PWID but did not report association with the exposure of interest and obtained 48 unpublished estimates from 21 studies. After removal of duplicate data, we included 37 studies with 70 estimates (26 for HIV; 44 for HCV). Studies originated from 16 countries including in North America, Europe, Australia, east Africa, and Asia. Pooling unadjusted estimates, recent homelessness or unstable housing was associated with an increased risk of acquiring HIV (crude relative risk [cRR] 1·55 [95% CI 1·23–1·95; p=0·0002]; I^2=62·7%; n=17) and HCV (1·65 [1·44–1·90; p<0·0001]; I^2=44·8%; n=28]) among PWID compared with those who were not homeless or were stably housed. Associations for both HIV and HCV persisted when pooling adjusted estimates (adjusted relative risk for HIV: 1·39 [95% CI 1·06–1·84; p=0·019]; I^2=65·5%; n=9; and for HCV: 1·64 [1·43–1·89; p<0·0001]; I^2=9·6%; n=14). For risk of HIV acquisition, the association for unstable housing (cRR 1·82 [1·13–2·95; p=0·014]; n=5) was higher than for homelessness (1·44 [1·13–1·83; p=0·0036]; n=12), whereas no difference was seen between these outcomes for risk of HCV acquisition (1·72 [1·48–1·99; p<0·0001] for unstable housing, 1·66 [1·37–2·00; p<0·0001] for homelessness).

Interpretation Homelessness and unstable housing are associated with increased risk of HIV and HCV acquisition among PWID. Our findings support the development of interventions that simultaneously address homelessness and unstable housing and HIV and HCV transmission in this population.

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Introduction

Globally, HIV and viral hepatitis are leading causes of mortality,[1,2] with people who inject drugs (PWID) being highly susceptible to HIV and hepatitis C virus (HCV) infection.[3–6] Over 2018–30, an estimated 43% of global HCV transmission is projected to be attributed to unsafe injecting practices among PWID.[6] Approximately 8% of new HIV infections globally and 20% outside

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Achieving health equity in harm reduction services

Adhering to harm reduction principles

- Nothing about us without use
- Client driven
- Non-punitive/Non-judgmental
- Practical

- Resources and Relationships are important for effective harm reduction
- People need social and material resources to protect their health and well-being

Operationalizing harm reduction for racial equity requires…

- Support leaders and people in the population with the problems for both harm reduction implementation and research
  - Drug user organizations such as Urban Survivors Union & SF Drug User Union among others
  - Support efforts for American Indians and Tribes
  - Black Harm Reduction Network

Emic strategies work	Drug injection	HIV & HCV	Overdose	Fentanyl
SSPs	Indirect	Direct	Indirect	Indirect
Naloxone distribution			Direct	Direct
Safer injection facilities	Indirect	Direct	Direct	Direct

Recommendations at the SSP level

- Support evidence-based SSP policies
  - Need-based distribution
  - Naloxone distribution
  - Identify essential other services
- Provide materials that improve health outcomes including pipes
  - We have preliminary data suggesting that smoking fentanyl is associated with lower odds of abscesses. Others have documented reduced injecting which is helpful as well (Kral et al., 2021).
  - Pipes are relevant for people who use fentanyl and methamphetamine and can increase access to other social and health services
- Prioritize access to SSPs for populations at elevated risk
  - CDC has programs like this for HIV and overdose
  - More focus on minoritized populations, particularly outside of urban areas seems warranted

Facilitate adoption of harm reduction principles in other settings

- Continue to support funding for cross-fertilization of services and methods between SSPs and other health and social service providers
- Develop biomedical interventions in collaboration with people with lived experience
  - Withdrawal management medication for use in community settings?!!!
- Reduce stigma/bias among healthcare providers from emergency rooms to treatment centers to pharmacies
  - Stigma is a well-known inhibitor to MOUD prescribing and retention for care in hospitals

Addressing social and political determinants of health

- Housing first
  - https://endhomelessness.org/resource/housing-first/
- Treatment first
  - https://pubmed.ncbi.nlm.nih.gov/31277891/
- Trieste model
  - https://www.npr.org/2021/11/24/1058794582/public-mental-health-care-illnesses-italy-trieste
- Universal basic income
  - https://lamag.com/homelessness/los-angeles-homeless-basic-income-experiment
- Reduce stigma against people who use drugs

Research issues

- Explore how patient-centered approaches for services used by people who use drugs relates to health outcomes
- Examine the consequences of political barriers to well-being among people who use drugs
- Measure the health cost of prohibition
- Explore how the social distance between researchers and participants impacts intervention development

Thanks for your attention

- **I can be reached at rbluthen@usc.edu for questions or comments**