Racism as a Social Determinant of Health in COVID-19 Outcomes

Anika A. H. Alvanzo, MD, MS, DFASAM, FACP

Presented at ASAM State of the Art Course 2022



Disclosure Information



Anika Alvanzo, MD, MS, DFASAM, FACP

- Pyramid Healthcare, Inc.- Regional Medical Director
- Maryland Department of Health, Behavioral Health Administration-Consultant



Session Learning Objectives

At the end of the session, you will be able to:

- Describe racial disparities in COVID-19 outcomes.
- Discuss contribution of social determinants of health and racism to COVID-19 disparities.
- Understand intersectional impact of race and substance use disorder (SUD) on COVID-19 outcomes.



Outline

- Definitions
- Racial disparities in COVID-19 outcomes
- Substance use disorder disparities in COVID-19 outcomes
- Intersectionality of race and SUD in COVID-19



Definitions

- Race:
 - A social construct involving a hierarchical classification of humans based on physical traits, ancestry, and social relations.
- Racingace is the child of racism, not the father."
 The belief that all members of a purported race possess characteristics,
 - The belief that all members of a purported race possess characteristics, abilities or qualities specific to race and is a particular form of prejudice directed toward a person or group of people based on their membership of a particular racial or ethnic group
- Structural Racism:
 - Public policies, institutional practices, cultural representations, and other societal norms that contribute to and perpetuate racial group inequity



Social Determinants of Health (SDOH)

Social Determinants of Health



- Availability of resources to meet daily needs
- Access to quality educational, economic, and employment opportunities
- Access to health care services
- Transportation options
- Opportunities for recreational activities
- Exposure to crime, violence, and social disorder
- Socioeconomic conditions
- Social norms
 - (e.g., structural racism)
- Access to mass media and emerging technologies
 - (e.g., telehealth)

Social Determinants of Health Copyright-free

-1 Healthy People 2030



Healthy People 2030, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved 9/23/22, from https://health.gov/he

Structural Racism \rightarrow SDOH

- Redlining/residential segregation
- Unequal educational opportunity
- Employment discrimination
- Unequal access to healthcare

Homeowning while Black: Md. couple alleges bias in appraisal

f y in Saturday, August 20 2022

🔒 Print

AP NEW YORK (AP) — How much does it pay to hide the photos of your family at your home, or anything else that shows your race? If you're Black and trying to find out how much your house is worth, one family suggests it could be hundreds of thousands of dollars.

A couple in Baltimore is suing an appraiser and a mortgage lender, alleging their home was severely undervalued because they are Black, blocking them from refinancing their mortgage. The couple says a separate appraisal, done after "whitewashing" the place by removing family photos and having a white colleague stand in for them, pegged the home's value higher by \$278,000.

The two "were shocked at the appraisal and recognized that the low valuation was because of racial discrimination," according to the suit filed earlier this week in U.S. District Court in Maryland.

- Disparate criminal legal enforcement and prosecution
- Consistent diminution of opportunities



US COVID-19 Racial Disparities Timeline

December 2019

- Cluster of patients in Wuhan, China with symptoms of atypical pneumonia
- WHO office in China notified

January 2020

- China reports 40 cases
- Chinese scientists identify genetic sequence and share online
- 282 cases reported outside China
- First US case identified
 - Person-to-person transmission first identified in US
- WHO: declares Public Health Emergency of International Concern
- HHS: US declares public health emergency

February 2020

- Worldwide deaths exceed 1,000 outpacing 2002-2003 SARS outbreak
- WHO announces official name of disease: "COVID-19"
- US announces first Covidrelated death



US COVID-19 Racial Disparities Timeline

March 2020

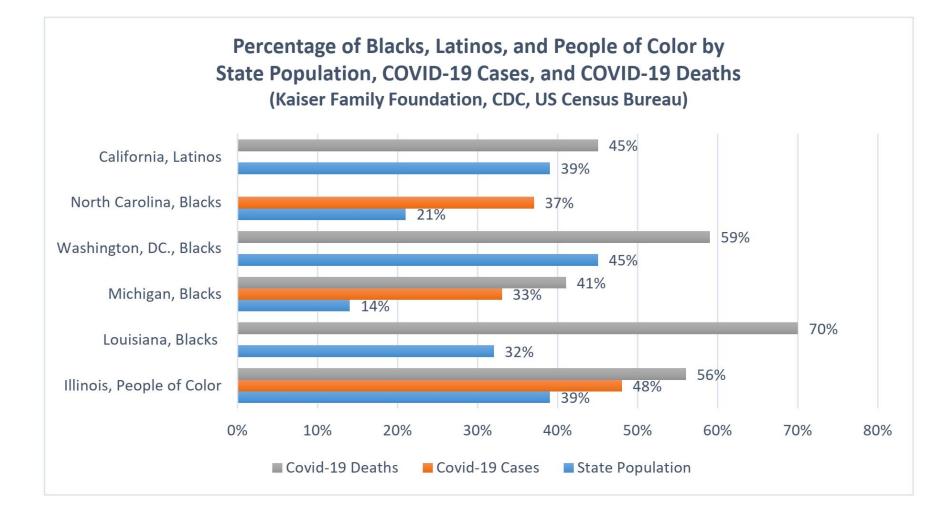
- CDC creates COVID-NET
 - Reports 60 cases in 12 states
- WHO declares a pandemic
- First human vaccine trials begin
- US declares national emergency
 - States begin shutdowns
 - Coronavirus Aid and Economic Security Act
 - Social distancing measures extended through April 2020
- CMS expands telehealth services

April 2020

- CDC announces mask wearing guidelines
- Doctors and Civil Rights organizations urge CDC to release race and ethnicity data on COVID-19 cases
- Chicago Department of Public Health publishes data showing marked racial disparities in Covid-19 related deaths



COVID-19 Outcomes by Race & Ethnicity





https://www.samhsa.gov/sites/default/files/covid19-behavioral-health-disparities-black-latino-communities.pdf

COVID-19 Outcomes by Race & Ethnicity

Rate ratios compared to White, Non-Hispanic persons	American Indian or Alaska Native, Non-Hispanic persons	Asian, Non- Hispanic persons	Black or African American, Non- Hispanic persons	Hispanic or Latino persons
Cases ¹	1.5x	0.8x	1.1x	1.5x
Hospitalization ²	2.8x	0.8x	2.2x	2.1x
Death ^{3, 4}	2.1x	0.8x	1.7x	1.8x



https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html#print

Factors Associated with Disparities

- Racialized myths about the virus
 - "China virus" or the "Chinese virus"
 - Black immunity to COVID-19
- Distrust of medical profession and medical science



SDOH \rightarrow COVID-19 Racial Disparities

- Disparities in prevalence of diseases associated with poor COVID-19 outcomes
 - Diabetes
 - Heart disease
 - Obesity
 - Pulmonary disease
- Lower health literacy
- Limited access to quality and affordable health care

- Criminal-legal disparities in arrest, prosecution, conviction and sentencing
 - Increased rates of poverty
 - Increased life stressors
 - Increased neighborhood
 density and disorganization
- Poor access to educational and employment opportunities
 - More likely to be essential workers



Employment Disparity: Essential Workers

Occupation	White	Black	Hispanic	Asian	Other	% Difference (B/W)	% Difference (H/W)	Spearman Correlation
Protective Service	1.92	3.25	1.49	0.58	1.97	1.33	-0.43	0.90
Transportation and material moving	5.33	10.58	8.65	4.74	7.32	5.25	3.32	0.87
Healthcare support	1.76	5.46	2.41	1.95	2.10	3.70	0.65	0.87
Office/Admin Support	11.22	12.76	10.75	8.38	12.69	1.50	-0.47	0.87
Food prep and serving	4.53	6.63	7.92	5.70	8.31	2.10	3.39	0.84
Maintenance	2.62	4.36	8.16	1.47	3.66	1.74	5.54	0.81
Personal care and service	3.28	4.84	4.15	6.14	4.75	1.56	0.87	0.85



Housing Disparity

- Wisconsin study of 2,595 consecutive patients
 - COVID-19 positivity: Blacks OR 5.37 (3.94-7.29)
 - 79% variability explained by zip code of residence
- US counties 1/22/20 10/28/20

	Lowest Quintile	Highest Quintile
COVID-19 death rate/ 100,000	20.9	151.0
% Black residents	5.0%	22.7%
% Uninsured	10.7%	16.1%
% Adults w/o high school diploma	10.8%	17.7%



Intersectionality of Race and SUD in COVID-19 Outcomes



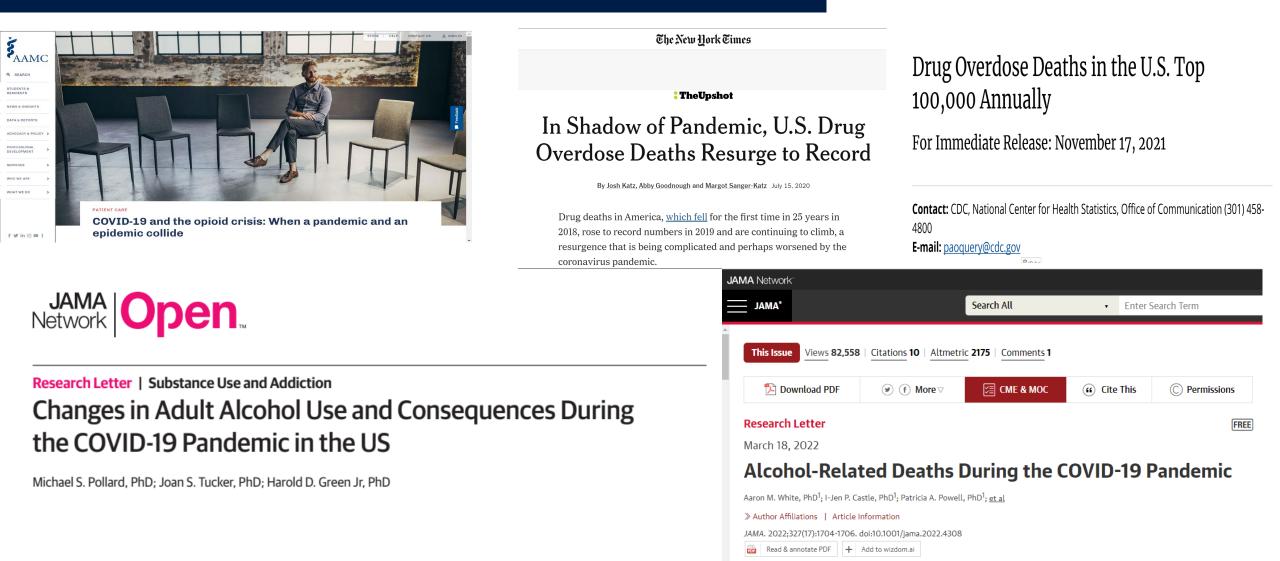
Impact of COVID-19 for Persons with SUD

- Increased stress
 - Fear of illness
 - Financial strain
 - Job loss
- Exacerbation of psychiatric symptoms
- Grief, loss and trauma
- Increased unstructured time/boredom

- Disconnected from recovery supports
 - Group counseling
 - Self/mutual help (NA, AA Smart Recovery)
 - Religious/Spiritual communities (church, mosque, synagogues)
- Social isolation
 - No one there to call 911 or administer naloxone



COVID-19 and Substance Use





COVID-19 Disparities in Persons with SUD

- ~73 million patients from 360 hospitals;
 - ~7.5 million (10.3%) with lifetime SUD diagnosis
 - ~722,00 (0.99%) with SUD diagnosis in past 12 months
 - ~12,000 with COVID-19 infection

	COVID-19 Positivity OR (CI)	Hospitalization %, (p-value)	Mortality (%)
Lifetime SUD	1.46 (1.42,1.50)	41.0% vs. 30.1%, (p <.0001)	9.6% vs. 6.6% (p <.0001)
Recent SUD diagnosis	8.69 (8.41, 9.00)	43.8% vs. 30.1% (p <.0001)	9.5% vs 6.6% (p =.003)
Blacks with lifetime SUD		50.7% vs. 35.2% (p <.0001)	13.0% vs. 8.6% (p =.003)
Blacks with recent SUD	2.17 (2.01, 2.35)	53.67% vs. 37.6% (p <.0001)	12.2% vs. 9.84% (p=.276)
Blacks with recent OUD	4.16 (3.13, 5.53)		



Race & SUD Intersectionality

- Minoritized patients in an opioid treatment program were:
 - More likely to report:
 - "Extremely concerned" about catching COVID-19 (29.5% vs. 9.1%)
 - Tried to get tested but could not (18.2% vs. 3.0%)
 - Know someone who died (43.2% vs. 22.7%)
 - Need to financially support others who lost jobs (31.8% vs. 13.6%)
 - Prepare own drugs (11.4% vs. 1.5%)
 - Decreased sharing of drugs or supplies with others (20.5% vs. 7.6%)
 - Less likely to report:
 - Increased alcohol consumption (9.1 % vs. 16.7%) or non-prescription drugs (11.4 vs. 13.6%)



Disparities in Access to Addiction Medications

- Segregation of methadone and buprenorphine clinics
 - Black resident: Each 1% \$\propto in probability of interaction with a White resident was associated with 0.6 more facilities providing methadone
 - White resident: Each 1% ↓ in the probability of interaction with a Black resident was associated with 8.17 more facilities providing buprenorphine
- Disparities in access to buprenorphine
 - Black patients with an opioid use disorder were 72% less likely to be prescribed buprenorphine when compared to Whites.
- Medications for alcohol use disorder (MAUD)
 - Blacks less likely than Whites to be prescribed MAUD (OR 0.68)



Disparities in Access to Other Treatment

- Telehealth
 - Black patients less likely to have access to technology for telemedicine
 - Particularly synchronous audio-visual visits
- Mental Health (MH) treatment
 - MH/SUD visits pre-pandemic, during surge, clinic re-opening
 - Non-Hispanic Whites increased by 10.5% relative to pre-pandemic
 - Blacks decreased by 33.0% and Hispanics decreased by 24.6%
- Harm Reduction
 - Racial/ethnic minorities less able to access syringe exchange services (OR 7.8) and naloxone (OR 9.9)



Race and Ethnicity Disparities in Overdose

- California study
 - Age-adjusted death rates between 2006 2020
 - Used forecasting model to predict deaths in Q2 –Q4, 2020
 - Total: 15.0 to 22.4 between 2019 and 2020 (50% increase)
 - Blacks: 27.0 to 41.1 (52% increase)
 - Whites: 22.2 to 31.7 (43% increase)
 - Latinx: 10.3 to 17.3 (68% increase)
 - AAPI: 3.5 to 5.7 (62.1% increase)
 - Black-White overdose mortality gap
 - 2018: 0.7
 - 2019: 4.8
 - 2020 (Q2 Q4): 9.9



Summary

- Notable racial and ethnic disparities in COVID-19 infection and outcomes.
- Disparities inextricably linked to the social determinants of health and racism.
- Intersectionality of race and substance use with worsening of outcomes.



References

- 1. Centers for Disease Control and Prevention. CDC Museum COVID-19 Timeline. 2022. https://www.cdc.gov/museum/timeline/covid19.html Accessed August 28, 2022.
- 2. Substance Abuse and Mental Health Services Administration. Double Jeopardy: COVID-19 and Behavioral Health Disparities for Black and Latino Communities in the U.S. 2020. https://www.samhsa.gov/sites/default/files/covid19-behavioral-health-disparities-black-latino-communities.pdf Accessed August 18, 2022.
- 3. Centers for Disease Control and Prevention. Risk for COVID-19 Infection, Hospitalization, and Death By Race/Ethnicity. 2022 https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html#print Accessed August 28, 2022.
- 4. Louis-Jean J, Cenat K, Njoku CV, Angelo J, Sanon D. Coronavirus (COVID-19) and racial disparities: a perspective analysis. J Racial Ethn Health Disparities. 2020;7(6):1039-1045
- 5. Alcendor DJ. Racial disparities-associated covid-19 mortality among minority populations in the US. J Clin Med. 2020;9(8).
- 6. Muñoz-Price LS, Nattinger AB, Rivera F, et al. Racial disparities in incidence and outcomes among patients with COVID-19. JAMA Network Open. 2020;3(9)
- 7. Rogers TN, Rogers CR, VanSant-Webb E, Gu LY, Yan B, Qeadan F. Racial Disparities in COVID-19 Mortality Among Essential Workers in the United States. World MedHealth Policy. 2020;12(3):311-327



References

- 8. Dalsania AK, Fastiggi MJ, Kahlam A, et al. The relationship between social determinants of health and racial disparities in COVID-19 mortality. J Racial Ethn Health Disparities. 2022;9(1):288-295.
- 9. Wang QQ, Kaelber DC, Xu R, Volkow ND. COVID-19 risk and outcomes in patients with substance use disorders: analyses from electronic health records in the United States. Mol Psychiatry. 2021;26(1):30-39.
- 10. Mistler CB, Sullivan MC, Copenhaver MM, et al. Differential impacts of COVID-19 across racial-ethnic identities in persons with opioid use disorder. J Subst Abuse Treat. 2021;129:108387.
- 11. Goedel WC, Shapiro A, Cerda M, Tsai JW, Hadland SE, Marshall BDL. Association of racial/ethnic segregation with treatment capacity for opioid use disorder in counties in the United States. JAMA Netw Open. 2020;3(4):e203711.
- 12. Lagisetty PA, Ross R, Bohnert A, Clay M, Maust DT. Buprenorphine treatment divide by race/ethnicity and payment. JAMA Psychiatry. 2019;76(9):979.



References

- 13. Williams EC, Gupta S, Rubinsky AD, et al. Variation in receipt of pharmacotherapy for alcohol use disorders across racial/ethnic groups: A national study in the U.S. Veterans Health Administration. Drug Alcohol Depend. 2017;178:527-533
- 14. Adepoju OE, Chae M, Ojinnaka CO, Shetty S, Angelocci T. Utilization Gaps During the COVID-19 Pandemic: Racial and Ethnic Disparities in Telemedicine Uptake in Federally Qualified Health Center Clinics. JGIM. 2022;37(5): 1191-1197
- 15. Yang J, Landrum MB, Zhou L, Busch AB. Disparities in outpatient visits for mental health and/or substance use disorders during the COVID surge and partial reopening in Massachusetts. Genl Hosp Psychiatry. 2020;67:100-106
- Rosales R, Janssen T, Yermash J, et al. Persons from racial and ethnic minority groups receiving medication for opioid use disorder experienced increased difficulty accessing harm reduction services during COVID-19. J Subst Abuse Treat. 2022;132:108648.
- 17. Friedman J, Hansen H, Bluthenthal RN, Harawa N, Jordan A, Beletsky L. Growing racial/ethnic disparities in overdose mortality before and during the COVID-19 pandemic in California. Prev Med. 2021;153:106845

