

Arizona Public Health Association Resolution:

Structural Racism is a Public Health Crisis: Opportunities for Policy Interventions

Effective date: October 2023

Abstract:

Structural racism creates variations in population health outcomes. Structural racism operates through economic, educational, criminal justice, environmental and health policy levers to create a legacy of inequities that can have long lasting impacts, even after the policies themselves are changed. Policies and procedures that perpetuate racial inequities continue to exacerbate existing poor health outcomes and worsen quality of life for people belonging to marginalized racial and ethnic groups. The current research goes as far as to point to a physiological basis for health disparities related to increased and sustained stress termed “weathering.”

Arizona is home to Native Americans, Latinos and Latinas, Asian American & Native Hawaiian Pacific Islanders, Black/African-Americans, people who are refugees, immigrant, and migrant workers (RIM) and other people of color who have historically suffered the health impacts of structural racism. By acknowledging this ongoing injustice, we begin the work of promoting equity within our education, criminal justice, housing, and health systems.

Relationship to Existing AzPHA Policy Statements: None prior

Problem Statement:

Bailey et al. defines structural racism in a 2017 Lancet article as “the totality of ways in which societies foster racial discrimination through mutually reinforcing systems” which “in turn reinforce discriminatory beliefs, values, and distribution of resources.”^{1,2} Racism is not merely the consequence of discrete bad acts perpetrated by individuals, but follows as the often foreseeable, if sometimes unintended, consequence of patterns of societal choices. We understand that structural racism continues to be integrated into far reaching social structures affecting healthcare, criminal justice, education, housing, and other resources.

The result of structural racism includes profound public health inequities. “Black Americans are disproportionately affected by poverty, a fallible public school system, unsafe neighborhoods, food deserts, mass incarceration, police brutality, maternal and infant mortality, obesity, and chronic health conditions, to name a few.”^{2,3} “Arizona is home to a large and diverse population of Latinos and Latinas. Although found to have better health outcomes than whites for most analyzed health factors, despite facing worse socioeconomic barriers...they [Hispanics] had much higher death rates from diabetes, chronic liver disease/cirrhosis, and homicide, and a higher prevalence of obesity.”⁴⁰

Unique to Arizona are 22 Federally recognized Tribal Nations as well as additional Native American tribes, who thus far are not federally recognized, throughout the state. “Compared with other

racial/ethnic groups, American Indians/Alaska Natives (AI/AN) have a lower life expectancy, lower quality of life, and are disproportionately affected by many chronic conditions.”^{4, 5}

Asian American and Pacific Islanders are the fastest growing minority in the US according to 2020 US census data, growing by 81% between 2000 and 2019.³⁵ In Arizona, the Asian American and Pacific Islander (AAPI) population is one of the fastest growing minority groups in Arizona, showing close to a 90% increase from 2000 to 2010.⁴⁴

AAPI community members, particularly refugees who are eligible for health benefits such as Arizona Medicaid (AHCCCS) report barriers enrolling for the program, barring them from access to needed healthcare.³⁶ These communities also experience barriers to obtaining in-language health information, such as in-language vaccine information, as public health organizations and other health institutions fail to invest in the spectrum of languages represented in the AAPI community. The absence of disaggregated data results in the needs of these communities being overlooked, to the point of invisibility.³⁷

Health System: The COVID-19 pandemic has exposed long-standing inequities in health-care access, utilization, and quality at the health-care system, provider, and individual levels.^{1,18} “As of August 18, 2020, the national COVID-19 mortality rate for Black Americans was 2.1 times higher than that of Whites, and hospitalization rates for Latinos were 4.6 times that of Whites.”¹⁷ When it comes to preventive screenings, “AIs and Latinos had lower incidence rates of screening for detectable cancers than Non-Hispanic Whites (NHW),”⁹ leading to “lower survival rates for common cancers than NHWs”^{10,11} as they “are more likely to be diagnosed with advanced stage cancer than NHWs.”^{9,12, 13; 14, 15}

In regard to mental healthcare, large disparities exist in access to care based on economic status. In addition, provider-related factors and context of therapy can create barriers to effective care for people from ethnic and racial minorities resulting in “mental health disparities between Arizona Whites and Hispanics, which should be addressed via culturally- and linguistically tailored mental health care.”¹⁶

Law Enforcement and Criminal Justice System: According to Arizona Department of Correction, Rehabilitation & Reentry statistics, Hispanic, Black, and Native American people are disproportionately represented in Arizona’s prison population⁴⁶, at risk for increasing and complex medical needs as they enter the criminal justice system. Incarceration can disrupt health care access through discontinuity in coverage (for example, through suspension of Medicaid or other insurance coverage).

Nationally, the annual rate of incarceration of Black men is 3.8–10.5 times greater than that of White men, across all age groups.”^{1, 26} “Rates of many chronic diseases in US jails and prisons are more than double of those in the general population, respectively—diabetes (5.0% vs 2.4%), chronic respiratory conditions (e.g., chronic obstructive pulmonary disease, 34.1% vs 19.2%), and liver disease (10% vs 0.6%)¹⁹. Similarly, the rates of communicable diseases, such as hepatitis C, HIV, and tuberculosis^{20,21}, are higher in incarcerated populations (e.g., 3.5% vs 0.4% for HIV among 25-34-year-olds). Women²², ethnic minorities²³, and older adults²⁴ are considered particularly at-risk for poor health outcomes in the jail system.”²⁵

Immigration: Immigrants of many backgrounds are subject to systemic racism prior to and after obtaining citizenship, as immigrants are afforded, “residence in low-resource communities, low SEP [socioeconomic position], the social construction of marked cultural identities, and institutional patterns

of unequal treatment, all of which contribute to health disparities.”^{27, 28} “[T]he strength of the association between discrimination and health among immigrants appears to vary both by length of time in the United States and age at migration.”²⁸ In addition to immigrants, “Native Americans and other people of color in the USA—including Latinx, Asian Americans, and Pacific Islanders—have also been the target of health-harming racial discrimination, combined with anti-immigrant and religious (e.g., anti-Muslim) discrimination.”^{1,30}

Education and Economics: Various policies historically and presently make it hard for persons of color to own homes in many geographic areas. Access to quality education, which is often dependent on tax revenues from more affluent communities, is often out-of-reach to people of color, leading to educational and vocational disparities. “In one study that used identical resumé, which differed only in the name of the applicant, hiring managers called back those with traditionally white names (e.g., Brad or Emily) 50% more often than those with traditionally black names” (e.g., Jamal or Lakisha).²⁹ In another study that used mailed resumé, “white applicants with criminal records were called back more often than Black applicants without criminal records.”^{1, 29}

Disparities in education and employment practices have a spillover effect in other areas, such as access to health care. Due in part to education and employment disparities, many people of color are underrepresented in the health care professions. Studies indicate that communities of color receive better care when care is delivered by providers who share their racial and cultural identity.⁴² Black Americans represent nearly 13% of the US population yet comprise only 5% of US medical professionals.⁴³

Firearm Violence:

Firearm violence remains a pervasive problem. In 2020, nonfatal and fatal firearm injuries represented over 39,000 years of potential life lost before age 75 and a CDC estimated cost of \$13.1 billion in Arizona alone. Firearm violence is one of the leading causes of death among both Arizonan adults (11th) and children aged 1-19 (2nd). Significant disparities by race/ethnicity exist in firearm death; in Arizona non-Hispanic blacks had the highest rate (20.7) of firearm death during the 1999-2020 period and rates for Hispanic (any race) were almost twice the U.S rates (12.3 for AZ and 6.7 for U.S). Firearm mortality rates among states with the strongest gun laws are generally lower versus those with the weakest gun laws; however, this difference narrows for Black people. As of 2023, Arizona had implemented only seven of 50 Foundational gun laws, according to Everytown Research and Policy.⁴⁵

Environmental/ Climate Change:

Climate change and other environmental factors have a disproportionate impact on underserved communities nationally, and we, along with public health systems in Arizona, acknowledge their contribution to health disparities in Arizona.^{38, 41}

In a 2021 Environmental Protection Agency report, people of color breathe more particulate air pollution on average, a finding that holds across income levels and regions of the US. The findings expand a body of evidence showing that African Americans, Hispanics, Asians, and other people of color are disproportionately exposed to a regulated air pollutant called fine particulate matter (PM_{2.5}).⁴⁷

Evidence-Based Strategies to Address the Problem/ Action Steps:

To begin addressing the public health impacts of structural racism, access to equitable education and healthcare services is necessary. A coordinated and multidisciplinary federal, state, and local effort is indicated.”² We propose the following strategies to begin addressing structural racism in Arizona:

1. “Equitable, trust-based, community partnerships that espouse the principles of community-based participatory research (CBPR) and ensure accountability by healthcare and public health institutions in equitably representing the needs, voices, and priorities of vulnerable communities through Community Advisory Boards (CABs) and/or community expert work groups.”^{2, 33, 34}
2. Ensure ethno-cultural specificity in data collection methods, tracking and analysis, and achieve cross-cultural and linguistic equivalency in the intersectional approach to data collection and analysis.
3. “Culturally responsive public health approaches to reducing risk factors and chronic diseases are needed.”⁶
4. Intentionality of our framing and discussion of racial issues, [integration of the concept of intersectionality] into the health inequalities literature has been limited. This limitation is most noticeable in immigrant health research where the acculturation paradigm dominates and examinations of how immigrant health trajectories are shaped simultaneously by race, class, and gender-based systems of hierarchy are, by and large, absent.²⁸
5. “Policymakers should empower communities through housing, education, job generation, and crime-reduction programs and mount government and public support for large scale community revitalization initiatives and immigration reform.”^{1,2}
6. Allocate and invest resources into historically underserved communities including BIPOC communities to enable data collection and analysis, workforce development, resources such as translation and training that helps identify and address health disparities and their root causes.

AZPHA Resolution – October 2023

Whereas, AZPHA recognizes the interdependent nature of the many social, political, environmental, and economic factors that influence public health; and

Whereas, a mature and growing body of evidence consistently reveals disparities in health outcomes according to race and ethnicity; and

Whereas, the vast majority of health disparities cannot be explained by genetic differences based on race and ethnicity; and

Whereas, the origins of health disparities are often connected to long-standing inequities that are rooted in discriminatory policies, practices, and beliefs; and

Whereas, such policies, practices and beliefs create systems that explicitly and implicitly perpetuate inequitable distribution of resources based on race.

Therefore, be it resolved that the Arizona Public Health Association supports:

- The U.S. Centers for Disease Control and Prevention's (CDC's) recognition that racism is a public health crisis that significantly impacts the health, physical safety, and economic survival of millions of people of color throughout the United States.
- Approaches that make health equity central to each and every policy and/or legislative action in the state and policy decisions that advance a comprehensive public health response to racism by directly addressing racial inequities across the systems and domains that influence social determinants of health—especially for Blacks, Hispanics, Native Americans, Asian Americans, Native Hawaiian and Pacific Islanders and other people of color.
- Health systems that account for and seek to address health disparities that are driven by social and economic inequities. Solutions should be grounded by the strengths, experiences, and needs of the communities that face the greatest disparities and designed by intentionally seeking input from a culturally, racially, and ethnically diverse group of stakeholders.
- Intentional inclusion of the full range of cultural, racial, and demographic diversity in health needs assessments and health policy implementation.
- Investment into accumulating disaggregated data that helps identify, track and address health disparities amongst the diverse Arizona community.
- Increased allocation of resources towards translation/ in-languages services and materials in healthcare settings and investment in community-based organizations providing in-language outreach and engagement.
- Evidence-based policies that promote firearm safety and health equity.
- Evidence-based policies that promote climate justice.
- Evidence-based education about systemic racism, health disparities, their root causes, and potential solutions, for our members, for the healthcare workforce, for policy makers, governmental agencies and for the public.
- Improving the quality of healthcare delivery and continuity of coverage for Arizona's incarcerated persons.
- Promotion of diversity, equity, and inclusion in the workplace, particularly throughout the healthcare and public health workforce, to include representation in positions of leadership and to diversify the healthcare workforce, especially physicians.
- Adoption of anti-racism policies, land and labor acknowledgments, and specific actions against defined benchmarks in furtherance of those statements by Arizona healthcare institutions.

References:

1. Bailey ZD, Krieger N, Agénor M, Graves J, Linos N, Bassett MT. Structural racism, and health inequities in the USA: Evidence and interventions. *Lancet*. 2017;389(10077):1453-1463. Accessed May 25, 2021. doi: 10.1016/S0140-6736(17)30569-X.
2. Ce J, Ns A, Cm O, S W, E M, Dv C. Racism, COVID-19, and health inequity in the USA: A call to action. *Journal of racial and ethnic health disparities*. 2020. <https://pubmed-ncbi-nlm-nih-gov.proxy1.library.jhu.edu/33197038/>. Accessed May 20, 2021. doi: 10.1007/s40615-020-00928-y.
3. Laurencin CT, McClinton A. The COVID-19 pandemic: A call to action to identify and address racial and ethnic disparities. *J Racial Ethn Health Disparities*. 2020;7(3):398-402. Accessed May 25, 2021. doi: 10.1007/s40615-020-00756-0.

4. ARIAS E, JIAQUAN XU, JIM MA. Period life tables for the non-Hispanic American Indian and Alaska Native population, 2007–2009. *American journal of public health (1971)*. 2014;104(S3):S312-S319. <https://www.ncbi.nlm.nih.gov/pubmed/24754553>. doi: 10.2105/AJPH.2013.301635.
5. COBB N, ESPEY D, KING J. Health behaviors and risk factors among American Indians and Alaska natives, 2000–2010. *American journal of public health (1971)*. 2014;104(S3):S481-S489. <https://www.ncbi.nlm.nih.gov/pubmed/24754662>. doi: 10.2105/AJPH.2014.301879.
6. M A, M S, F X, et al. Health disparities among American Indians/Alaska natives - Arizona, 2017. *MMWR. Morbidity and mortality weekly report*. 2018;67(47). <https://pubmed-ncbi-nlm-nih-gov.proxy1.library.jhu.edu/30496159/>. Accessed May 20, 2021. doi: 10.15585/mmwr.mm6747a4.
7. Allan N. Williams MPH, Ph.D., Will Humble, MPH. Rates and trends of opioid overdose deaths, arizona, 1999-2019: Implications for public health policy. *Arizona Public Health Association*. 2021:1-18. <https://static1.squarespace.com/static/56ec8d2562cd9413e14c0019/t/60327ddae9e4fb27eab49484/1613921755715/Final+Final+AZPHA+Opioid+Report+Feb+21+2021.pdf>.
8. Williams DR, Collins C. Racial residential segregation: A fundamental cause of racial disparities in health. *Public health reports (1974)*. 2001;116(5):404-416. <https://journals.sagepub.com/doi/full/10.1093/phr/116.5.404>. doi: 10.1093/phr/116.5.404.
9. K B, Fc G, Al E, Do G, J G, Ra K. Patterns of cancer related health disparities in arizona. *Cancer health disparities*. 2019;3. <https://pubmed-ncbi-nlm-nih-gov.proxy1.library.jhu.edu/31938767/>. Accessed May 20, 2021.
10. Pinheiro PS, Sherman RL, Trapido EJ, et al. Cancer incidence in first generation U.S. Hispanics: Cubans, Mexicans, Puerto Ricans, and new Latinos. *Cancer Epidemiol Biomarkers Prev*. 2009;18(8):2162-2169. Accessed May 25, 2021.
11. White MC, Espey DK, Swan J, Wiggins CL, Ehemann C, Kaur JS. Disparities in cancer mortality and incidence among American Indians and Alaska natives in the United States. *Am J Public Health*. 2014;104 Suppl 3:377. Accessed May 25, 2021. doi: 10.2105/AJPH.2013.301673.
12. Clegg LX, Li FP, Hankey BF, Chu K, Edwards BK. Cancer survival among US whites and minorities: A SEER (surveillance, epidemiology, and end results) program population-based study. *Arch Intern Med*. 2002;162(17):1985-1993. Accessed May 25, 2021. doi: 10.1001/archinte.162.17.1985.
13. Hoffman RM, Espey DK, Rhyne RL, et al. Colorectal cancer incidence and mortality disparities in new mexico. *J Cancer Epidemiol*. 2014;2014:239619. Accessed May 25, 2021. doi: 10.1155/2014/239619.
14. Hoffman RM, Gilliland FD, Eley JW, et al. Racial and ethnic differences in advanced-stage prostate cancer: The prostate cancer outcomes study. *J Natl Cancer Inst*. 2001;93(5):388-395. Accessed May 25, 2021. doi: 10.1093/jnci/93.5.388.
15. Iqbal J, Ginsburg O, Rochon PA, Sun P, Narod SA. Differences in breast cancer stage at diagnosis and cancer-specific survival by race and ethnicity in the United States. *JAMA*. 2015;313(2):165-173. Accessed May 25, 2021. doi: 10.1001/jama.2014.17322.

16. La V, Ba L. Racial/ethnic and socioeconomic disparities in mental health in arizona. *Frontiers in public health*. 2015;3. <https://pubmed-ncbi-nlm-nih-gov.proxy1.library.jhu.edu/26191523/>. Accessed May 20, 2021. doi: 10.3389/fpubh.2015.00170.
17. Cases, data, and surveillance. Centers for Disease Control and Prevention Web site. <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html>. Updated 2020. Accessed May 25, 2021.
18. White K, Haas JS, Williams DR. Elucidating the role of place in health care disparities: The example of racial/ethnic residential segregation. *Health Serv Res*. 2012;47(3 Pt 2):1278-1299. Accessed May 26, 2021. doi: 10.1111/j.1475-6773.2012.01410.x.
19. Bai JR, Befus M, Mukherjee DV, Lowy FD, Larson EL. Prevalence and predictors of chronic health conditions of inmates newly admitted to maximum security prisons. *J Correct Health Care*. 2015;21(3):255-264. Accessed May 25, 2021. doi: 10.1177/1078345815587510.
20. Binswanger IA, Redmond N, Steiner JF, Hicks LS. Health disparities and the criminal justice system: An agenda for further research and action. *J Urban Health*. 2012;89(1):98-107. Accessed May 25, 2021. doi: 10.1007/s11524-011-9614-1.
21. Vaughn MG, Salas-wright CP, Delisi M, Piquero AR. Health associations of drug-involved and criminal-justice-involved adults in the United States. *Criminal Justice and Behavior*. 2014;41(3):318-336. <https://doi.org/10.1177/0093854813504405>. Accessed May 25, 2021. doi: 10.1177/0093854813504405.
22. Hoynes HW, Page ME, Stevens AH. Poverty in america: Trends and explanations. *Journal of Economic Perspectives*. 2006;20(1):47-68. <https://www.aeaweb.org/articles?id=10.1257/089533006776526102>. Accessed May 25, 2021. doi: 10.1257/089533006776526102.
23. Kaba F, Solimo A, Graves J, et al. Disparities in mental health referral and diagnosis in the new york city jail mental health service. *American journal of public health (1971)*. 2015;105(9):1911-1916. <https://www.ncbi.nlm.nih.gov/pubmed/26180985>. doi: 10.2105/AJPH.2015.302699.
24. Chodos AH, Ahalt C, Cenzer IS, Myers J, Goldenson J, Williams BA. Older jail inmates and community acute care use. *Am J Public Health*. 2014;104(9):1728-1733. Accessed May 25, 2021. doi: 10.2105/AJPH.2014.301952.
25. Trotter li RT, Camplain R, Eaves ER, et al. Health disparities and converging epidemics in jail populations: Protocol for a mixed-methods study. *JMIR Res Protoc*. 2018;7(10). doi: 10.2196/10337.
26. Carson EA. Bureau of justice statistics (BJS) - prisoners in 2014. Bureau of Justice Statistics Web site. <https://www.bjs.gov/index.cfm?ty=pbdetail&iid=5387>. Updated 2015. Accessed May 26, 2021.
27. Zambrana RE, Carter-Pokras O. Role of acculturation research in advancing science and practice in reducing health care disparities among latinos. *Am J Public Health*. 2010;100(1):18-23. Accessed May 26, 2021. doi: 10.2105/AJPH.2008.138826.

28. Ea V, Py M, S A. More than culture: Structural racism, intersectionality theory, and immigrant health. *Social science & medicine (1982)*. 2012;75(12). <https://pubmed.ncbi.nlm.nih.gov.proxy1.library.jhu.edu/22386617/>. Accessed May 26, 2021. doi: 10.1016/j.socscimed.2011.12.037.
29. Pager D, Shepherd H. The sociology of discrimination: Racial discrimination in employment, housing, credit, and consumer markets. *Annual Review of Sociology*. 2008;34(1):181-209. <https://doi.org/10.1146/annurev.soc.33.040406.131740>. Accessed May 26, 2021. doi: 10.1146/annurev.soc.33.040406.131740.
30. Omi M, Winant H. *Racial formation in the United States*. ; 2014. <https://www.routledge.com/Racial-Formation-in-the-United-States/Omi-Winant/p/book/9780415520317>. Accessed May 26, 2021.
31. Poma PA. Race/ethnicity concordance between patients and physicians. *J Natl Med Assoc*. 2017;109(1):6-8. Accessed May 25, 2021. doi: 10.1016/j.jnma.2016.12.002.
32. Garces LM, Mickey-Pabello D. Racial diversity in the medical profession: The impact of affirmative action bans on underrepresented student of color matriculation in medical schools. *J Higher Educ*. 2015;86(2):264-294. Accessed May 25, 2021. doi: 10.1353/jhe.2015.0009.
33. Crouse Quinn S. Crisis and emergency risk communication in a pandemic: A model for building capacity and resilience of minority communities. *Health Promot Pract*. 2008;9(4 Suppl):18S-25S. Accessed May 25, 2021. doi: 10.1177/1524839908324022.
34. Wieland ML, Njeru JW, Alahdab F, Doubeni CA, Sia IG. Community-engaged approaches for minority recruitment into clinical research: A scoping review of the literature. *Mayo Clin Proc*. 2021;96(3):733-743. Accessed May 25, 2021. doi: 10.1016/j.mayocp.2020.03.028.
35. Budiman Abby, Ruiz Neil G.: Asian Americans are the fastest-growing racial or ethnic group in the U.S. by Abby Budiman and Neil G. Ruiz Pew Research Center: April 9, 2021 <https://www.pewresearch.org/short-reads/2021/04/09/asian-americans-are-the-fastest-growing-racial-or-ethnic-group-in-the-u-s/> Accessed Sep 7, 2023
36. Bregel Emily: AHCCCS wrongly restricted coverage for refugees, immigrants *Tucson Daily* Jul 28, 2016 Updated Jul 29, 2016 https://tucson.com/news/local/complaint-ahcccs-wrongly-restricted-coverage-for-refugees-immigrants/article_f2e90927-ace0-5622-a481-664b80897bbf.html Accessed Sep 7, 2023
37. Fang Jenn: Disaggregation is essential to achieve data justice for Asian Americans. Treating Asian Americans as “the same” within data leaves them vulnerable to social and political exclusion” <https://prismreports.org/2022/05/02/disaggregation-data-justice-asian-americans/> Accessed Sep 7, 2023
38. Ebi Kristie L., Hess Jeremy J.: Health Risks Due To Climate Change: Inequity In Causes And Consequences. *Health Affairs (Millwood)*. 2020. 39: 2056–2062. doi:10.1377/hlthaff.2020.01125.
39. Reagor Catherine. Taros, Megan 'Institutionalized racism of the past': Discriminatory housing practices resound in south Phoenix today: Arizona Republic May 7, 2022

40. Dominguez K, Penman-Aguilar A, Chang M, et al; Centers for Disease Control and Prevention. Vital signs: leading causes of death, prevalence of diseases and risk factors, and use of health services among Hispanics in the United States—2009-2013. *MMWR Morb Mortal Wkly Rep.* 2015;64(17):469-478
41. *Bridging Climate Change and Public Health*. Bridging Climate Change and Public Health | Maricopa County, AZ. (n.d.). <https://www.maricopa.gov/4640/Climate-Change-and-Public-Health>
42. Alsan, M., Garrick, O., & Graziani, G. (2018, July 13). *Does diversity matter for health? experimental evidence from Oakland*. SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3210441
43. Ly, D. P. (2021, April 19). *Historical trends in the representativeness and incomes of black physicians, 1900–2018 - Journal of general internal medicine*. SpringerLink. <https://link.springer.com/article/10.1007/s11606-021-06745-1>
44. The State of Asian Americans & Pacific Islanders in Arizona, Volume 2: Health Risks, Disparities and Community Responses, 2011. Link to report here: <https://sirc.asu.edu/sites/default/files/%5Bterm%3Aname%5D/%5Bnode%3Acreate%3Acustom%3AYm%5D/health-risks-disparities-and-community-responses.pdf>
45. Jackman, J., & Williams, A. N. (2023b, March 9). *Gun Violence in Arizona Data to Inform Prevention Policies*. Arizona Public Health Association. [https://azpha.wildapricot.org/resources/Final Final - Gun_Violence_in_Arizona_-_Data to Inform Prevention Policies March 9 2023.pdf](https://azpha.wildapricot.org/resources/Final%20Final%20Gun_Violence_in_Arizona_-_Data%20to%20Inform%20Prevention%20Policies%20March%209%202023.pdf)
46. July 2023 the Arizona Department - corrections.az.gov. (n.d.). <https://corrections.az.gov/sites/default/files/documents/reports/CAG/2023/July%202023%20CAG.pdf>
47. Tessum, C. W., Paoletta, D. A., Chambliss, S. E., Apte, J. S., Hill, J. D., & Marshall, J. D. (2021). **PM_{2.5} pollutants disproportionately and systemically affect people of color in the United States**. *Science Advances*, 7(18), eabf4491.