Health care/services

Characterizing ED “Super-Utilizers” among Undocumented Immigrants in the Health Care Safety Net Ahalya Prakash* Ahalya Prakash, Annie Ro, Jung Min Choi,

Introduction: Approximately 10.2 million undocumented immigrants in the U.S. are not eligible for Medicaid, limiting their access to preventive care and increasing their reliance on emergency departments (ED). Programs such as My Health LA (MHLA) provide primary care to mostly undocumented adults in Los Angeles County, though structural barriers and delayed care persist, leading to severe or repeat ED visits. Identifying ED “super-users” is critical for optimizing healthcare resources and informing cost considerations as California expands Medi-Cal coverage to undocumented immigrants.

Data & Methods: ED utilization was examined using merged MHLA enrollment, Medi-Cal claims (MICRS), and electronic health record data from Los Angeles County Department of Health Services hospitals (2014–2023). The sample included 51,656 MHLA enrollees with ≥1 ED visit. ED use was categorized as low (0–3 visits/year), high (4–9), or super (≥10).

Results: ED users had a mean age of 46 years and were predominantly female (61.4%), Spanish-speaking (91.1%), Hispanic (69.6%), and from Mexico (68.7%), Guatemala (11.6%), or El Salvador (9.8%); most were not homeless (69.6%; 1.5% homeless). Patients averaged 8.4 primary care visits, 1.6 ED visits, and 4.2 years of MHLA enrollment. Overall, 89.7% were low utilizers, 9.57% high, and 0.69% super-utilizers. Super-utilizers were older (49 vs 48.5 vs 45.6; **$F=338.86, p<0.0001$**), more likely male (57.8% vs 44.1% vs 37.8%; **$\chi^2=292.02, p<0.0001$**), had more primary care visits (5.03 vs 4.78 vs 4.14; **$F=515.27, p<0.0001$**), but shorter MHLA enrollment (3.5 vs 3.8 vs 4.23 years; **$F=211.43, p<0.0001$**). Multinomial regression will examine predictors of ED utilization controlling for relevant covariates.

Conclusion: Although <1% of patients were super-utilizers, they accounted for a disproportionate share of ED visits. Characterizing these high utilizers may help inform targeted interventions and improve care continuity within safety-net systems as Medi-Cal expands.

Health equity

The Intersecting Association of Speaking a Non-Dominant Language and Lower Healthcare Access on Self-Reported Depression Among U.S. Adults: A Cross-Sectional Study using NHANES Data (2015-March 2020) Vincenzo Cornacchione* Vincenzo Cornacchione, Corey Linver, Jessica Kilinski, Kelly Reavis, Deborah Karasek,

Background: Depression remains a leading public health concern in the U.S., with existing inequities in diagnosis and treatment by race, ethnicity, and language spoken. Mental health services are limited by healthcare access and, when access is available, multilingual individuals face systemic challenges in navigating an English-centric healthcare system. The joint impact of language preference and healthcare access on depression prevalence remains unexplored.

Objective: We examined the independent and joint associations between language preference and healthcare access on moderate-to-severe depression.

Methods: We conducted a cross-sectional analysis among non-institutionalized adults aged 20 and older living in the US using nationally representative data from NHANES 2015–March 2020 (n = 11,049). Depression was assessed using the PHQ-9, and we measured healthcare access using a three-level categorical measure (adequately insured, inadequately insured, and uninsured) based on Penchansky and Thomas's Theory of Access. Multivariable logistic regression models adjusted for individual sociodemographic confounders and were used to estimate odds ratios (ORs), including interaction terms to assess joint effects.

Results: Among those who were adequately insured, odds of moderate-to-severe depression were slightly lower when speaking a non-dominant language [aOR = 0.89 (95% CI: 0.52, 0.89)], compared to those speaking a dominant language. Conversely, moderate-to-severe depression odds increased among dominant language speakers who were inadequately insured [aOR = 1.56 (95% CI: 1.11, 2.18)] or uninsured [aOR = 1.17 (95% CI: 0.90, 1.52)]. Significant interaction effects were observed ($p < 0.05$), where individuals who spoke a non-dominant language had significantly lower odds of moderate to severe depression when inadequately insured [aOR = 0.48 (95% CI: 0.24, 0.95)] and uninsured [aOR = 0.49 (95% CI: 0.26, 0.91)], compared to adequately insured, dominant-language speakers.

Conclusion: Contrary to dominant narratives, speaking a non-dominant language was associated with lower odds of moderate-to-severe depression, particularly among those with low healthcare access. These findings challenge deficit-based framings of multilingual populations and underscore the importance of intersectional approaches to mental health disparities.

Migration

Does neighborhood matter? Assessing the role of neighborhood context on health insurance status among South Asians in California Angubeen Khan* Angubeen Khan, Jessica Gipson, Min Zhou, Randall Kuhn,

Background: Neighborhood context is critical to healthcare access, especially among immigrants. Despite having prominent ethnic neighborhoods in the U.S, no studies examine how the neighborhood affects South Asian health access. This study examined how neighborhood context was associated with health insurance status among South Asian Americans.

Methods: The study used the 2020 American Community Survey. The sample included Californians aged 18 years and older (N=1,444,781). Neighborhood context was assessed using aggregate co-ethnic density (i.e. percent South Asian in a neighborhood), foreign-born density, and socioeconomic status (i.e. percent college-educated and home ownership and median household income). A theoretically informed neighborhood typology was created using these measures. Weighted multivariate logistic regression models were used to examine the role of neighborhood context (as individual measures and the typology) on health insurance status. Wald tests were used to assess if neighborhood context was an important predictor of health insurance status. Analyses were conducted in STATA 18.

Results: Compared to Whites, South Asians had higher odds of being insured ($p<0.001$) and lower odds of having private health insurance ($p<0.001$). Suburban residence and high co-ethnic density significantly increased the odds of any health insurance among South Asians ($p<0.05$) and living in a central city and high neighborhood-level socioeconomic status increased odds of private health insurance ($p<0.05$). Wald Tests indicated that select neighborhood factors were better predictors of private health insurance than the neighborhood typology.

Discussion: The study demonstrated that the neighborhood, especially factors like co-ethnic density and neighborhood-level socioeconomic status, can influence health access. Researchers should continue to assess the role of the neighborhood when examining health disparities in the South Asian immigrant community.

Migration

Impact of 2018 Immigration Policy Shifts on Hispanic HIV Incidence Across Divergent Local Policy Environments in the United States Jordan Herring* Jordan Herring, Carlos Rodriguez-Diaz,

Background and Objective: In 2018, proposed public charge rule changes—amid intensified anti-immigrant rhetoric and heterogeneous local immigration enforcement—were widely publicized and have been linked to reduced health care access among Hispanic populations, potentially increasing HIV risk, yet little is known about how local policy context shapes these health impacts. This study examined how shifts in immigration policy and rhetoric post-2018 affected Hispanic HIV incidence rates across anti-sanctuary and sanctuary counties in the United States.

Methods: County-level HIV incidence rates for 2010-2022 were from AIDSVu. Counties were sorted into anti-sanctuary counties, sanctuary counties, or baseline counties using a county-level policy scoring system from the Immigrant Legal Resource Center. Sanctuary counties aimed to limit cooperation with federal immigration enforcement, hypothesized to protect and encourage health care access among Hispanic populations. Conversely, anti–sanctuary counties, a relatively new phenomenon, aimed to increase cooperation with federal enforcement dramatically, hypothesized to deter health care access and usage through amplifying federal immigration policy and enforcement among Hispanic populations. A triple difference-in-differences (DDD) model estimated changes in Hispanic HIV incidence rates after 2018 by county type using White HIV incidence rates as a comparison group. Black HIV incidence rates were included as placebo tests.

Findings: DDD models estimated a statistically significant 17.7% increase in HIV incidence rates among Hispanic populations in anti-sanctuary counties relative to baseline counties after 2018. Estimates for Black populations were not statistically significant, and point estimates were negative, opposite the direction for Hispanic populations, supporting the interpretation that post-2018 immigration policy shifts uniquely affected Hispanic populations.

Conclusion: Results from this study indicate that immigration policy can work against public health policy to end the HIV epidemic. Hispanic HIV incidence rates may have increased due to fear and chilling effects stemming from immigration policy, impeding the progress to end the HIV epidemic in the United States. Implications extend beyond HIV, indicating that anti-immigrant policies could lead to deterioration in a wide range of health outcomes.

Life-course/developmental

The Impact of Early Adversities on Sexual Assault Risk in Emerging Adulthood Amongst Young Women: A Longitudinal Analysis Using the Future of Families Survey Diana Augustin* Diana Augustin,

This study examines the impact of early life adversities—specifically parental incarceration and homelessness during adolescence—on the risk of experiencing sexual victimization in emerging adulthood among vulnerable young women. We operationalize adolescent homelessness as youth living “doubled-up” without paying rent or experiencing literal homelessness. Both adolescent homelessness and parental incarceration are critical experiences that may disrupt typical developmental trajectories. The research question guiding this study is: How do experiences of parental incarceration, homelessness, and related adversities in adolescence separately and jointly influence the risk of sexual assault in emerging adulthood? The study is grounded in the Life Course Perspective, which posits that early adversities can disrupt developmental pathways and increase vulnerability to future harm, including sexual victimization. Using Waves 6 and 7 of the *Future of Families and Child Well-being Study data*, this longitudinal analysis tracks participants from adolescence into emerging adulthood, focusing on young women’s experiences of sexual assault. The primary independent variables are parental incarceration and homelessness during adolescence, with sexual assault in emerging adulthood as the dependent variable. Control variables include family poverty, mental health history, intimate partner relationships, substance use history, and material hardship. We hypothesize significant associations between both parental incarceration and homelessness in adolescence with increased risk of sexual assault in adulthood. Additionally, we expect that socioeconomic status and material hardship will moderate these relationships. The findings will contribute to understanding the pathways through which early adversities affect later outcomes, especially sexual violence, and will have implications for policy and practice. Interventions for at-risk youth, particularly those experiencing parental incarceration and homelessness, will be crucial in mitigating the long-term risks of sexual victimization.

Life-course/developmental

School Policy Punitiveness and Midlife Cardiometabolic Risk: Gender, Race, and Health in the Zero Tolerance Era Sylvie Tuder* Sylvie Tuder,

In the US, youth racialized as Black (“Black”) are sorted into disproportionately punitive schools and punished at disproportionate rates than their peers racialized as White (“White”). Black-White disparities in school punishment are larger for girls than for boys. Research shows that exclusionary school discipline harms numerous social and health outcomes, and increasingly draws links between school socioeconomic and racial context and health. Still, little is known about whether school policy punitiveness is associated with stress-related physiological dysregulation at the intersection of racialized social status and gender. Using nationally representative data from Waves I and VI of the National Longitudinal Study of Adolescent to Adult Health (N = 2,768) and an intersectional, life course approach, I ask: (1) is exposure to school policy punitiveness during adolescence associated with midlife (ages 39-51) cardiometabolic risk? and (2) does this association vary by race and gender for Black and White adults?

I create a latent construct of school policy punitiveness (SPP) via confirmatory factor analysis. Negative binomial regressions suggest that exposure to higher levels of SPP in adolescence is associated with higher cardiometabolic risk at midlife for Black women [Count Ratio = 1.10, 95% CI = [0.99, 1.22]) but not for Black men, White women, or White men. Next steps include refining the SPP measurement models; multiple imputation with chained equations; considering effect modifiers (i.e., skin tone or sexual identity); and exploring mediators. I aim to shed new light on the life course health implications of school policy, an overlooked yet contested political terrain. Finalized results may contribute to a growing evidence base arguing that abolishing zero tolerance in education is a population health imperative. A world with zero tolerance for educational injustice is one where all adolescents, and particularly Black girls, live long and healthy lives.

Life-course/developmental

Long Reach of Adverse Childhood Experiences on Health among Working-Aged Adults Aged 25-64 in the United States: The Role of State of Residence Kent Jason Cheng* Kent Jason Cheng,

Abstract:
Adverse childhood experiences (ACEs) are well-established determinants of health across the life course, yet less is known about how their long-term effects vary across state policy contexts. This study examines whether the association between ACEs and adult health differs by U.S. state of residence. Data come from the 2024 Behavioral Risk Factor Surveillance System (BRFSS), restricted to adults aged 25–64 in seven states that administered the ACE module (FL, GA, HI, IA, NV, ND, VA). The outcome is self-rated physical health, dichotomized as fair/poor versus good/very good/excellent. Key predictors include ACE exposure (≥1 vs. none; ≥4 vs. <4). Logistic regression models are estimated separately by state, adjusting for age, gender, and race/ethnicity.

Preliminary results show a graded relationship between ACEs and health: adults with ≥1 ACE have 68% higher odds of reporting fair/poor health, and those with ≥4 ACEs have more than twice the odds compared to those with fewer or no ACEs. Importantly, these associations vary across states. The adverse health effects of ACEs are more pronounced in conservative-leaning states, while more liberal policy contexts appear to attenuate these relationships.

These findings suggest that the consequences of childhood adversity are not fixed but are shaped by broader policy environments. State-level differences in social protections and public health infrastructures may either exacerbate or buffer the long-term impacts of early-life disadvantage. Ongoing work will extend analyses to additional states and incorporate objective health measures.

Health equity

Social Spending and Population Health Across the Life Course: Cross-National Evidence
Susan Osayande* Susan Osayande, Thomas Fuller-Rowell,

Background: Understanding how national policy environments shape population health is central to advancing equitable health policy. While prior research suggests that social spending improves health outcomes, particularly in OECD countries, less is known about how these policy environments relate to population health across the life course and across socioeconomic groups in a broader global context. This study provides preliminary cross-national evidence linking national social spending to population health while examining socioeconomic and age-related patterns.

Methods: We utilized data from the 2023 Gallup World Poll (N = 141,126 individuals across 128 countries). Health was measured using the Personal Health Index (α = .77). Country-level social spending (% of GDP) was linked to individual survey responses. We used weighted regression and multilevel models to examine associations between national spending contexts, population health, socioeconomic position, and age.

Results: Substantial cross-national variation in health was observed, with country-level mean health averaging 67.4 (SD = 9.4; range = 37.9-91.2). A strong income gradient was evident: mean health increased from 60.7 in the lowest income quintile to 73.4 in the highest. Higher national social spending was associated with better population health (β = 0.30, p < .001). Health also declined significantly with age (β = -0.56 per year). Multilevel analyses indicate that social spending moderates age-related health decline: each additional unit of spending was associated with an estimated 2.7% reduction in the rate of age-related health decline.

Discussion: These preliminary findings suggest that national spending environments may influence both average population health and age-related health trajectories. Ongoing analyses will incorporate additional social policy indicators and institutional factors to better understand how policy environments shape cross-national health disparities across the life course.

Mental health/function

Deconstructing Race: Racial Identity Discordance and Mental Health Outcomes Fatima Fairfax* Fatima Fairfax,

There is a wealth of research that demonstrates racial disparities in US mental health outcomes. However, much of this work relies on self-reported race to measure racial identity. While self-reported race is one component of racial identity, how others perceive one's race is an important factor into a persons racialized experience. As such, considering a person's ascribed race, is crucial to better understanding the links between race and mental health outcomes. In this study, I explore how discordance between self-identified race and ascribed race is associated with mental health symptoms and treatment among adults who identify as Asian, Black, Hispanic, or Native American. I leverage nationally representative data from the 2023 BRFSS. I find that adults who experience discordance between their self-identified race and the race they believe they are ascribed have 28% increased odds of mental distress compared to those who are concordant. Racial discordance is also associated with significantly increased odds (OR = 2.03) of diagnosed depression. Furthermore, I find that this effect is not consistent across groups. In race stratified models, for adults who identify as Black or Asian, racial discordance has no significant association with increased mental distress. However, Hispanic and Native identifying adults have increased odds of mental distress if they experience racial discordance. Meanwhile, all adults except for self-identified Black adults who experience racial discordance have increased odds of being diagnosed with depression. These results demonstrate the importance of examining different facets of racial identity to better understand how race matters to mental health outcomes.

Mental health/function

Mental Health Disparities Within the U.S. Black Population: Heterogeneity in Prevalence and Treatment Utilization Across Black Ethnic Subgroups in the All of Us Research Program Harvey Nicholson* Harvey Nicholson, Nari Yoo, Nelson Jean Francois, Oluwatobi Alawode,

The Black population in the United States is becoming increasingly ethnically heterogeneous, making it important to examine ethnicity in the context of mental health. Prior work has explored within-group variation in mental health conditions among the Black population, but with less attention to African-origin populations, such as Nigerians who account for the largest Black African-origin population in the United States. Using All of Us Research Program data, this study estimates mental health condition prevalence and treatment rates across five Black ethnic groups: African American (n=92,181), Caribbean (n=2,347), Jamaican (n=1,667), Haitian (n=1,195), and Nigerian (n=1,067). We estimated adjusted prevalence of any mental illness (AMI), mood, anxiety, serious mental illness, and neurodevelopmental conditions using logistic regression with three nested models controlling for age, gender, socioeconomic factors, nativity, and insurance, with African Americans as the reference group. Prevalence varied substantially. Nigerian Americans had the highest AMI prevalence (13.1%), with significantly elevated odds relative to African Americans (9.7%), after full adjustment (OR=1.39, 95% CI: 1.15–1.67), driven by anxiety (OR=1.42) and neurodevelopmental conditions (OR=2.82). Haitian Americans had the lowest AMI prevalence (7.9%) and significantly reduced odds in the age- and gender-adjusted model (OR=0.80, 95% CI: 0.65–0.98). Among those with AMI, treatment rates ranged from 55% (Haitian Americans) to 68% (Caribbean Americans); Haitian Americans had significantly lower odds of treatment receipt than African Americans (OR=0.67, 95% CI: 0.45–0.99), with this pattern consistent but attenuating toward the null after full covariate adjustment (OR=0.68, 95% CI: 0.46–1.02). These findings demonstrate that aggregating the Black population in the United States masks clinically meaningful within-group variation and point to the need for targeted outreach, particularly for Haitian Americans facing both lower mental health prevalence recognition and lower treatment engagement.

Non-health institutions (business, political, education systems)

Examining Mental and Physical Health Differences Across First-generation and Racial/Ethnic Minority Status Jagruti Kolla* Kimberly Narain, Walter Solorzano, Sonya Brooks, Carina Salazar, Yamonte Cooper, Ashaunta Anderson, Rebecca Dudovitz, Mitchell Wong, Nicholas Jackson,

Research Objective: To examine the association between first-generation student status and health, across racial/ethnic groups

Study Design: We conducted a cross-sectional analysis of data from a single large university within the National College Health Assessment Survey (2023). Our outcomes were self-reported mental health (anxiety, depression, loneliness, stress (30-day and 1-year) and flourishing) and self-reported physical health (overweight/obese and general health). Our primary predictor was the interaction of two dichotomous variables (first-generation status (no parent graduated from a US college) and racial/ethnic minority status). Our statistical models were linear and logistic regression models, adjusted sequentially for demographics (sex, age, graduate vs. undergraduate status, full vs. part time and marital status), health behaviors (diet, exercise and sleep), and an index of microaggressions/trauma (MT) exposures. A two-sided alpha level of 0.05 was used for determining statistical significance.

Population Studied: 818 undergraduate and graduate students

Principal Findings: Minority first-generation students had higher levels of 30-day and 1-year stress, lower levels of flourishing, and worse general health, relative to their non-minority first-generation and non-first-generation minority counterparts, controlling for demographics and health behaviors. When we adjusted our models for our MT index, these differences were no longer statistically significant.

Conclusions: Minority first-generation students report worse mental and physical health outcomes, relative to their non-minority first-generation and non-first-generation minority counterparts. These findings may be partially driven by differences in exposure to microaggressions and trauma.

Implications: There is a critical need for interventions to create environments that support minority first-generation college students in achieving their academic aspirations while maintaining their health.

Mental health/function

Healthy Immigrant Paradox: Depressive Symptoms and Anxiety among Middle Aged American Adults using the National Longitudinal Study of Adolescent to Adult Health (Add Health) Min Kyung Kim* Min Kyung Kim,

Introduction
The Covid-19 pandemic heightened levels of mental distresses in the US. While foreign-born (FB) Americans faced additional stressors compared to their US-born counterparts, they may have experienced fewer mental distresses, suggested by the Healthy Immigrant Paradox. However, it remains unclear whether this paradox extends after the global pandemic among middle aged adults who might have experienced greater mental distresses as sandwich generation, caring for both their aging parents and their own children. This study sought to describe the mental health disparity by immigrant generation among middle aged US adults.
Methods
This study design was cross-sectional and used the latest data (wave 6) of the National Longitudinal Study of Adolescent to Adult Health (Add Health). The data were collected in 2022-2025 immediately after the pandemic. Three immigrant generation was defined as: 1) first – FB to FB parents, 2) second: US-born to FB parents, and 3) third: US-born to US-born parents. Depressive symptom was measured using the Center for Epidemiologic Studies-Depression Scale and anxiety was measured using the General Anxiety Disorder-7.
Results
Among 11,727 participants included, the average age was 44 years old. Majority were third generation (83%), followed by first (10%), and second (6%). The average depressive symptoms and anxiety scores were (3.10, SD = 0.05) and (3.95, SD = 0.07), respectively. First generation immigrant reported the lowest depressive symptom (2.64, SD = 0.11) compared to second (3.18, SD = 0.19) and third (3.13, Sd = 0.06). Similarly, the lowest anxiety was reported among the first generation (2.90, SD = 0.21) compared to second (3.90, SD = 0.30), and third (3.99, SD = 0.09).
Conclusion
Despite additional stressors faced by FB middle-aged adults, their immigrant status protected them from experiencing depressive symptom and anxiety compared to US-born counterparts. Investigation into potential socio-political factors of this paradox might explain the Healthy Immigrant Paradox.

Mental health/function

Bilingual Protection or Structural Confounding? A Nationally Representative Analysis of Household Language and Pediatric Mental and Behavioral Health Disparities Marina Frimpong* Marina Frimpong, Muntasir Masum,

Abstract

Background: The US has substantial disparities in pediatric mental and behavioral health. Prior work suggests children in language-minority households fare better despite socioeconomic disadvantage, a pattern commonly described as the immigrant paradox. Few national studies have examined whether this relationship persists after accounting for adverse childhood experiences (ACEs), a major driver of child mental health. This study assessed whether household language environment is associated with impairing mental and behavioral conditions among US children.

Methods: We analyzed pooled 2020–2022 National Survey of Children's Health data on children ages 2–17 years. The outcome was any currently impairing mental or behavioral condition, defined by parent-reported diagnosis plus current impairment for anxiety, depression, ADHD, behavioral problems, autism, or developmental delay. Household language was categorized as English-only, bilingual, or non-English. Survey-weighted logistic regression estimated adjusted odds ratios (aORs) with 95% confidence intervals (CIs), adjusting for demographics, socioeconomic factors, insurance, nativity, urbanicity, survey year, and ACE burden.

Results: One in five children had an impairing condition. Bilingual households had 62% lower odds than English-only households (aOR=0.38, 95% CI: 0.31–0.47), while non-English households showed no difference (aOR=0.96, 95% CI: 0.68–1.38), suggesting a bilingual advantage not shared across all language-minority households. ACE burden showed a strong dose-response pattern; children with 3+ ACEs had over fourfold higher odds of impairment (aOR=4.66, 95% CI: 4.14–5.24). Interaction analyses were null.

Conclusions: This study adds national evidence that bilingual household environments may protect child mental and behavioral health, while underscoring ACE burden as a key target for screening and prevention in diverse US pediatric populations. This has implications for policy and practice.

Health care/services

Association between state-level utilization of 988 Lifeline and suicide-related outcomes in the US. Parvati Singh* Parvati Singh,

In July 2022, the US launched the 988 Suicide and Crisis Lifeline, a nationwide three-digit number for individuals in crisis, which preceded a sharp rise in the use of these services nationally. We examined the ecological association between 988 Lifeline utilization and suicide-related outcomes at the state-quarter level from July 2021 to December 2023 across all US states.

We retrieved state-level quarterly data on (1) suicide mortality from CDC WONDER, (2) suicide-related emergency department (ED) visits from the State Emergency Department Database, and (3) suicide-related hospitalizations from the State Inpatient Database. We defined our three outcomes as state-quarterly rates per 100,000 population. We obtained state-quarter-level data on 988 utilization from the Lifeline's public reports, from July (quarter 3) 2021 (earliest 988 data availability) to December (quarter 4) 2023.

We used the timing of the national 988 launch (binary: 1 for quarter 2 2022 onward; 0 otherwise) as an instrumental variable (IV) to examine the association between our outcomes and three 988 utilization-related exposures using two-stage least squares (2SLS) linear regression analyses: (1) volume of calls to 988 per 100 population, (2) volume of 988 calls answered in-state per 100 population, and (3) answer rate (percentage of in-state calls answered to calls made). Analyses controlled for state, quarter fixed effects, non-suicide-related mortality/ED visits/hospitalizations (per outcome), and co-terminus abortion bans.

Results from IV analyses show no change in suicide mortality and suicide-related hospitalizations in relation to 988 utilization. However, suicide-related ED visits declined with increase in volume of calls to 988 (coeff= -123.8, 95% CI -196,-51.6), volume of 988 calls answered in-state (coeff= -110.5, 95% CI -174,-47), and answer rate (coeff = -72.88, 95% CI: -116.2,-29.5).

Higher utilization of 988 Lifeline may correspond with reductions in suicide-related ED visits.

Mental health/function

School-based health centers, community services, and youth mental health in rural communities Xue Zhang* Xue Zhang, Mildred Warner,

Research question: How are school-based health centers (SBHC) and community services associated with youth mental health in rural communities?

Significance: Rural youth face growing mental health challenges and limited access to health and social services. Schools can function as community hubs to address these gaps, and SBHCs have emerged as a strategy to expand access to care. However, little is known about how SBHC access and community services jointly shape youth mental health. Understanding these relationships can inform cross-sector strategies among educators, health providers, and community organizations.

Data and methods: We linked electronic health record data from 2024 with a school survey across 38 school districts in a four-county rural region of New York State. Outcomes include whether students had mental health-related visits (bipolar disorder, anxiety, depression, suicide-related conditions, or substance use disorders) and, among those students, whether these visits occurred in emergency departments. Key exposures include SBHC access and the availability of services promoting social engagement (e.g., after-school programs) and basic needs (e.g., food pantries). We ran logistic regressions adjusting for age, sex, Medicaid coverage, social determinants of health (SDOH) diagnoses, and behavioral health provider visits.

Preliminary results: Among 16,636 students aged 5-18, 54% had access to a SBHC. SBHC access was associated with a lower likelihood of mental health visits, after adjusting for behavioral health provider visits. Mental health visits were more likely among female students and students with Medicaid coverage, older age, and SDOH-related diagnoses. Districts with more social engagement services were associated with lower probabilities of both mental health visits and emergency department visits. The findings highlight the role of SBHCs and coordinated school and community services in improving youth mental health in rural communities.

Mortality

Inequitable improvements in the US drug overdose crisis Mathew Kiang* Mathew Kiang, Antonino Polizzi, Monica Alexander, Corinne Riddell,

From 1999 to 2023, the US drug-related mortality rate increased from 6 deaths per 100,000 (95% Uncertainty Interval [UI]: 5.8, 6.2) to 31 deaths per 100,000 (95% UI: 30.0, 31.6). Over this 24-year period, there were only two instances of significant year-over-year declines in mortality: first in 2018, when there was a decrease of 1.0 deaths per 100,000 (95% UI: -1.9, -0.2), and again in 2023, when there was a decrease of 1.3 deaths per 100,000 (95% UI: -2.4, -0.1). Understanding why (ie, which substances), where, and who benefitted from these improvements is essential for informing public health interventions.

We use a demographic decomposition on the CDC restricted-use multiple cause of death data to examine these declines in drug-related mortality in 2018 and 2023. Using a Kitagawa decomposition, we quantify the contribution of mutually-exclusive drug categories to the decrease in the national age-standardized drug-related mortality rate by both geography and sociodemographic subgroups.

We found stark geographic, pharmacologic, and sociodemographic differences between the 2018 decline and the 2023 decline. Geographically, the 2018 decline was highly concentrated: 3 states accounted for 80% of the national decline, and all states that had a decline were located in the Eastern US, except for Alaska. In contrast, the 2023 decline was geographically diffuse with 6 states accounting for 75% of the decline. Pharmacologically, the entirety of the 2018 decline was driven by a reduction in non-fentanyl drug deaths. Conversely, the 2023 decline was driven entirely by a drop in fentanyl-involved deaths. Sociodemographically, the decline was driven exclusively by lower mortality in the non-Hispanic white population in both 2018 (-1.9; 95% UI: -2.9, -0.8) and 2023 (-2.6; 95% UI: -3.8, -1.4).

These preliminary results show that demographic decomposition methods provide insight into targeted, equitable interventions and policies to reduce drug-related mortality in the US.

Mental health/function

Intersectional Differences in Despair in a U.S. Probability Sample of Sexual Minority Adults
Isaac Wright* Evan Krueger,

Background: Despair is a multidimensional psychosocial state associated with worsening population health and premature mortality. However, little is known about how despair varies across intersecting social identities. This study examined differences in despair across intersections of race and ethnicity, age, and sex assigned at birth among sexual minority adults in the United States.

Methods: Data were from the Generations Study, a national probability sample of sexual minority adults (N = 880; data collected in 2016-2017). Despair was measured using an index of 12 indicators across three despair domains (emotional/cognitive, biosomatic, behavioral). Negative binomial regressions assessed differences in despair across intersectional groups defined by race/ethnicity (White, Black/African American, Latinx), age (younger: 19-26, middle: 35-42, older: 53-60), and sex assigned at birth (female, male). Models were adjusted for education, employment status, and healthcare access.

Results: Overall, despair scores were higher among younger (vs. older) respondents, females (vs. males), and Black (vs. White and Latinx) respondents. However, key differences were noted across intersectional groups. Among younger respondents, White females had higher despair scores than White males and Latinx respondents. Among middle cohort respondents, Latinx females had higher despair scores than White males, Black males, and Latinx males. Among older respondents, Black females had the highest despair scores relative to several other groups (all $p<0.05$). In domain-specific analyses, younger respondents had higher levels of emotional/cognitive and behavioral despair, and middle and older age groups had higher levels of biosomatic despair.

Conclusion: Despair varies substantially across intersecting social identities among sexual minority adults. These findings highlight the importance of intersectional approaches for understanding population health disparities and informing prevention strategies.

Methodological approaches to studying public health

The Use of Community-Based Participatory Research Methods to Collaborate with People Experiencing Homelessness: A Scoping Review Lauren Love Pieczykolan* Lauren Love Pieczykolan, Megan Glavin, Nicole Theis-Mahon, M. Kumi Smith,

Background: The US is experiencing unprecedented levels of homelessness, accompanied by growing interest in research on its causes and potential solutions. Community-based participatory research (CBPR) is promoted as a strategy for meaningfully involving and centering people experiencing homelessness (PEH) in this work. However, there is limited consensus on what constitutes CBPR in practice, constraining insights into its implementation and best practices. This review aims to close this gap by characterizing the extent and nature of CBPR methods currently used in homelessness research.

Methods: The search was developed for MEDLINE(R)ALL (Ovid) and translated across APA PsycINFO (Ovid), CINAHL, Scopus, and Web of Science Core Collection, returning 801 papers. Studies met inclusion criteria if they were peer-reviewed, published in English, sampled PEH, and utilized a CBPR method. Two reviewers independently assessed evidence against the inclusion criteria.

Results: Involvement of PEH as members of community advisory boards or in consultative roles was the most common CBPR practice. Novel methods include the Docent Method where PEH physically and narratively walk researchers through sites of interest in their community, and the Appreciative Inquiry model in which PEH identify and leverage community strengths to solve problems. The level of detail with which CBPR methods were described varied greatly.

Conclusions: Preliminary findings highlight the diversity of CBPR practices, both in their implementation and how these practices are documented and disseminated. The large number of studies that cite CBPR without describing how it was implemented underscores the need for clearer reporting standards in this field. Greater consensus around practice and reporting is necessary if CBPR is to realize its potential to amplify PEH in research, integrate community knowledge and innovation into program and policy design, and mend historical harms that research has inflicted on PEH.

Methodological approaches to studying public health

Justice-centered recruitment and retention strategies in a randomized controlled trial of concentrated investment in Black neighborhoods Keven Cabrera* Keven Cabrera, Rikley Costa Paixao, Helena Jeudin, Ashley Tryba, Craig Terry, Hilena Addis, Evan Spencer, Nicole Thomas, Aditi Vasan, Atheendar Venkataramani, Eugenia South,

Researchers frequently encounter challenges with recruitment and retention of minoritized populations in clinical trials. Barriers to study participation, including institutional mistrust, negative perceptions of research, housing instability, and inequitable access to technology (e.g. mobile phones or email), can both threaten research validity and perpetuate disparities in population health knowledge and innovation. We conducted an NIH funded community-based cluster-randomized controlled trial of a suite of environmental (vacant lot greening, tree planting, litter removal) and economic (financial counseling, connection to public benefits, tax preparation, and a $400 microgrant) interventions in majority Black, lower socioeconomic status neighborhoods in Philadelphia, PA from 9/2022 to 11/2023. We approached recruitment and retention of a population thought to be “difficult to reach” by centering justice-oriented strategies in trial design and execution. Our study team successfully recruited 571 participants (87.6% Black, 50.8% Female, and 58.7% with an annual household income < $45K). Using an ongoing qualitative reflection process and field note analysis, we have identified emerging themes on how our study team overcame barriers and found opportunities for meaningful participant engagement including: community IRB approval before launching the study; hiring of local, identity congruent team members to conduct participant facing activities; a modified random walk recruitment methodology; sustained one-on-one participant contact throughout study period; regular team refinement and practice of culturally humble communication; strategic, personalized messaging; sustained community partner involvement; and dynamic adaption of follow-up protocols to reach as many participants as possible. Using these approaches, we maintained a 71% follow-up rate over two years, demonstrating feasibility of meaningful research engagement with historically marginalized communities.

Methodological approaches to studying public health

AI DrivenRace and Skin Tone Measurment Public Health Reserach Jack Hasch* Michael Esposito, Rob Warren,

Population and administrative data sources that could be instrumental for studying health disparities are frequently limited by a lack of sophisticated race and ethnicity measurement. Administrative records linking individuals across decades of observation — from school enrollment to death certificates — could tell powerful stories about how racial inequality in risk of premature death evolves over the life course, but sometimes lack basic race information, and even more frequently lack race-adjacent measures, like skin tone, that are known to be instrumental in stratifying health outcomes. Past efforts have addressed this by employing large teams of human coders to assess names and photographs for race and ethnicity. Beyond being prohibitively costly however, this approach is error-prone and overly reliant on point-estimate classifications, a limitation that obscures meaningful variation, given that perceived race is not static but better characterized as a distribution. In this project, we introduce an AI-driven approach to recovering race and skin tone data from archival imagery. The scalability of this method allows us to construct distributions of perceived skin tone and race, capturing median perceptions alongside rater variation, rather than collapsing to a single classification. Applied to yearbook photographs linked to mortality records, this approach opens new possibilities for studying how racialization shapes health across the life course.

Methodological approaches to studying public health

Creating a Nationwide Atlas on Urban Population and Capital Flight: A Tool for Extending Population Health Research 'Beyond Redlining' Richard Sadler* Richard Sadler, Alan Harris, Samantha Gailey, Danielle Beatty Moody, Don Lafreniere,

Legacy urban development processes and decisions have had hugely detrimental impacts on the quality of our cities and the health of their residents. While studying redlining's impacts has received attention as a way to build an evidence base to remediate past wrongs—including building public trust in science by enumerating impacts on population health—additional aspects must be studied to drive more meaningful change. Here we discuss the added value of considering patterns of white flight (often from real estate blockbusting) from American cities during the later 20th century (in particular, from the 1968 Fair Housing Act through the 1980s). In our initial work on this topic, we have consistently found impacts on population health and smaller survey-based health outcomes stronger than those found for redlining. This suggests a need to reorient work on the broader topic of structural racism in the built environment; doing so may further help confront the rise in scientific skepticism around this topic by more accurately defining the processes that drive urban decline and how they negatively impact on key populations. Likewise, it could promote local understanding of additional urban development processes 'beyond redlining' and the need for more equitable approaches. We have built a nationwide blockbusting atlas (work that includes engagement with key partners, data processing, design work, and further outreach efforts), as a means of empowering researchers to push the boundaries of population health science. The atlas allows users to visualize every tract where significant white flight occurred from the 1950s to the 2010s. Our intention is to provide a resource for blockbusting similar to the one created for redlining and those being created for restrictive covenants. In so doing, we hope that population health scientists can more easily include this phenomenon in their work and contribute further important findings to this growing body of research.

Methodological approaches to studying public health

Practitioner perspectives on Indigenous-centered quantitative methodology for health research Jessica Williams-Nguyen* Jessica Williams-Nguyen, Cole Allick, MichaeLynn Kanichy, Denise Dillard, Clemma Muller,

Quantitative methodology is crucial to health research and evidence-based solutions; yet there are significant barriers to its use in the context of Indigenous health. These include legacies of harm due to misuse of research and statistics as well as epistemological disconnect between Western and Indigenous knowledge systems. An emerging literature promotes quantitative methods that increase cultural safety by centering the worldviews of Indigenous Peoples. This study documented perspectives of practitioners on the value and application of Indigenous-centered quantitative methodology for health research. In fall 2024, we surveyed 49 members of academic, governmental, and Tribal organizations in the US and Canada who use quantitative science for Indigenous health research. Most respondents had a doctoral degree (82%) and worked in academia (69%). White identity was reported by 59%, and 43% reported Indigenous identity using a total response approach. Most respondents endorsed a belief that greater power for Indigenous Peoples in quantitative health science decision-making at all stages would increase self-determination (89%), actionability of research (87%), and health benefits (77%) for Indigenous communities. These proportions were even greater (100%, 91%, and 91%, respectively) among respondents who identified as Indigenous. Respondents were split as to whether Indigenous-centered quantitative health science methodology already exists. Among those who said that it does, a majority said that it was not easy to access or to implement. Nearly all of those who were not aware of such resources felt that they would be valuable. These results indicate both the existence of applicable resources as well as significant potential for improving their translation to practitioners. Our study concludes with a recommendation to reorient the quantitative process to support Indigenous cultural safety and ensure that its benefits are fully accessible to Indigenous communities.

Economic development

Effects of a Municipal Immigrant Economic Recovery Program on Mental Health and Wellbeing Ariela Braverman Bronstein* Ariela Braverman Bronstein, Natalia Espinosa Tokuhama, Laura McElherne, Rolande, Ayinkamiye, Jessica Santos,

Background: Economic security is closely linked to health, yet immigrant communities often face barriers to financial inclusion. During COVID-19, many relief programs intended to reduce economic and health impacts excluded immigrants, contributing to widening disparities. In response, local governments and community organizations implemented initiatives to support affected communities. The City of Boston launched a $3 million ARPA-funded Immigrant Economic Recovery Initiative (IERI) providing immigrants—including internationally displaced families and asylum seekers—$600 monthly payments, education and savings incentives, case management, and financial inclusion services. Methods: We conducted a prospective single-arm longitudinal study of immigrant families enrolled in the 12-month program. Of 546 eligible applicants, 200 were randomly selected and 148 completed the program. Case managers collected monthly survey data on financial stability, mental health, and basic needs. Financial stability was measured using a composite score capturing food security, housing stability, financial strain, and ability to cover unexpected expenses. Mixed-effects ordered logistic regression models assessed associations between financial stability and mental health over time. Results: Financial stability improved across all domains over the 12-month program, particularly housing stability and reductions in financial strain. The proportion of participants classified as financially unstable decreased substantially over time, while the proportion reporting languishing mental health also declined. In mixed-effects models, higher financial stability was associated with better mental health. Each one-point increase in the financial stability score was associated with higher odds of being in a better mental health category, with housing stability showing the strongest association. Conclusion: Participation in this immigrant-focused economic recovery program was associated with improved financial stability and reduced distress. These findings highlight the potential of financial stability interventions to positively influence immigrant health and well-being.

Mental health/function

Making Life Under Constraint: Psychosocial Strengths and Mental Health Among Latina Immigrant Women Juan Gudino* Juan Gudino, Jeanie Santaularia Gomez, Barbara Baquero, Gabriela Nagy,

Background: Latina immigrant women experience multiple forms of immigration-related stress, however, psychosocial strengths may shape how stress is experienced and protect against poor mental health. Few studies have examined psychosocial strengths alongside stressors in relation to mental health among Latina immigrants in community-based samples. This study aimed to assess associations between psychosocial strengths, immigration-related stressors, and depression and anxiety in Latina immigrant women.

Methods: We analyzed data from a community-based sample of Latina immigrant women (N=226) in Seattle, WA, participating in a mental health intervention trial conducted between 2019 and 2021. Depressive and anxiety symptoms were measured using continuous Patient Health Questionnaire-9 and Generalized Anxiety Disorder-7 scores, and psychosocial strengths and stressors were assessed using validated survey scales. Crude and adjusted ordinary least squares regression models estimated associations between psychosocial strengths and stressors and mental health outcomes.

Results: Perceived stress was associated with higher depressive (β = 0.55, 95% CI: 0.33–0.77) and anxiety symptoms (β = 0.47, 95% CI: 0.26–0.69). Social isolation was also associated with higher depressive (β = 0.31, 95% CI: 0.18–0.44) and anxiety symptoms (β = 0.20, 95% CI: 0.07–0.32), while immigration-related stress was associated with higher anxiety symptoms (β = 0.24, 95% CI: 0.15–0.34). Social support was associated with lower depressive symptoms (β = −1.60, 95% CI: 2.40 to −0.89).

Discussion: Findings highlight the importance of social support as a psychosocial resource for maintaining mental health among Latina immigrant women exposed to multiple stressors. Future research should examine how immigration policy environments shape chronic stress exposure over time, particularly through longitudinal designs that capture changes in stressors and psychosocial strengths across the life course.

Mental health/function

Leveraging Community-Based Participatory and Qualitative Methods to Identify Risk and Protective Factors for Suicide and Mental Health among Latina Immigrants Laura Mata Lopez* Laura Mata Lopez,

Latina immigrants in the United States (U.S.) experience significant mental health inequities shaped by migration-related trauma and structural social determinants of health (SDOH). Many endure cumulative adversity across pre-migration, migration, and post-migration phases, including violence, family separation, economic precarity, and barriers to healthcare. Despite suicide being a leading cause of death among Latinas in the U.S., limited research has examined the multilevel factors (including migration-related trauma and structural determinants of health) that shape suicide risk among Latina immigrants. This study uses a community-engaged qualitative design to examine lifetime suicide trajectories among Latina immigrants in the Baltimore metropolitan area. Participants were recruited through community-based organizations, faith communities, and local service providers serving Latina immigrant populations. Data were collected between November 2024 and March 2025 through life history interviews with Latina immigrants (n=20) and focus groups with providers, community leaders, and religious leaders serving Latina immigrants (n=16). Interviews and focus groups were conducted in Spanish. Data are being analyzed using typology analysis to identify patterns of lifetime suicide trajectories and to explore how migration experiences, SDOH, and community resources shape suicide risk and resilience. Preliminary analyses suggest cumulative and intersecting stressors across migration phases, including exposure to violence, economic hardship, and barriers to healthcare and social services. Early findings also highlight protective factors rooted in family networks, faith communities, and collective community support. This study advances population health science by identifying how structural conditions and community resources shape suicide risk trajectories among Latina immigrants and by informing culturally responsive prevention strategies that advance health equity.

Chronic disease

Qualitative Perspectives on Sources of Resilience and Support among South Asian Americans Naheed Ahmed* Naheed Ahmed, Sabiha Sultana, Saikat Talukder, Haroon Zafar, Hemalatha Naik, Sadia Obaidul, Sirazam Munira, Zakia Hossain, Klara Wichterle, Alka Kanaya, Namratha Kandula, Nadia Islam,

Introduction

The Mediators of Atherosclerosis in South Asians Living in America (MASALA) is the first longitudinal epidemiologic cohort study of South Asians Americans. To understand nuances of participants' lives that may be linked with health status, a subsample of MASALA participants with low and high risk for atherosclerotic cardiovascular disease (ASCVD) were interviewed about acculturative stress, health resources and access, and sources of support and resilience.

Methods

A total of 64 interviews were conducted with MASALA participants (19 Bangladeshis, 20 Indians, 25 Pakistanis) on their migration journey, adjusting to life in the U.S., health status, and social and family support in 2025. Interviews were conducted in Bangla, Urdu, Hindi, and English. Audio recordings of interviews were translated and transcribed to English. Modified grounded theory was used to analyze data, including an iterative process for codebook development, double coding of transcripts, and reviewing code outputs for common and unique themes. Data were analyzed using Dedoose.

Results

Preliminary findings indicated challenges associated with relocating to the U.S., adjusting to U.S. culture, and other transitions related to housing and employment. Examples of challenges included learning English and experiencing discrimination. Sources of support shared by participants included family members, friends, and neighbors in their home country and in the U.S. Other sources of support included religious beliefs and practices, and ethnic neighborhoods with shared language and culinary traditions. Despite past experiences with hardship, participants demonstrated resilience in care for themselves and their family members.

Discussion

These qualitative findings provide insight into the lived experiences of MASALA participants and their migration to and settlement in the U.S. While we are still analyzing differences between participants with low and high ASCVD risk, South Asian subgroups, and by gender, we have identified significant sources of support and resilience among participants, which are potential intervention points for improving health outcomes among South Asians.

Social/relational factors

Organizing another way of being Vietnamese American: mental health of young women in conservative families in California Emma Tran* Emma Tran,

The scholarly dismissal of right-wing people of color forecloses opportunities to forge intergenerational and interracial politics of solidarity in pursuit of an expansive “public” health. To address this issue, I collaborate with a grassroots youth organizing group based in Orange County, California to ask: how do young Vietnamese American (VA) women make sense of their families’ and communities’ conservative politics? How does political misalignment affect their health and wellbeing?

This community-engaged project draws on three years of ethnographic fieldwork as a volunteer and member of a youth organizing group based in OC, as well as 60 interviews with VA women high school teachers, organizers, and girls age 18-23 living in California. Findings show that participants’ sensemaking concepts are ultimately underpowered to make clear sense of their families’ and communities’ politics (e.g., how their refugee families could endorse vehement anti-immigrant sentiments while being immigrants themselves), which has severe affective consequences, such as chronic feelings of betrayal, shame, and hopelessness. In part because conservatism has a political monopoly in OC, young VA women trust few to no people to speak about politics, further isolating them and taxing their mental wellbeing.

Moreover, while right-wing politics are attributed to anti-communism as a trauma response to war, dispossession, and assimilation, my research suggests that anti-communism masks other political agendas, such as anti-immigration, anti-Black segregation, and patriarchy. These findings underscore that community organizers face an important opportunity to recruit young diasporans into social justice projects salubrious for their personal and community’s health. Lastly, this paper emphasizes that public health researchers must attend to ideological ecologies that function not only as socio-structural determinants of health, but also as the contexts through which those very determinants emerge.

Non-health institutions (business, political, education systems)

Partisan Gerrymandering and Infant Mortality AP Pittman* AP Pittman,

In the past ten years, partisan gerrymandering has gained more public attention, with scholars and activists alike calling for more rigorous empirical research into the topic. Empirical research on partisan gerrymandering to date is sparse; to the extent that it exists, it is primarily concerned with the consequences of gerrymandering for elections, governing bodies, and political parties. However, a large range of possible downstream consequences of partisan gerrymandering remain understudied, both within and outside of the political sphere. The current paper situates partisan gerrymandering in the broader framework of structural determinants of health and asks: Does gerrymandering, and the dilution of political power that it represents, result in tangible differences in infant health? I use a measure developed by legal scholars to quantify gerrymandering, called the efficiency gap; in results from two-way fixed effects models, I show that increasing values of the efficiency gap – that is, gerrymandering to the advantage of Republicans – results in significant increases in infant mortality rates for both White and Black infants. This effect persists even after controlling for current partisanship, suggesting that Republican gerrymandering impacts infant mortality through other pathways in addition to changing the partisan composition of state legislatures to be more Republican. This paper signals the need for population health researchers to integrate gerrymandering into their theories of structural/political determinants of health.

Structural factors

The Long Shadow of the Great Migration: Historical Migration Inflows and Persistent Racial Inequality in Premature Mortality Sudipta Saha* Sudipta Saha,

Between 1910-1930 and 1940-1970, millions of Black Americans left the U.S. South fleeing racial terror and seeking economic and political opportunity. However, northern destinations often responded with hostility – intensifying segregation, expanding policing, and disinvesting from public goods. The long-run consequences of these migration patterns for racial health inequality remain poorly understood.

We assemble a harmonized county-level mortality panel spanning 1959-2023 and estimate Black-White premature (<65) mortality inequities using a small-area Bayesian spatio-temporal model. We link these estimates to historical census data measuring the intensity of second Great Migration inflows (1940-70), defined as the net increase in Black population relative to total 1940 population. Northern commuting zones are divided into population-weighted quartiles of migration exposure and compared to the South. We find persistent monotonic relationship between migration intensity and long-run racial mortality inequity. In 1959, Black-White premature mortality rate ratios (RRs) were similar across northern quartiles (1.89-1.92), while the South exhibited higher inequity (RR=2.13). Over time, these trajectories diverged. By 2019, RRs were ordered by historical migration exposure: 1.26 in the lowest-inflow northern quartile, 1.45 in Q2, 1.71 in Q3, and 1.77 in the highest-inflow quartile, compared to 1.37 in the South. High-inflow northern areas experienced persistently elevated disparities and slower convergence.

These findings show that the geography of contemporary racial mortality inequality closely tracks historical migration exposure. The results are consistent with accounts suggesting that migration interacted with local institutional and spatial structures in ways that may have had durable implications for population health.

Mortality

State-Level Variation in Mortality among People Experiencing Homelessness Kaitlyn Berry* Kaitlyn Berry,

Significance: People who experience homelessness endure extreme adversity, putting them at up to a five-fold increased risk of early death compared to the general population in the US. Existing, but limited data, on homeless mortality suggests that death rates vary substantially by location. However, only a handful of states collect data on homeless deaths, and between state comparisons are limited by differences in definitions and estimation strategies. Thus, a better understanding of state-level geographic variation in homeless mortality rates is drastically needed.

Aim: We estimate the first comparable and complete estimates of state-level homeless mortality rates in the US.

Data & Methods: The decennial US Census includes individuals experiencing homelessness (n=423,000 in 2010) who are enumerated at emergency and transitional shelters as well as unsheltered locations such as soup kitchens, mobile food vans, vehicles, and tent encampments. We link individual-level records of people experiencing homelessness at the time of the 2010 Census to the US Census Bureau Numerical Identification file (Numident), which contains full-population death records from the Social Security Administration. We then use discrete time-survival analysis to assess mortality during the 5-year period following the 2010 Census and estimate age-adjusted homeless mortality rates for each US state.

Preliminary Results: We have linked the data, established our sample of people experiencing homelessness, and begun estimating homeless mortality rates. These preliminary estimates show substantial variation by state. However, we are unable to share numbers or comment on patterns as these results have not yet been approved for sharing by the US Census Bureau.

Next Steps: Before the IAPHS conference, we will finalize our state-level homeless mortality estimates and go through the required disclosure avoidance review process to get Census Bureau approval for presenting the results.

Structural factors

County-level decarceration atlas: mechanisms of decarceration across 2,870 U.S. counties, 1999-2019 Yiran Liu* Yiran Liu, Beier Li, Joshua Warren, Gregg Gonsalves, Emily Wang,

Mass incarceration is increasingly recognized as a driver of poor health and health inequities, yet little is known about the health effects of decarceration, the process of reducing incarceration rates. Study of decarceration's health effects is hindered by the difficulty of systematically identifying where, when, and how decarceration has occurred. Policy surveillance is difficult to scale; legislative reforms do not always translate into reduced incarceration; and de facto changes (e.g. prosecutorial discretion, fiscal constraints) are often overlooked. To address this gap, we developed a scalable approach to identify county-level decarceration using publicly available administrative data. Applying joinpoint regression to longitudinal jail and prison measures from over 2,870 U.S. counties (1999-2019), we defined four operational types of decarceration: reduced pretrial detention, reduced jail time, reduced prison admissions, and reduced prison time. Seventy percent of counties experienced at least one decarceration type during the study period. Reduced prison admissions and reduced pretrial detention were most common, each occurring in about 40% of counties. Frequency and timing varied markedly by region, state, and urbanicity. Declines were typically modest (median ten-year reductions of 19-35%) and often followed recent growth to above-average incarceration levels, suggesting reactions to unsustainable growth rather than proactive structural reforms. Validation against documented instances of real-world decarceration indicated alignment with known drivers while demonstrating the approach's ability to detect within-state heterogeneity following state-level reforms. This study provides the first systematic characterization of county-level decarceration in the U.S. over two decades and provides a framework and hypothesis-generating resource to support comparative and quasi-experimental studies of decarceration's heterogeneous health effects.

Structural factors

Developing a state-level measure of structural cisheteropatriarchy in the United States
Dougie Zubizarreta* Dougie Zubizarreta, Ariel L. Beccia, S. Bryn Austin, Ayden I. Scheim, Jaquelyn L. Jahn,

Background: Structural cisheteropatriarchy operates through laws/policies, institutionalized practices, and cultural norms to maintain the dominance and normalization of compulsory cisheterosexuality and patriarchy. This system of oppression subordinates women, queer people, and trans/nonbinary people, while advantaging cisheterosexual men – thereby contributing to health inequities. To enable further study, we developed and evaluated the psychometric properties of the first measure of structural cisheteropatriarchy.

Methods: We conducted exploratory factor analysis (EFA) to assess construct validity and develop an index comprised of 30 indicators of protective/harmful state laws across five domains in 2023: economic, youth/education, healthcare/reproductive justice, political, and violence. We generated descriptive statistics and heat maps to visualize overall and indicator-specific patterns.

Results: Inter-item correlations ranged from 0.01 to 0.80 (with 40% 0.40), and Cronbach's alpha and coefficient omega (both=0.95) indicated good internal consistency reliability. EFA supported a single underlying latent factor. Structural cisheteropatriarchy scores were lowest in the West and Northeast, and highest in the South, with substantial heterogeneity across states (range=-24 to 30, mean=3.7). Notably, even states with generally protective legal climates enacted harmful laws.

Conclusions: This measure demonstrates strong construct validity and addresses critical gaps in structural discrimination research. Future studies should examine how structural cisheteropatriarchy shapes population health and inequities.

Health equity

The Threshold of Toxicity: Compounding Carceral Exposures and Black Reproductive Health Emma Blackson* Emma Blackson,

Research Question: Does the co-location of punitive school environments and lethal police violence escalate the risk of adverse birth outcomes for Black birthing people beyond the impact of independent institutional exposures?

Background: While population health science often frames education as a protective asset, this study interrogates educational carcerality, the embedding of surveillance and criminalization within school systems, as a structural pathogen. By shifting the analytical gaze from individual behavior to state behavior, this research challenges traditional silos, conceptualizing the carceral state as an integrated, multi-system determinant of health.

Methods: This stage of a multi-stage investigation links 2015-2018 federal Civil Rights Data Collection and Mapping Police Violence data to restricted-use U.S. natality records (approx 2.2 million singleton live births to non-Hispanic Black individuals). A novel district-level latent measure of the school-to-prison pipeline (STPP) was developed to empirically define the STPP using law enforcement referrals and arrests. Using multivariable Poisson regression with robust standard errors, we tested for a toxicity threshold in High/High districts where punitive schooling and lethal policing converge.

Results: Findings reveal a distinct threshold of compounding harm. Residing in a district characterized by both high STPP exposure and high police lethality was associated with a 7.5% higher risk of preterm birth (IRR=1.075, p=0.022) and a 5.6% higher risk of low birth weight (IRR=1.056, p=0.039) compared to low-exposure districts. Single-domain high exposures were not statistically significant, suggesting that the carceral air only reaches critical biological mass through the convergence of punitive systems. Sensitivity analyses restricted to term-only births attenuated associations to the null, identifying prematurity as the primary biological pathway.

Conclusion: To reimagine population health science as a vehicle for building trust, our field must first confront the geographies of silence produced by federal data suppression, which render the carceral experiences of marginalized communities invisible to oversight. By establishing a threshold of toxicity where punitive schooling and lethal policing converge, this study shifts the analytical lens from individual risk to institutional harm. Ultimately, this work builds influence by providing the evidentiary basis for a public health abolitionism that demands the dismantling of the carceral archipelago as a prerequisite for reproductive justice and family flourishing.

Health equity

Reimagining Population Health to Build Trust: An Interdisciplinary Fourth Trimester Model to Reduce Postpartum Readmissions Jenny Bernard* Aimee Gabuya,

Research Question:

In postpartum patients, does implementing a “Fourth Trimester” care model with shared decision-making and risk-stratified follow-up, compared with standard care, reduce hospital readmissions and improve maternal health outcomes within the first year postpartum?

Significance:

New Jersey’s maternal mortality crisis, which ranked the state 47th nationally with a rate of 26.0 deaths per 100,000 (2018-2022)[1],[2],[3], demanded an evidence-based response. With over 60% of preventable maternal deaths occurring postpartum[4], our health network, serving 15% of the state’s births, developed an equitable evidence-based Fourth Trimester care model. Our transformative model ensures every mother receives vital postpartum follow-up resources, regardless of background, blending rigorous data with real-world impact to advance knowledge and create meaningful change.

Data/Methods:

We conducted descriptive, comparative, and trend analyses using t-tests, Wilcoxon, and chi-square tests. Outcomes were assessed by year, by data type, and by distribution.

Our fourth-trimester model screens for social needs and offers risk-based follow-up at 3, 5, or 7 days for high-, intermediate-, or low-risk patients, with personalized support. To enhance our approach, we introduced a new initiative, a visual cue for rapid escalation of care for hypertensive disorders, complemented by teach-back education on warning signs to empower patients.

Results:

The fourth-trimester model significantly reduced postpartum readmissions by 85.7% (from 7% in 2022 to 1% in 2025) and achieved zero maternal deaths within the network during the study period. Concurrently, New Jersey’s statewide maternal health ranking improved, from 47th to 25th. This scalable collaborative approach addressed urgent postpartum needs and rebuilt trust between patients and providers, demonstrating a successful model for translating population health science into meaningful, system-level change.

Health equity

“They Didn’t Expect Me to Be in There”: Black Fathers, the Birth Experience, Reproductive Health Systems, and the Cost of Exclusion Diamond Cunningham* Diamond Cunningham, Darrell Creecy, Andre Apparacio,

Louisiana leads the nation in maternal mortality, with Black women dying from pregnancy-related causes at rates three to four times higher than white women. Nearly half of those deaths occur in the first postpartum year. Louisiana also leads the nation in incarceration, with Black men disproportionately impacted by structural racism limiting healthcare access. These crises happen in the same households, to the same families, during the same critical window.

The Reproductive Empowerment and Advocacy for Louisiana (R.E.A.L.) Fathers Study examines Black fathers’ reproductive health engagement during the first postpartum year in post-Dobbs New Orleans using a convergent mixed-methods design. Guided by Public Health Critical Race Praxis and reproductive justice, the study examines contraceptive knowledge, reproductive health self-efficacy, and partner communication through community-based surveys and focus groups conducted with Black father-led organizations including Fathers Matter NOLA and Dad-a-Port.

Preliminary findings from seven focus groups with 30 Black fathers reveal consistent experiences of structural exclusion within healthcare settings. Fathers described being rendered invisible by providers despite being physically present. One father said nurses looked at him like “they had never seen a Black father in the delivery room.” Another whose son spent 90 days in the NICU said: “I would have had a better experience with my babies.” Another said simply: “We actually care. Plain and simple.”

The maternal mortality crisis has largely asked Black women to solve it themselves. Black men make up approximately 80% of partners of Black women giving birth and are already present and motivated. Reimagining population health science to build trust requires finally turning to look at who is already in the room.

Structural factors

A Meta-Analysis of Trust in Police and its Relationship to Trust in the Medical System Over Time Caitlin McMurtry* Caitlin McMurtry, Nathalia Gutierrez Sacasa,

Polling data indicates that trust in U.S. institutions, especially those related to policing and healthcare, have declined over the past four decades, but these trends have not unfolded evenly across time or population. The death of Michael Brown in Ferguson, Missouri on August 9, 2014 and the subsequent popularization of the Black Lives Matter movement marked a consequential turning point in public discourse on policing, drawing sustained national attention to racial disparities in policing and their relationship to health and civic life. Cross-sectional studies suggest that trust in these areas may be directly related, as experiences of police brutality are associated with lower levels of trust in medical institutions (Alang, McAlpine, and Hardeman 2020) and greater odds of unmet need for medical care (Alang et al. 2021). However, it is unclear whether these trends are linked longitudinally. Even less is known about whether these trends in trust vary by race or ethnicity. This study uses a systematic review and meta-analysis approach to analyze archival polling data, measuring changes in police confidence over more than three decades and the changing relationship between institutional confidence in police and the medical system. This approach allows us to test whether rising distrust in police is associated with the popularization of the Black Lives Matter movement (and the state violence that gave rise to it). We also test whether police and medical mistrust is greater among respondents of different races and ethnicities over time.

Structural factors

Association Between Residential Proximity to Carceral Facilities and Asthma ED Visits in California Beier Li* Beier Li, Yiran Liu,

Background: The U.S. operates roughly 6,300 correctional facilities, with new facility construction ongoing. While research has documented health harms associated with high community-level incarceration rates, less is known about the health effects of living near prisons and jails.

Methods: This ecological, census tract-level analysis examined cross-sectional associations between residential proximity to jail/prison and asthma ED visits (age-adjusted rate per 10,000) in California, 2015-2017. Tracts overlapping 0.5-, 1-, or 2-mile radii around facilities were classified as proximate. Multivariable linear models adjusted for urbanicity, sociodemographic characteristics, healthcare access, and air pollution measures including ozone, particulate matter (PM) 2.5, and diesel PM.

Findings: At a 1-mile radius, 563 census tracts (7.0%) with about 2.8 million residents were proximate to a jail, while 457 tracts (5.7%) were proximate to a prison. Increasing jail proximity was positively associated with asthma ED rates in a dose-response manner (0.5-mile: $\beta=5.06$, $p = 0.001$; 1-mile: $\beta=3.29$, $p = 0.003$; 2-mile: $\beta=1.40$, $p = 0.08$). Prison proximity showed negative associations at close range (0.5-mile: $\beta=-4.51$, $p = 0.012$; 1-mile: $\beta=-2.54$, $p = 0.048$) but a positive association at 2 miles ($\beta=2.10$, $p = 0.018$). In a sensitivity analysis excluding census tracts containing a prison or jail, negative associations with prison proximity at 0.5 and 1 mile radii diminished; other effects were consistent.

Conclusions: Millions of Californians living near jails experience higher asthma ED rates than explained by measured covariates, with effects stronger at closer distances. Associations with prison proximity were inconsistent and may reflect census enumeration practices for incarcerated individuals. Findings suggest that residential proximity to carceral facilities is an additional understudied pathway through which mass incarceration may harm community health.

Public Health Communication and Trust

Coverage of fentanyl in nationally-circulated United States news media, July 2022–June 2025 Craig Caudill* Craig Caudill, Erin Annunziato, Evan Eschliman,

The ongoing fentanyl-driven overdose crisis in the US requires interdisciplinary intervention and remains a topic of interest in national media. We characterized the coverage of fentanyl in nationally-circulated United States news media content from July 2022–June 2025. We used the ProQuest U.S. Newsstream database to identify news media content related to fentanyl from all four nationally-circulated US newspapers (i.e., The New York Times, The Wall Street Journal, The Washington Post, and USA Today) published from July 2022–June 2025. We analyzed a random sample of 20% of articles using a directed content analysis characterizing articles' overall framing, content elements, and sources quoted/cited. We summarized results and trends by calendar quarter using descriptive statistics. Of the 283 included articles across 12 quarters, 29.7% had international relations framing, 26.2% had public health framing, 24.4% had domestic politics framing, 17.8% had crime framing, and 2.1% had another framing (e.g., movie reviews). We observed an overall increase in the number of articles from July 2022–June 2025, peaking at 48 articles (17.0% of our sample) in Q1 of 2025. Articles mentioning immigration/border security and cartels/gangs also peaked in Q1 of 2025 (35.4% and 20.5% of mentions, respectively). Stigmatizing content was present in one-third (33.2%) of all articles, half of which (49.5%) were articles with public health framing. Non-public health solutions (e.g., increasing border security, tariffs) (70.3%) were mentioned more often than public health solutions (e.g., harm reduction, expanding access to treatment) (38.5%). Nationally-circulated news media coverage on fentanyl commonly mentions immigration/border security and cartels/gangs, covers non-public health solutions, and contains stigmatizing content; this coverage may influence public perception of fentanyl and the efficacy of policies and public health interventions intended to mitigate fentanyl-related harms.

Public Health Communication and Trust

Evidence Without Authority: Demonstration Centers and the Historical Roots of Trust in Population Health Science Quinn Valier* Quinn Valier,

The difficulty population health science faces in establishing trustworthy relationships and durable influence with many communities is routinely framed as a problem of communication or recent political polarization. This paper argues that it has older and more structural roots — ones that historical analysis can make visible in ways that neither policy reform nor improved engagement practice alone can address.

Drawing on the history of public health and medical demonstration centers in the twentieth century United States, the paper traces how American public health and medicine learned to learn from communities. Demonstration centers were disproportionately sited in marginalized and underserved communities — in part because poverty and structural deprivation made causal relationships between social conditions and health outcomes unusually legible. The evidence they generated was documented and sometimes acknowledged, but rarely allowed to reconfigure broader evidentiary hierarchies or policy commitments. That asymmetry was constitutive of how the demonstration model worked, and the institutional ways of knowing that population health science inherited carried it forward. The early twenty-first century NIH Clinical and Translational Science Awards program formalized community engagement as a structural requirement while leaving relatively undisturbed the hierarchies that determined which knowledge was fit to travel.

Building trust and influence therefore requires asking not only how to engage communities better, but why the evidence those communities have long generated has so rarely been allowed to change what the field takes for granted.

Public Health Communication and Trust

Building Trust and Influence in Population Health Through Community-Centered Data
Chiharu Kato* Chiharu Kato, Shannon Laing, Kristina Talarek,

As public trust in science continues to decline, population health researchers need new ways to work with data that feels relevant, fair, and useful to communities. This presentation shares findings from an 18-month assessment of the Robert Wood Johnson Foundation's Healthy Communities data work, led by the Michigan Public Health Institute. We used multiple methods, including document review, interviews with funders and grantees, focus groups with community data leaders, and a review of published and gray literature, to understand how data projects are designed, supported, and used at both national and community levels.

We identified a strong yet fragmented data landscape. Many projects generated high-quality data and tools, especially large dashboards and academic-led initiatives, but often lacked clear connections among themselves or to community priorities. In contrast, community-based projects were more effective at building trust by focusing on local issues, using participatory approaches, and valuing lived experience alongside data. Across all perspectives, trust grew when data work was transparent, relationships were built over time, communities shared decision-making power, and "data translators" made complex information understandable and meaningful.

Community data leaders highlighted that trust isn't built only by sharing data. Instead, it grows through listening, sharing power, storytelling alongside statistics, and investing in people and relationships. They also noted that uncertain funding decisions, limited opportunities for shared learning, and a lack of support for community organizations to turn data into action challenge their efforts.

This presentation offers practical lessons for researchers, funders, and practitioners who want population health science to be more meaningful to the people it serves. We emphasize designing community-centered data efforts that balance technical quality with real-world relevance, support community leadership, and translate data into action that communities find credible, useful, and aligned with their efforts.

Methodological approaches to studying public health

Data as a Public Good: Trust, Transparency, and Technology in Population Health Marjory Givens* Marjory Givens, Hannah Olson-Williams, Keith Gennuso, Christine Muganda, Bethany Rogerson, Michael Stevenson,

Public health data platforms are vital tools for community changemakers seeking to improve population health. Yet making population-level data accessible and analytically sound while also critically challenging social, structural, and scientific norms requires navigating persistent 'data democracy' tensions around what and how information is collected, analyzed and shared publicly. These challenges have intensified in a polarized political climate and amid federal and philanthropic disinvestment in data infrastructure. At the same time, emerging AI tools expand possibilities for insights and new data sources, while also introducing risks of opacity, misuse, and compounding biases of the corpora.

County Health Rankings & Roadmaps (CHR&R), a national program committed to democratizing data for local decision-making, confronts these complexities regularly. For nearly two decades, CHR&R has worked to make data actionable for a range of county types, including rural areas and among marginalized groups where small numbers can mean unstable or unreliable estimates, or risks to anonymity with data disaggregation. CHR&R seeks a balanced approach in democratizing data through methodological transparency and employing suppression to protect privacy and avoid misinterpretation. Audiences vary widely in data fluency, thus, CHR&R invests in methods of communication that include plain-language documentation, technical assistance to support accurate interpretation, and data sharing to support usability.

CHR&R will share approaches for navigating tensions, including audience engagement to inform decisions about democratizing data, communicating uncertainty in ways that build trust, and evaluating the responsible use of emerging technologies. This presentation invites discussion on how maintaining data as a public good is both a technical task and an ethical commitment to equity, transparency, and responsible stewardship in service of healthier communities.

Structural factors

Structural Racism, Ballot Measures, and Health Anna Hing* Anna Hing,

Voter suppression is a clear example of how structural racism functions to unequally distribute both power and resources. If people cannot vote, they cannot shape the policies directly impacting the conditions in which they live – their SDOH.

One understudied factor linking voting to health are the policies that are enacted by voters or elected officials. State-level **ballot measures voted on directly by the people** without intermediary representatives, can be used to determine if structural racism, via voter suppression, is linked to more equitable (antiracist) or harmful (racist) measures being passed that shape the racialized patterning of SDOH.

Aim**. To understand how structural racism contributes to the racialized patterning of social determinants of health by examining if voter suppression contributes to more racist ballot measures being passed**.

Hypothesis: States with a higher cost of voting (voter suppression) will be associated with a higher number of racist ballot measures.

Data. All ballot measures will be identified via **Ballotpedia**. Ballot measures will be coded as "racist" if the anticipated impact is harmful to racial equity or "antiracist" if the if impact is likely to ameliorate racial inequities. The **Cost of Voting Index (COVI)** 2024 provides state-level data on barriers to voting (i.e. voter suppression). The COVI examines election laws and calculates a single score and subsequent rank for difficulty of voting in each state. The American Community Survey, freely available by the US Census Bureau, will provide state-level covariates.

Methods. For Aim 1, I will employ Public Health Critical Race Praxis (PHCRP) to code ballot measures. The COVI score 2024 will serve as the main predictor variable in a Poisson or Negative Binomial regression model in StataMP. The outcome variables will be a count of racist ballot measures and antiracist ballot measures, proposed and passed. State-level covariates will be included.

Analyses have not yet been completed.

Structural factors

Unequal beginnings, Unequal pain: Three approaches to how Welfare State moderate the relationship between childhood SES and later-life pain. Rui Huang* Rui Huang, Yuhang Li,

Pain is highly prevalent among older adults in Europe, and childhood disadvantage is a strong risk factor. Yet, evidence remains limited on whether welfare-state contexts buffer the long-run translation of childhood socioeconomic disadvantage into pain. We linked individual-level data from Survey of Health, Ageing and Retirement in Europe (2013-2021; N= 58,529) with country-level indicators from European System of Integrated Social Protection Statistics and Comparative Welfare Entitlements Dataset 2 to assess how welfare-state arrangements shape childhood socioeconomic status (cSES) disparities in moderate/severe pain among adults aged 50–95. Welfare-state arrangements were examined through three complementary lenses: welfare regimes (regime approach), social protection spending (social protection approach), and policy generosity (institutional approach). Using Poisson generalized estimating equations with cluster-robust standard errors, we tested whether cSES predicts later-life pain, whether cSES disparities change with age, and whether welfare-state characteristics moderate both the level and age pattern of the cSES–pain association. Results show a strong cSES gradient in later-life pain, and the disadvantages associated with low cSES appear consistent and persistent with age. Cross-national patterns indicate that cSES-pain associations are weakest in Scandinavian countries, stronger in Southern and Eastern European countries, and strongest in Israel. cSES disparities by age persistent in Scandinavian and Eastern countries, shrink in Bismarckain and Southern countries (with different underlying substantive meanings), and widen in Israel. Higher social protection expenditures and more generous welfare policies are generally associated with smaller cSES-related pain gaps and weaker amplification of childhood disadvantage with aging. This study underscores the buffering impacts of sociopolitical contexts.

Structural factors

Structural racism and LGBTQ+ discrimination in state policy: Associations with health and healthcare access Carolyn Fan* Carolyn Fan, Elle Lett, Stephen Mooney, Megha Ramaswamy, Wendy Barrington,

Background: Research is essential to understand not only how systems of oppression influence health inequities, but how multiple systems of oppression interact to cause these health inequities. State policy offers a way to investigate a changeable and actionable aspect of structural racism and discrimination.

Methods: This paper examines independent and joint associations between structural racism, structural cisheterosexism (i.e., LGBTQ+ discrimination), and race and sexual orientation and gender identity (SOGI) subgroups on outcomes of health-related quality of life, cost barriers to seeking healthcare, and insurance status. Data sources include 2020-2023 Behavioral Risk Factor Surveillance System data, as well as indices of structural racism (Agénor et al.'s database of Structural Racism-related State Laws for Health Equity Research and Practice) and structural cisheterosexism (Movement Advancement Project LGBTQ Policy Tally) in state policy.

Results: This study found that state policy environments—and the systems of oppression they reflect—are significantly associated with health and healthcare access across a number of race and SOGI subgroups. Living in more harmful states for (1) structural racism, (2) structural cisheterosexism, and (3) both was generally associated with significantly worse outcomes for not only BIPOC and LGBTQ+ populations, but also for White and non-LGBTQ+ people. Our results suggest a broad impact of systems of oppression; however, the most marginalized still bear a disproportionate burden of poor health and barriers to healthcare.

Impact: These findings should be used to advocate for state policy change and galvanize changemakers in academic, policy, and community. Through these results, stakeholders can explore which demographic groups are most impacted in terms of health and healthcare access. This can help partners target their policy advocacy, as well as community-based interventions.

Policy

Impacts of county-level economic support policies on rates of community firearm violence
Rafael Charris* Rafael Charris, Ellicott Matthay, Matthew Brandner, Magdalena Cerda, Ivan Diaz, Sidra Goldman-Mellor, Rita Hamad, Sharon Lipperman-Kreda, Brita Roy, Ryan Treffers,

Insecurity in housing, nutrition, utilities, and income are recognized correlates of community firearm violence, yet little research has assessed whether public policies that support access to these basic needs help prevent community firearm violence. During the COVID-19 pandemic, several counties enacted policies to mitigate the economic consequences of the pandemic by offering different types of economic supports. We estimated the impact of these policies on firearm assault injuries across 31 California counties from January 2020 to December 2022. We analyzed weekly county-level population-representative data on policies from the US COVID-19 County Policy Database, firearm assault injuries from statewide emergency department and inpatient hospitalization discharge records, and confounding variables from multiple public sources. Using modern causal inference method and adjusting for potential confounders, we compared changes in firearm assault injury rates associated with each type of policy enacted as-observed versus the rates had all counties prematurely stopped the given policy on a specified date. Across the 4,836 county-weeks of observation, the average weekly firearm assault injury rate was 0.18 per 100,000 people. Nutrition support policies were associated with lower rates of firearm assault injuries (Risk Difference [RD] per 100,000 -0.143; 95% CI, -0.099, -0.187), as were paid sick leave policies (RD, -0.079; 95% CI, -0.099, -0.059), but only for certain pandemic periods (through April 2021 and after October 2021, respectively). Housing protections, unemployment supports, other income supports, or utilities payment supports were not associated with firearm assault injuries. Associations varied by racial/ethnic group, gender, and age group. This study adds to a small but growing literature on the potential effectiveness of economic support policies in reducing community firearm violence.

Policy

SNAP Policies Matter: Food Insufficiency Among U.S. Children Tasnim Tabassum* Tasnim Tabassum, Benjamin Walker,

Supplemental Nutrition Assistance Program (SNAP) is a federal program to address food insecurity; however, it varies across states in terms of policy generosity. We examined whether state SNAP policy generosity is associated with children's household food situation after accounting for child and household characteristics, and whether state policy modifies the relationship between household poverty, SNAP receipt, and food insufficiency.
We analyzed data from 2017-2018 National Survey of Children's Health (NSCH), where children were nested within states. The outcome measures household food situation during the past 12 months using a four-level ordered scale. We estimated mixed-effects ordered logistic regression (multilevel) models with random intercepts for states. The model identifies how individual, household, and state-level factors are related to food situation. State-level exposure was the SNAP Policy Index 2014, collected from USDA. This index measures 10 policies related to SNAP eligibility, transaction costs, stigma, and outreach.
Greater state SNAP generosity was modestly associated with lower odds of child food hardship, with significant but small state-level variation (ICC=0.3%), indicating contextual policy influences. A 0.1-point increase in the SNAP generosity index was associated with approximately 1% lower odds of being in a worse food sufficiency category. Parental health emerged as a strong determinant of child food sufficiency. Children whose mothers were not in good health had 146% higher odds of worse food situations (OR = 2.46), while father absence was associated with 73% higher odds (OR = 1.73). Interaction analysis showed that the policy environment of states is not disproportionately protecting SNAP recipients compared to eligible non-recipients, and the effect appears uniform across income depth. The findings show the importance of translating the benefits of SNAP-related policies to improve children's food security.

Social/relational factors

A Life History Approach to Identifying Sources of Distress among South Asians, and Assessment of Storytelling as a Mental Health Intervention Naheed Ahmed* Naheed Ahmed, Saikat Talukder, Haroon Zafar, Sabiha Sultana, Hemalatha Naik, Sadia Obaidul, Sirazam Munira, Zakia Hossain, Klara Wichterle, Alka Kanaya, Namratha Kandula, Nadia Islam,

Introduction

The Mediators of Atherosclerosis in South Asians Living in America (MASALA) is the first longitudinal cohort study of South Asian Americans. Building on a qualitative component of MASALA, this study integrated life history interviews using a trauma informed approach to examine lifetime sources of distress. In addition to conducting these interviews, participants were invited to a storytelling workshop, which we assessed as a potential mental health intervention.

Methods

A total of 41 life history interviews were conducted with a subsample of MASALA participants with low and high depressive symptoms, focusing on their childhood, education and employment, migration to the U.S., life in the U.S., and historical and contemporary sources of trauma. Interviews were conducted in Bangla, Urdu, Hindi, and English. Audio recordings of interviews were translated and transcribed to English. Modified grounded theory was used to analyze data, including an iterative process for codebook development, double coding of transcripts, and reviewing code outputs for common and unique themes. Data were analyzed using Dedoose. Two storytelling workshops were held and evaluations conducted with facilitators and participants.

Results

Preliminary findings indicate multifaceted life trajectories. Many participants shared joyful memories of their childhood related to close relationships with family and friends, and celebrating religious and cultural holidays. Motivations for migrating to the U.S. varied among participants, such as family reunification and socioeconomic opportunities. Participants recounted painful and lasting memories from the conflicts in South Asia (e.g., communal violence, war). Preliminary storytelling workshop evaluations suggest participants thought the workshop was effective and engaging.

Discussion

These findings highlight the importance of a trauma informed approach to understanding participant experiences, and health outcomes. We are still analyzing differences between participants with low and high depressive symptoms, and have identified significant sources of trauma and resilience among participants. Preliminary findings suggest storytelling has the potential to improve mental health, and as a community-based intervention may be more acceptable to participants.

Social/relational factors

Connecting Support: Social Network Diversity, Mental Health, and Help-Seeking Among Young Asian Americans Hsiu-yu Yang* Hsiu-yu Yang,

Background
Asian American (AA) youth are less likely than their White peers to seek professional help for mental health problems, partly due to cultural stigma and model minority expectations (Lee et al., 2009; Pham et al., 2017). Instead, many rely on close friends when facing mental health challenges (Derr, 2016; Kim & Lee, 2022). However, little is known about how personal networks influence mental health service utilization. Because social ties facilitate information flow and belief exchange, I test how network attributes—such as number of friends, isolation, and diversity in racial and migration-status (1, 2, 3+ gen American) composition—may shape how AA youth perceive and utilize mental health services.

Method
I use Waves 1 and 2 of the National Longitudinal Study of Adolescent to Adult Health (Add Health). At wave 1, around 90,000 7–12th graders were asked to nominate up to ten close friends. These nominations are used to construct network measures including in-degree, out-degree, isolation, and network diversity in race and migration status. Diversity is measured with the Index of Qualitative Variation (IQV), a 0–1 index of categorical diversity. Outcomes include depressive symptoms (CES-D) and a binary indicator on past-year mental health service utilization at Wave 2. Linear and logistic regression models are estimated across racial groups, with a focus on AA youth.

Result
AA youth have the lowest in- and out-degrees among racial groups but the most diverse networks in terms of race (IQV = 0.19) and migration status (IQV = 0.27). AA also shows higher CES-D than White youth. Asian boys are less likely to seek mental health help than White boys ($p<0.01$). Among Asian boys, greater migration-status diversity in social networks increases the likelihood of seeking help (OR = 27.3, $p<0.05$) , whereas racial diversity does not.

Conclusion
Findings suggest friendship networks may play an important role in shaping mental health help-seeking behaviors among AA youth.

Race/Ethnicity

Examining mental health diagnosis as an effect modifier on multiracial Asian identity and psychological distress Tessa Pulido* Tessa Pulido, Kalani Phillips, Vivi Martinez Mendoza, Anne Saw,

Background: Asian Americans are underrepresented in mental health service utilization. Multiracial Asians (MRAs) report higher odds of psychological distress than monoracial peers yet are more likely to seek care and report better health. The mixed findings suggest racial identity fluidity may buffer risks while also create stressors. For MRAs, a mental health diagnosis may intersect with identity to shape how distress is experienced.

Objective: This study examines multiracial identity and psychological distress between monoracial Asian and MRA (Asian-White) individuals and investigates whether pre-existing mental health diagnosis modifies this relationship.

Methods: We used data from a 2021 national needs assessment on Asian Americans. The sample (*n=3,024)* included *119* Asian-White and *2,905* monoracial Asian American adults. Using multivariable linear regression, we examined mental health diagnosis as an effect modifier between racial identity (Asian-White vs. monoracial Asian) and psychological distress using PHQ-4 scores.

Results: Overall, 27.5% respondents reported having a mental health diagnosis. Unadjusted t-tests revealed a significant difference in distress (Asian-White, M=4.71, SD=30; monoracial Asian, M=4.03, SD=3.26; p=0.03); however, adjusting for sociodemographic variables revealed no significant differences. Without a mental health diagnosis, our interaction model predicted higher distress for Asian-White ($\hat{y}$=4.07) than monoracial Asian individuals ($\hat{y}$=3.53). With a diagnosis, our model predicted higher distress for monoracial Asian ($\hat{y}$=5.45) than Asian-White individuals ($\hat{y}$=4.78).

Conclusion: Asian-White identity is associated with greater distress for those without a mental health diagnosis but lower distress for those with a diagnosis. Our results suggest that psychological distress may vary by racial identity. Future research may examine how pre-existing mental health diagnoses and contextual factors shape experiences for MRAs.

Social/relational factors

Correlates of Neighborhood Social Cohesion among Latinx/Hispanics: The Multi-Ethnic Study of Atherosclerosis and Neighborhood Study Sarah Diaz* Sarah Diaz, Theresa Osypuk, Dustin Duncan,

Background: In the neighborhood and health literature, there has been extensive work on the benefits of neighborhood social cohesion (NSC) on health in general United States (US) populations. However, despite that Latinxs are one of the fastest growing populations in the US, there is limited research on what features of immigrant assimilation (such as English language proficiency and perceived interpersonal discrimination) may affect their perceptions of NSC.

Methods: We used the Multi-Ethnic Study of Atherosclerosis, a multi-site population-based study, and its ancillary Neighborhood Study collected in 2010 and 2016 to examine the association between three indicators of acculturation and assimilation proxies (i.e. English language proficiency, perceived interpersonal discrimination, and density of social engagement destinations) with perceived NSC (M=3.56, SD=0.57) using multilevel linear regression models, among Latinx/Hispanic participants. Models were adjusted for age, gender, household family income, and nativity status. Effect modification by residential Latinx-White segregation (G* statistic) was assessed in final models.

Results: Results showed that experiencing interpersonal discrimination across 2 or more domains compared to none was significantly associated with a 0.10 lower NSC score (SE=0.05, p= 0.02) among Latinx/Hispanics in the fully adjusted model. English language proficiency and density of social engagement destinations were not associated with NSC, and Latinx residential segregation did not modify assimilation-NSC associations.

Conclusion: Given the often-beneficial health effects of NSC, our findings highlight an additional avenue by which interpersonal discrimination may negatively influence not only individuals but also neighborhoods and the communities that live in them. These results also highlight the importance of integrating interpersonal discrimination into the conceptualization of research on NSC in the US.

Reproductive health

The Induction Cascade as a System Problem: Mixed-Methods Evidence from Low-Risk Births in Louisiana Dovile Vilda* Dovile Vilda, Regan A. Moss,

Background: Rising intervention use in low-risk pregnancies has heightened concerns about medicalization of birth and unnecessary procedures. Induction has increased in the US while cesarean trends have fluctuated, within racialized differences in maternity care shaped in part by racism. We assessed whether trends among low-risk births reflect system pressures and differ across racialized groups.

Methods: Explanatory sequential mixed methods: Phase 1 analyzed Louisiana birth records (2012–2024) restricted to clinically low-risk births (first birth, term, singleton, head down; no preexisting conditions or major pregnancy complications). We estimated annual prevalence and trends in induction and cesarean delivery and tested differences by race/ethnicity. Phase 2 includes 16 interviews with obstetric clinicians, midwives, L&D nurses, and doulas; transcripts were analyzed using deductive and inductive thematic analysis. Integration used joint displays linking trends to provider-described mechanisms.

Results: Among low-risk births (n=148,962), cesarean declined from 30.2% in 2012 to 23.1% in 2024, while induction increased from 37.7% to 45.0% ($p<0.05$). Induction increased most for Asian patients (26.7% to 41.9%) and Black patients (33.1% to 44.9%); White patients remained highest overall (41.7% to 47.2%). Cesarean declined across groups but remained higher for Black patients (29.4% to 23.8%). Interviews highlighted protocol timelines, quality oversight, staffing/scheduling constraints, and liability-driven risk management that normalize default escalation and an induction pathway; limited counseling time and differential flexibility by patient race/payer were also noted.

Conclusions: Louisiana low-risk births show increasing induction alongside declining cesareans, with racialized differences. Provider accounts point to modifiable system targets, including revising low-risk protocols and strengthening staffing and counseling to support shared decision-making and physiologic labor.

Reproductive health

Key Informant Perspectives on the US Abortion Care Ecosystem, Abortion Seeker Holistic Needs, and Considerations for Over the Counter Medication Abortion Laura Jacobson* Laura Jacobson, Samantha Ruggiero, Leah Scott, Ruvani Jayaweera, Caitlin Gerdts,

Background
Abortion access in the United States is shaped by an ecosystem of clinical, community, legal, policy, and funding actors. Many people rely on self-managed medication abortion (SMA) supported by helplines, pill-by-mail initiatives, doulas, abortion funds, and wrap-around practices. As formal over-the-counter (OTC) medication abortion is explored, little is known about ecosystem-level facilitators, social supports, and implementation challenges. We describe the current abortion ecosystem; characterize perceptions of abortion-seekers' holistic needs; examine how the ecosystem meets or fails to meet those needs; and identify equitable pathways to OTC medication abortion to inform policy and practice.

Methods
We conducted a qualitative study using semi-structured key-informant interviews. We recruited 23 experts from sexual and reproductive health, rights, and justice organizations across the United States via purposive sampling, drawing on professional networks to capture diverse perspectives and roles across the ecosystem. We included clinicians (clinic-based and wrap-around practices), pill-by-mail programs, full-spectrum doulas, abortion funds, national hotlines, reproductive-justice organizations, and legal and policy advocates. Participants worked nationally and in 28 states, with many based in restrictive Southern and Midwestern regions. Interviews explored the abortion landscape, holistic needs, perceived facilitators, barriers, and equity safeguards for OTC medication abortion. Interviews were recorded when permitted, transcribed, de-identified, and analyzed using thematic analysis with a combined deductive (ecosystem domains) and inductive approach.

Results
Interviewees described a strained but resilient abortion ecosystem delivering clinical care, information, logistical, legal, and financial support across the access continuum. Roles included traveling clinicians and wrap-around practices, pill-by-mail initiatives, full-spectrum doulas, hotlines, abortion funds, and advocacy groups working in concert to guide people before, during, and after abortion. We identified layered, intersecting holistic needs that shape decision-making and delays: practical information, cost and lost wages, transportation and childcare, legal risk and criminalization fears, immigration enforcement, emotional care, intimate-partner violence, follow-up access, stigma, and needs such as housing and food. Parents, Black and Latinx communities, LGBTQ+ people (including trans-masculine clients), immigrants, youth, rural residents, people with disabilities, and those living in poverty faced amplified barriers. The ecosystem meets needs through curated information tools, shield-law virtual care, practical and financial support, peer accompaniment, provider legal protocols, and policy advocacy. Yet capacity limits, chilling effects of information-sharing, judgmental spaces, harmful media narratives, clinic rules that exclude children, and clinic deserts persist. OTC medication abortion was widely viewed as a "game-changer" that could shrink logistical burdens if paired with plain-language instructions, multilingual hotlines, accompaniment, and clear guidance on follow-up and legal rights. Concerns about OTC centered on patchwork legality, pharmacy harassment, age/ID verification, coercion, and clinic financing.

Conclusion
Abortion seekers need straightforward, multilingual information on options and legality; affordable

care and practical help (funding, travel, childcare, time off); follow-up support; accessible clinical/legal advice; digital privacy; protection from criminalization and immigration enforcement; non-judgmental emotional and peer support; and accessible, culturally affirming services for parents, youth, rural residents, disabled and LGBTQ+ people. Sustainable funding is needed to expand ecosystem capacity. OTC medication abortion may ease burdens in a supportive legal environment that is embedded within these supports.

Health care/services

Do Racial Microaggressions in Prenatal Care Settings Predict Poor Quality Prenatal Care for Black/African American Women? Habibah Ijaiya* Habibah Ijaiya, Dawn Misra, Jaime Slaughter-Acey,

Background: In the United States, Black/African American (AA) women face significant health disparities, including higher rates of Adverse Pregnancy Outcomes (APOs). This is despite increased utilization of prenatal care (PNC) over time, which is a critical intervention for identifying and managing pregnancy-related complications. While most research has focused on PNC entry, less attention has been given to the quality of PNC received. This study investigates the association between perceived racial microaggressions during PNC and perceived quality of PNC among AA women.

Methods: Data were drawn from 448 AA women enrolled in the ongoing Life Course Influences on Fetal Environments-2 (LIFE-2) birth cohort in Metropolitan Detroit, Michigan. Racial microaggressions during prenatal care were measured using the Daily Life Experiences–Prenatal Care (DLE-PNC) scale and categorized using the sample median (≥31 vs. <31). Quality of prenatal care (QPNC) was assessed using the Quality of Prenatal Care Questionnaire and dichotomized at the median score (≥122 vs. <122). Binomial regression with an identity link was used to estimate risk differences (RD).

Results: About half of women reported poor QPNC (scores <122). In the unadjusted model, women experiencing more frequent racial microaggressions (DLE-PNC ≥31) had a 19 percentage-point higher probability of poor QPNC compared with those experiencing less frequent microaggressions (RD = 0.19; 95% CI: 0.08–0.30). After adjusting for potential confounders, women experiencing more frequent racial microaggressions had a 12–percentage-point higher probability of poor QPNC (RD = 0.12; 95% CI: 0.01–0.24).

Conclusions: Addressing racial microaggressions in PNC is essential to advancing the quality and equity of care experienced by AA women. Future research should move beyond measures of PNC initiation to incorporate women’s experiences of care quality throughout pregnancy.

Public Health Communication and Trust

How Adolescents Interpret Contraceptive Content on Social Media: A Multi-State Qualitative Study April Bell* April Bell, Sativa Banks, Subasri Narasimhan,

Background:
For many adolescents, social media serves as a routine source of health information. While prior research has documented exposure to online contraceptive content, less is known about how adolescents describe interpreting and integrating that content into their thinking about prescribed birth control. Examining youth accounts can clarify how digital information environments shape contraceptive meaning-making.

Methods:
We analyzed open-ended responses from 596 adolescents (mean age 19.9 years, SD 2.55) residing in 50 U.S. states and Washington, DC. The sample included 301 females (50.5%), 215 males (36.1%), and 80 gender-diverse youth (13.4%); 10.6% identified as Black, 15.6% Asian, 9.1% multiracial, and 13.2% Hispanic. Participants responded to the question: “How has social media affected your thoughts about prescribed birth control?” Using inductive thematic analysis, we identified recurring patterns in how adolescents describe encountering and evaluating contraceptive content.

Results:
Three patterns were prominent. First, participants frequently described exposure to narratives emphasizing side effects and hormonal harms, which shaped perceptions of risk. Second, adolescents highlighted the role of peer-generated content—including influencers and comment threads—in establishing informal norms about what forms of contraception are viewed as acceptable or “natural.” Third, many respondents described navigating conflicting or mixed messages, expressing uncertainty about how to assess credibility. Although some participants reported increased awareness of contraceptive options, accounts of cautionary or negative content were more common.

Conclusions:
Adolescents in this multi-state sample describe social media not only as a source of contraceptive information, but as a context in which meanings about risk, acceptability, and safety are negotiated. Public health efforts aimed at improving adolescent sexual and reproductive health may benefit from engaging with how youth interpret digital contraceptive narratives, rather than focusing solely on information provision.

Reproductive health

“I needed to be my own provider”: A Qualitative Exploration of IUD Insertion Pain, Patient-Provider Trust, and Healthcare Navigation Muna Hassan* Muna Hassan, Madeline Mahoney, Asha Hassan,

In recent years, a surge of social media posts on TikTok has brought public attention to people’s experiences with IUD insertion pain, with some users documenting their procedures and sharing narratives of unexpected or severe pain. These stories may be contributing to growing mistrust in medical providers and contraceptive technology. The goal of this study is to examine how the experiences of a painful IUD insertion influence future reproductive and contraceptive decision-making and their trust in healthcare providers. We conducted semi-structured qualitative interviews (n=30) between October 2025 and January 2026 with people who experienced a painful IUD insertion between six months and two years ago. Recruitment flyers were posted in reproductive health clinics in the Twin Cities metropolitan area. Interviews were analyzed using the Sort and Sift, Think and Shift qualitative analysis method.

Interview participants were median age 26; 93% nulliparous; 57% monoracial white; 80% women or cisgender women. Majority of participants reported feeling underprepared for the pain they experienced during insertion. Direct and honest communication from healthcare providers, an established relationship with their provider, and being offered pain management options all contributed to a more positive IUD insertion experience. Factors that contributed to more negative IUD insertion experiences included multiple insertion attempts, presence of or insertion by students or trainees, and unclear or unempathetic communication. Some participants expressed increased medical mistrust and self-advocacy in healthcare settings after their experience with a painful IUD insertion. Clinicians should practice clear communication about IUD insertion pain, the adjustment period, and IUD side effects. Painful IUD insertions and negative experiences with contraceptive side effects may increase medical mistrust, wariness of contraceptive technologies, and ability to self-advocate in healthcare settings.

Race/Ethnicity

Suicide-Related Hospitalizations Among Black Residents Following the Decline of Stop-and-Frisk in New York City Parvati Singh* Parvati Singh,

Racially targeted policing practices may increase psychological stress and adverse mental health outcomes among Black populations. Emblematic of these patterns, New York City's police department's (NYPD) stop and frisk practices generated widespread concern that led to the class action lawsuit Floyd v. City of New York, which challenged their constitutionality and preceded major changes in NYPD hyper surveillance patterns. NYPD stop and frisk volume declined rapidly following the filing of the Floyd lawsuit in 2012, and a federal court declared the practice unconstitutional in 2013. We examined whether this period of rapid decline NYPD's stop and frisk practice corresponded with reductions in suicide related hospitalizations among Black populations in New York City (NYC).

We used data from the Healthcare Cost and Utilization Project State Inpatient Database for all New York (NY) state counties from 2006 to 2015. We defined the outcome as county-year counts of hospitalizations for suicidal ideation or self-harm. We conducted a difference in difference in difference analysis using conditional fixed effects Poisson regression models. We defined the five NYC counties as the treated group and all other NY counties as the comparison group. We defined the post treatment period as years beginning in 2012. We estimated the triple difference coefficient by interacting the treated group, post period indicator and Black race indicators. Controls included unemployment, poverty, insurance coverage, and arrest rates.

We observed a 14.5 percent reduction in suicide related hospitalizations among Black residents in NYC during the post period relative to other NY counties and non-Black populations (IRR 0.85; 95% CI 0.83, 0.89). Event time models showed that the outcome decline appeared in the first post treatment year and strengthened in later years.

Reduction in NYPD's racialized hyper-surveillance preceded a reduction in suicide-related hospitalizations among Black populations in NYC.

Migration

The Protective Benefits of Collective Organizing in a Latin American Immigrant Community Kyle Machicado* Kyle Machicado, Jhumka Gupta, Bethany Letiecq, Maribel Tohara Nakamatsu,

Background: The forces of structural racism and legal violence including deportation and family separation have significant influence on the health of immigrants. Research suggests that collective organizing is a critical tool to disrupt the impacts of anti-immigrant, racialized, and gendered legal violence.

Purpose: This study seeks to examine how collective organizing empowers immigrants to actualize better health and well-being.

Methods: Using a community-based participatory research approach, we conducted an exploratory mixed-methods, sequential study design. We conducted four focus group discussions with community advisory board members to develop a conceptual model for how community organizing promotes well-being and health. These findings informed the development of a survey administered to Latin American immigrants in the Washington, DC-area (n=103) to quantitatively examine how collective organizing impacts health and well-being.

Results: Focus groups highlighted how community organizing leads to feelings of accomplishment, solidarity, and power. Survey respondents had positive views of collective organizing, highlighting its role in improving community strength, political power, knowledge on rights, information dissemination, and confidence while reducing fear, loneliness, and isolation. Higher participation in collective organizing was associated with greater levels of reported hardship including physical and mental health, living expenses, unemployment, anti-immigrant sentiment, and fear of family separation.

Conclusion: These findings highlight the protective benefits of collective organizing in an immigrant community. While participants highly engaged in organizing reported worse health and greater socioeconomic challenges, this may indicate that immigrants turn to organizing for support and solidarity when faced with adversity. These findings highlight collective organizing as a potential tool for supporting immigrant physical and mental health.

Migration

Labor, Gender and Mental Health: Arab American Women's Lived Experiences of Wellbeing, Power and Resistance Sima Bou Jawde* Sima Bou Jawde, Carmel Salhi, Danielle Crookes, Alisa Lincoln,

Background Increasing violence in foreign policies and imperialism abroad, as in the "War on Terror," has impacted the racialization of Arab Americans' in the US along religious and gendered lines. This has implications on Arab American women's engagement in the labor market and their gender roles within families, yet, their health experiences remain unexplored in population health. This study asks: How do Arab American migrant women navigate gendered labor and family functioning, and how do these experiences shape their and their families' health?

Methods This qualitative study recruits Arab American migrant women in the greater Boston area. Following years of volunteering and key interviews with community leaders in Center for Arab Culture, World Lebanese Cultural Union, and Muslim Justice League, I designed a complex sampling strategy across three settings (churches, mosques, and cultural venues) and two migration periods (pre- and post-9/11), to capture the plurality of populations' experiences. I aim to recruit 40–50 participants who have both held paid work and have family caregiving responsibilities. Semi-structured interviews on the themes of labor, gender and migration are conducted in Arabic, English, or French, audio-recorded, transcribed, and analyzed using NVivo.

Preliminary Results Recruitment and interviews are currently underway through Spring and Summer of 2026. Early themes include tensions between workplace exploitation and caregiving burdens, experiences of discrimination shaping employment, and community-based activism as power reclaimant countering collective psychological distress.

Significance This study fills a critical gap in migration health scholarship while directly serving Arab American communities. By centering women's accounts of paid/unpaid labor and their role in Arab American families, findings will equip communities with evidence to support labor organizing and community building strategies impacting health of population. Awarded the Philip Kayal Grant for Arab American Research, this work exemplifies IAPHS's 2026 theme: Rigorous research building trust across communities and driving change through praxis.

Mental health/function

What Kinds of Harmful Content Do Teens Actually See on Social Media? Objective Evidence from a Representative Sample of Teens' Screen Recordings, Surveys, and App-Level Screen Time Data Marie Bragg* Marie Bragg, Zora Hall, Emil Hafeez, Roxanne Dupuis,

Exposure to harmful content on social media has become a growing public health concern, yet few studies have directly measured what large samples of adolescents encounter on their actual social media feeds. This study integrates objective screen-time metrics, screen recordings of real social media use, and survey data to provide granular and unprecedented insights into adolescents' exposure to problematic content across platforms—and how teens interact with such content.

Participants were recruited from an opt-in national research panel with demographic quotas to reflect state populations. In Wave 1, 175 teens from Texas completed a survey assessing demographics, social media use, and mental health and uploaded screenshots of their weekly smartphone screen-time reports. A randomly selected subsample of 80 teens also uploaded at least one hour of screen recordings showing their typical social media use. Trained coders analyzed the videos and categorized problematic content using a coding framework derived from major platform safety guidelines: profanity/crude humor; violence/criminal behavior; sexual abuse/violence; harassment/bullying; suicide/self-harm; depression; disordered eating or risky weight management; dangerous challenges; sexualized content; graphic content; hate speech; and other concerning material.

Most teens reported concerns about their own use: 68.6% said they use social media "too much," and 53.5% reported unsuccessful attempts to cut back. Objective screen-time data showed teens spent an average of 4.83 hours per day on their top five apps, with TikTok the most used platform (1.53 hours/day). Among the 80 teens whose actual feeds were analyzed, 93.8% were exposed to at least one instance of problematic content. Across 85.9 hours of recorded social media use, coders identified 1,431 posts containing problematic content—an average of 16.6 such posts per hour. Profanity/crude humor was most common (59.5%), followed by sexualized content and dangerous activities (11.5% each), shocking and graphic content (6.6%). TikTok accounted for the majority of problematic posts and had the highest number of instances across most content categories, including suicide and depression-related content. We are analyzing data on how many teens liked, commented on, or shared problematic content.

These findings provide rare objective evidence of the volume and types of concerning content appearing in adolescents' social media feeds, and how they self-report their own problematic use—along with unprecedented insights into how teens like, comment, and share harmful content—with implications for platform governance, youth mental health, and emerging digital safety policies.

Reproductive health

Examining the Association between Stillbirth and Depression in Subsequent Pregnancies
Rebecca Woofter* Rebecca Woofter, Mark McGovern, Slawa Rokicki,

In the U.S., over 20,000 pregnancies result in fetal demise at 20+ weeks of gestation, also known as stillbirths. Existing literature has shown that those who experience stillbirths are at risk of depression following the stillbirth, but less is known about mental health in subsequent pregnancies. In this population-based retrospective cohort study, we examine the association between prior birth outcome (livebirth vs. stillbirth) and perinatal depression in the subsequent pregnancy.

We analyzed linked data for all birth records and hospital discharge records in New Jersey from 2016-2021. Stillbirths were identified in hospital records through ICD-10 diagnosis and procedure codes. Depressive symptoms were assessed in the immediate postpartum period based on scores of 10+ (out of 30) on the Edinburgh Postnatal Depression Scale (EPDS). New Jersey mandates screening with the EPDS in the hospital after delivery and prior to discharge and screening results are recorded on birth records. We compared EPDS scores for those who had a stillbirth followed by a live birth (N=463) with those who had a live birth followed by a live birth (N=175,401) using multivariable logistic regression.

While 3.6% of those with a prior live birth had depressive symptoms, 6.3% of those with a prior stillbirth had depressive symptoms. After matching those in each group by maternal sociodemographic (e.g., race/ethnicity, age, education) and health characteristics (e.g., delivery type, preterm birth, hypertension), those with a prior stillbirth had 52% higher odds (95%CI: 1.04-2.22) of depressive symptoms.

These findings demonstrate that those with prior stillbirths may be at greater risk of depression in a subsequent pregnancy. Identifying and treating perinatal mental health conditions is a key priority to improve maternal and infant health. Healthcare providers should ensure that patients with prior stillbirths are screened for mental health conditions and referred for treatment as needed.

Structural factors

The health impacts of neoliberalism within the United States: A scoping review of the definitions, & analytic frameworks utilized, and the health processes and outcomes considered within the public health literature Maren Spolum* Maren Spolum,

Public health research identifies the structural determinants of health as the factors that have the greatest impact on population health outcomes and health inequities. Neoliberalism has been the dominate political-economic system in the United States since the 1980s. Noting that U.S. life expectancy began to deviate from other high income peer nations also beginning in the early 1980s, for over a decade, population health scientists have been calling for investigations into the health impacts of neoliberal changes to U.S. political economy around that time period. While in the last two decades there has been a marked increase in scholarship on the health impacts of neoliberalism, it is unclear how much of that literature has focused on United States, as no know literature review focused specifically on this topic has been conducted. In this presentation I will review the results from a scoping review conducted to assess the body of scholarship focused on how neoliberalism has impacted health within the United States. Through database searches of the public health literature, I identified 87 articles published between 1987 and 2025 for inclusion. I will present my findings regarding: the range of definitions offered of neoliberalism, the analytic frameworks guiding the studies, the health processes that neoliberalism was proposed to impact, and outcomes across the studies. I will also offer an assessment of the gaps in this literature, particularly around the relationship between neoliberalism and social-structural patterning of health inequities in the U.S., and directions for future work.

Structural factors

Linkages between Educational Context and Biological Risk Factors of Alzheimer's Disease and Other Related Dementias (ADRD) among Early Midlife Americans Taylor Hargrove*
Taylor Hargrove, Heming Pei, Jessica Polos, Chantel Martin,

Educational attainment strongly predicts later life cognition and mediates Black-White disparities in ADRD, yet little is known about the quality and context of schooling that shape the educational experience. Historical and contemporary processes of structural racism may differentiate the educational contexts of Black and White students, creating unequal educational pathways to ADRD risk. We examine the relationship between adolescent educational contexts and biological risk factors for ADRD among Black and White early midlife adults and assess whether educational attainment mediates this relationship.

Using Waves I (1994-95) and V (2016-18) of the National Longitudinal Study of Adolescent to Adult Health, we developed two indices of adolescent educational context: 1) a contextual disadvantage index (CDI), reflecting differences in resources/opportunities between schools, and 2) a structural racism index (SRI), capturing Black-White inequities across resources/opportunities within schools. Indicators spanned student background characteristics, school characteristics, academic performance, academic selectivity, school connectedness, and perceived life chances. Outcomes (Wave V) included three epigenetic clocks (PhenoAge, GrimAge2, DunedinPACE) and 4 inflammatory markers (C-reactive protein (CRP); IL-6; IL-10; tumor necrosis factor-a). Weighted regression models and causal mediation analyses were used.

Attending schools with more disadvantages (e.g., higher CDI) was associated with faster epigenetic aging and higher IL-6 among Black and White respondents, and higher CRP and TNF-a among White respondents. Attending schools with greater Black-White inequities (e.g., higher SRI) was linked to decelerated epigenetic aging and lower CRP. Significant CDIxSRI interactions indicated faster epigenetic aging among those who attended contextually disadvantaged schools with lower Black-White inequities. Educational attainment explained between 31-60% of these associations.

Structural factors

The association of labor market institution premium generosity and birth outcomes in the US Megan Reynolds* Sine Grude, Sine Grude, Rita Hamad, Emily Dore,

Individuals experiencing poverty are more likely to have worse birth outcomes than higher income peers. The labor market context (e.g., minimum wage, unions) varies across states and has the potential to impact disparities in health by providing resources for workers. However, little is known about the combined effect of labor market institutions on birth outcomes. To fill this gap, we constructed a composite measure of indicators of state-level support for workers, or what we term the labor market institution premium (LMIP). More specifically, the LMIP was constructed for each state-year, representing the added value of minimum wage, union wage premiums and unemployment insurance compared to federal minimum wage. Using birth certificate data across all 50 states from 2003 to 2019 (n=64,247 ,739), we assessed the relationship between the LMIP and birth outcomes, including measures of gestational age and birthweight. We conducted multivariate linear regression with fixed effects for year and state with a one-year lag (i.e., aligns with the pregnancy period) and two-year lag between exposure and birth for the full sample and subgroups stratified by educational attainment. For the one-year lagged model, we found no association between LMIP score and birth outcomes. For two-year lagged models, we found that a one unit change in LMIP increases birthweight by 8.87 g [95% CI 1.43, 16.31]. For education subgroups, we found that the increase in birthweight is largest among groups with lower education (9.78 g [95%CI 2.94, 16.62] for less than high school, 9.64 g [95% CI 2.21, 17.08] for high school). The findings suggest that labor market institution generosity was associated with higher birthweight when exposed during the preconception period. However, null findings for other outcomes suggest that these institutions may not reach the intended recipients or may not be generous enough to alleviate poor birth outcomes for the working poor.

Structural factors

Shifting Labor Share and the Social Distribution of Health Megan Reynolds* Megan Reynolds, Jerzy Eisenberg-Guyot, Tom VanHeuvelen,

The power of workers relative to employers has been theorized as a crucial determinant of population health and health inequities. However, the relationship has seldom been directly studied, in part because quantitative measures of such power relations are scarce. The labor share of income, or the amount of economic output paid as workers' compensation (versus employers' profits), has been used in sociologic and economic research as an indicator of working-class power. However, it has seldom been used in public-health research. Thus, we linked state-level labor-share data from Stansbury (defined as state-level labor compensation over state-level gross domestic product) to 1982-2016 Panel Study of Income Dynamics data on respondents ages 25-64. Our outcomes included incident psychological distress (K6>5), poor/fair self-rated health, and all-cause mortality. Confounders included sociodemographic variables measured at baseline and time-varying individual- and state-level employment-related variables measured throughout follow-up. Using g-computation to address time-varying exposure-confounder feedback, we contrasted the effects on cumulative incidence of the outcomes of a high labor-share scenario, in which labor share in each year of follow-up was set to the maximum observed state-level value, with the effects of a low labor-share scenario, in which labor share in each year of follow-up was set to the minimum observed state-level value. Next, we estimated how the scenarios' effects varied by respondents' baseline social class, proxied by respondents' self-employment and occupational status. Finally, we estimated how social-class inequities in health would have narrowed if labor share had remained at baseline levels over follow-up. Forthcoming findings will support emerging research connecting worker power to population health and health inequities.

Structural factors

Structural Determinants of Intimate Partner Violence: Evidence from Structural Equation Modeling of Alaska BRFSS Data Mary Wingert* Mary Wingert, Betty Bekemeier, Avanti Adhia, Oscar Olvera Astivia,

Purpose: Examine population-level risk and protective factors associated with intimate partner violence (IPV) in Alaska to inform prevention efforts.

Background: Alaska consistently reports some of the highest IPV rates in the United States; approximately 70% of women report experiencing physical violence, psychological aggression, or coercive control by an intimate partner in their lifetime. IPV is associated with elevated risks for chronic physical and mental health conditions and imposes substantial economic costs on individuals and communities.

Methods: To examine population-level determinants of IPV, four years of Alaska Behavioral Risk Factor Surveillance System (BRFSS) data with IPV measures were used (2012, 2017, 2020, 2023). First, ordered-categorical exploratory and confirmatory factor analyses were conducted to identify and validate latent constructs representing modifiable determinants, including health status, healthcare access, economic stress, and substance use. Structural equation modeling was then used to examine relationships among latent determinants and IPV victimization. Demographic characteristics (e.g., age, race, rural residence) were included as covariates. Longitudinal measurement invariance was evaluated across survey years to assess whether constructs retained comparable meaning.

Results: In preliminary structural equation modeling using 2023 Alaska BRFSS data (analytic n = 463), economic stress was strongly associated with poorer health status ($\beta = 0.60$). Both economic stress ($\beta = 0.25$) and poorer health status ($\beta = 0.23$) were associated with greater IPV victimization.

Conclusions: Findings suggest that structural economic vulnerability may shape IPV risk both directly and indirectly through health-related pathways. Identifying population-level, modifiable determinants of IPV can inform upstream prevention strategies and support public health policies and interventions aimed at reducing IPV and its health consequences in Alaska.

Public Health Communication and Trust

Digital social influencer messaging reduces infection burden and modifies epidemic lag in group-structured populations Aja Sutton* Aja Sutton, Adam Z. Reynolds, Matthew A. Turner, James Holland Jones,

Epidemics are systems of coupled contagion: the interaction between the social contagion of behavior and disease transmission. With increasing digital connectivity, the mode and contexts of social contagion and learning is changing. Now, many people can instantaneously interact with socially homogeneous networks that can include digital (social media) influencers. Many of these influencers have developed significant followings, with some espousing, e.g., “anti-vax/mask” sentiment. Yet, formal models have yet to test the intuitive hypothesis that messaging from these influencers is sufficient to generate tangible, real-world effects on population-level epidemic outcomes. For the first time, we develop an agent-based model of coupled contagion that incorporates digital influencers into an epidemic scenario to test hypotheses about how competing influence messages can affect the diffusion of health-protective behaviors throughout a population, and thereby alter the course and outcome of infectious disease epidemics.

In coupled contagion systems where behavior and disease both diffuse endogenously throughout the population, influencers play a unique role — especially for novel epidemics when people are behaviorally naïve. At the macro-level, a population’s behavior can be affected by policy and public health messaging. At the micro-level, individual social learning depends on local and personal connections in social networks. Influencers, however, exist in a meso-level position: though they are highly unlikely to influence the entire population, they gain greater-than-average influence in the population by growing a social following (e.g., via sociopolitical identity), and thus have influence not only through their direct messaging, but also by shaping opinion and group identity in ways that structure the environment for social learning. We test epidemic scenarios of coupled contagion across two social conditions known to shape epidemics: homophily and out-group aversion. We find influencers can affect both individual behaviors and contribute to persistent behavioral differences between groups. These trends were strongest when social polarization was high. Health-protective messaging was able to protect the total population even in the presence of anti-protective influence.

Public Health Communication and Trust

Public Perceptions of Health Messaging Through Social Selling Evangeline Pang* Evangeline Pang, Anna Decesare, Margaret Tait,

Multi-level marketing (MLM) and “social selling” business models are widely used to promote health and wellness products in the United States. These models rely on personal networks, relational trust, and digital platforms to disseminate product information. While companies using these models become increasingly mainstream, little is known about how the public perceives the credibility of their health-related claims. Studying how credibility is viewed in these contexts is essential to population health efforts aimed at rebuilding trust in public health science, particularly in areas where relational networks increasingly shape health beliefs and decision making.

We fielded a pilot survey in June 2025 among U.S. adults recruited through Prolific. The survey measured familiarity with and personal or relational experience in social selling, along with broader trust in health information. Participants were randomly shown a mock health product advertisement framed as originating from either an independent social seller or a traditional retail brand. Then, respondents evaluated the credibility messaging and reported behavioral intentions. The pilot data shaped refined survey measures; the full study will be fielded among a larger U.S. sample in March 2026.

In the pilot sample (n=21), perceptions of trustworthiness varied, with most respondents rating social selling health claims as slightly or moderately trustworthy. One-third reported personal participation in social selling, and two-thirds reported exposure through close friends or family. Reactions to the mock ad showed both interest and skepticism. Responses most frequently identified public health officials as trusted messengers. Data from this pilot shaped our current survey questions, though they are similar.

This research shows how socially mediated health messaging shapes credibility perceptions in a digital information age. As health claims circulate through relational networks, population health science must account for how trust is formed outside institutional settings.

Public Health Communication and Trust

How is Trust in Public Health Authorities Conceptualized and Measured in the Context of U.S. Public Health Crises? A Systematic Review Samantha Kloft* Samantha Kloft, Daniel López-Cevallos, Jung Hee Hyun, Elizabeth Bertone-Johnson, Airín Martínez,

Trust in public health authorities (TiPHA) is critical for effective public health preparedness, yet there is limited consensus on how trust is defined or measured. Inconsistent conceptualizations hinder efforts to compare findings, evaluate interventions, and strengthen relationships between communities and public health agencies. Hence, the present study evaluated how TiPHA is conceptualized and measured. A systematic review following PRISMA guidelines identified studies examining TiPHA across multiple disciplines, including peer-reviewed and gray literature. Eligible studies defined or measured TiPHA in the context of public health emergencies, ranging from pandemics to natural disasters and biological/chemical threats. Forty-three studies met inclusion criteria; 70% (30/43) provided a definition of trust and 81% (35/43) included at least one measure. Definitions varied widely and were often implicit. Competence was the most frequently referenced dimension (25 studies), while dimensions such as integrity, transparency, and fairness appeared inconsistently. Most research was conducted with general adult populations (33), with relatively little attention to specific, emergency-affected communities or public health practitioners. Studies most often assessed trust in federal agencies, with state and local authorities referenced less frequently. Measurement approaches varied substantially and included single-item ratings, multi-item scales, “most trusted source” questions, and qualitative assessments. Most quantitative studies relied on non-validated measures or did not report psychometric properties. These findings demonstrate substantial conceptual and methodological inconsistency in how TiPHA is defined and measured. The review synthesizes definitions and measurement approaches and offers recommendations to support more consistent definitions and standardized measures of TiPHA, advancing future research and trust-building efforts in public health preparedness.

Public Health Communication and Trust

Erosion of trust in the federal government's measles response: Findings from a national survey of US parents Kristin Goddard* Kristin Goddard, Mallory Ellingson, Katherine Kritikos, Kathryn Kennedy, Benjamin Kahn, Melissa Gilkey, Noel Brewer,

Significance. Ongoing US measles outbreaks threaten to again make the disease endemic. Effective mitigation of infectious disease outbreaks often relies on the public's trust in public health response efforts. We sought to understand how trust in the federal government's ability to control measles outbreaks has changed since the beginning of 2025, when measles began circulating widely in the US.

Methods. We conducted a nationally representative survey of 1,315 adult parents of children (ages 9-12 years) in May 2025. The online, cross-sectional survey assessed how much trust in the federal government's ability to control measles outbreaks had changed since the start of 2025. The outcome of trust was categorized as less trust versus unchanged or more trust. We examined the association of less trust in government response with parent characteristics using logistic regression.

Results. Nearly half of parents (47%) reported less trust in the federal government's ability to control a measles outbreak, with 28% reporting "much less" trust. Consistently liberal-leaning parents were more likely to report less trust in the federal government response compared to consistently conservative-leaning respondents (84% vs. 36%, $p<0.05$). About half of parents from the Midwest (54%), West (52%) and Northeast (51%) reported less trust compared to 40% of respondents from the South (all $p<0.05$). Parents with a bachelor's degree or higher were more likely to report less trust than those with some college or less (57% vs 38%, $p<0.05$).

Conclusions. Our findings suggest an erosion of parents' trust in the federal government's ability to control measles outbreaks. The decrease was strongest among liberal and more educated parents. This lost trust could limit federal health authorities' ability to control the ongoing measles outbreaks.

Public Health Communication and Trust

How recent changes in public policy and scientific funding have shaped career decision-making among US public health trainees Beth Stelson* Elisabeth Stelson, Matthew Lee, Mary Kathryn Poole, Uzoma Asiegbu, Erica L. Kenney, Sarah N. Bleich, Eric Rimm,

Background: The US is at risk of losing a generation of the public health workforce with advanced methodological training. For many years, individuals with doctoral-level training have exited public health. Recent, large-scale changes to federal policies and scientific funding during the Trump Administration may worsen early career public health workforce attrition. Ensuring a robust public health workforce with advanced training is critical to protecting Americans' health.

Objective: To ascertain how recent policy changes to health, education, and scientific funding shape career decisions of advanced public health trainees (doctoral candidates, postdocs).

Methods: We are currently conducting 40 semi-structured Zoom interviews of trainees, purposively sampled from programs of public health in the U.S. Transcripts will be double-coded in NVivo15, used to calculate intercoder reliability (κ=0.60). We will employ an immersion-crystallization approach to conduct thematic analysis.

Preliminary results: To date, we have interviewed 19 doctoral candidates and 13 postdocs from 17 institutions located in 13 states of differing political leanings. Preliminary analysis indicates that while trainees intend to search for public health jobs, most expressed substantial uncertainty securing employment. Participants reported federal scientific funding and immigration restrictions—at times coupled with state education policies and censorship—reduced psychological safety and employment opportunities. Some participants described redefining future public health employment to include jobs in non-public health industries, which may have positive public health impacts, while others report shifting research to match ideological and funding restrictions. Participants emphasized how recent policy changes exacerbate longstanding training difficulties, namely limited training in scientific and public communication and grant writing; precarious employment as trainees; and inconsistent mentorship.

Conclusion: Recent federal policy shifts are driving many doctoral-level public health trainees away from public health careers, severely weakening the pipeline of advanced public health talent. Dedicated efforts are needed to support and retain an effective, advanced public health workforce and improve longstanding higher education training practices.

Methodological approaches to studying public health

Mixed Methods Mapping of Armed Group Violence in Buenaventura, Colombia Kati Hinman* Kati Hinman,

Background: Research on armed conflict, community violence and health is extensive, yet gaps remain in understanding how criminal armed groups, as key perpetrators, selectively commit violence and how their social control of communities impacts health.

Methods: This mixed-method research examines the causes, geospatial scope, and population-level impacts of armed group violence in the city of Buenaventura, Colombia, conceptualized and conducted with CONPAZCOL, a network of indigenous, Afrodescendent, and farming communities impacted by the Colombian conflict. Three data sources were triangulated to examine reported and perceived patterns of violence in Buenaventura from 2010 to 2023: 1) Geospatial police crime data by neighborhood; 2) key informant interviews (KIIs) with local officials, social leaders, and NGO representatives; 3) community mapping sessions with CONPAZCOL communities identifying areas residents considered safe and unsafe and safety strategies.

Results: Crime data, KIIs, and community mapping identified overlapping and distinct areas of elevated violence. Police data showed hotspots downtown, which KIs attributed to increased reporting and police presence in a higher income area. KIs reported that violence clustered by waterways armed groups used for drug trafficking.

Conclusion: The combination of police crime data, KIIs and community mapping presents a nuanced and layered examination of ‘official’ violence, perceived violence, and invisible violence, as well as highlighting strategies to avoid violence victimization.

Place/Communities

Neighborhoods as Indicators of Structural Untrustworthiness and Pathways to Medical Mistrust Jennifer Richmond* Jennifer Richmond, Amanda Y. Kong, Sandy Aguilar-Palma, Lilli Mann-Jackson, Ashley Strahley, Laura McDuffee, Tara S. Strigo, Carla Mena Arredondo, Shaniqua Lewis, Nadine Barrett, Clarissa Diamantidis,

Introduction: Research on healthcare trustworthiness has largely focused on clinical interactions, overlooking how encounters with non-health institutions in neighborhoods may shape medical mistrust through spillover effects. Little work has centered community perspectives on how neighborhood institutional experiences relate to healthcare trustworthiness.

Research Question: How do neighborhood institutions influence the trustworthiness of healthcare providers and systems?

Methods: We conducted six focus groups (N=72) with residents in Winston-Salem, NC. Using inductive–deductive thematic analysis, we examined how residents depicted neighborhood conditions, interactions with health and non-health institutions, and healthcare expectations.

Results: Participants described uneven neighborhood infrastructure, safety, and service access as indicators that communities defined by race, ethnicity, socioeconomic status, and zip code are deprioritized “by design.” Experiences with non-health institutions such as police, government, housing, and transportation informed broad institutional expectations. Non-responsiveness, differential treatment by race/ethnicity or language, and high navigation burdens indicated that systems do not listen or act fairly. These indicators appeared in healthcare through transportation, language, and navigation barriers. Rushed, transactional care further fostered mistrust, while care continuity, listening, and navigation support signaled trustworthiness.

Conclusion: Neighborhood residents may judge institutional trustworthiness through responsiveness to community needs. When non-health institutions are unresponsive, this perceived disinvestment may spill over into medical mistrust. Strengthening healthcare trustworthiness may require making institutional responsiveness visible in neighborhoods before people enter medical settings, while ensuring care continuity, listening, and navigation support are present when people do enter clinical settings.

Place/Communities

Renovating public housing and health: evidence from Fresno County, California Yueqi Yan* irene yen, Nylah Hassaan-Warren,

Poor housing conditions are associated with illness. For example, roof leaks can lead to mold that triggers asthma. Many US public housing developments are aging and in disrepair. The Rental Assistance Demonstration (RAD) program supports building improvements and promotes wellbeing of residents through private-sector funding incentivized by tax credits.

Are RAD-funded renovations in Fresno County (CA) public housing associated with changes in health, using Medicaid healthcare utilization? We used data of 125,731 Medicaid patients who resided in renovated public housing (RAD-PH), non-renovated public housing (Non-RAD), or non-public housing (Non-PH) in Fresno 2017-2019. We selected housing-sensitive conditions – respiratory infections, injury, and mental disorders – identified in the records with ICD10 codes. We used Cox regression models to compare one-year follow-up healthcare visits for these conditions with weighted propensity scores applied across each cohort to balance sample characteristics across groups.

After applying normalized propensity score weights, RAD residents (32%) had a lower weighted prevalence of visits for respiratory disorders compared to non-RAD (43%) and non-PH residents (38%; $p<.001$). We saw similar patterns for respiratory infections and chronic lung disease (Non-RAD PH: 69%; Non-PH: 70%; RAD: 41%; $p<.001$) and injury (Non-RAD PH: 12%; Non-PH: 11%; RAD: 7%; $p<.001$). In contrast, RAD residents had a higher prevalence of visits for mental disorders (32%) than Non-RAD PH (17%) and non-PH residents (12%; $p<.001$). Weighted Cox regression models showed that, compared to RAD, non-PH residents had a lower hazard of mental health visits (HR=0.48, $p=.012$). In contrast, both non-PH (HR=1.59, $p=.032$) and non-RAD residents (HR=1.58, $p=.035$) had a higher hazard of visits for respiratory infections and chronic lung disease compared to RAD residents. Our results suggest initiatives to support public housing improvements can reduce healthcare utilization.

Health behaviors

Income Inequities in Youth Movement Behaviors: The Role of the Neighborhood Environment Hayley Almes* Hayley Almes, Ryan Burns, Adriana Coletta, Jacob Kean,

Prior research has demonstrated income-linked disparities in movement behaviors (including sleep, sedentary screen time, and physical activity), but few have examined the potential role of neighborhood environment in these relationships. We examined associations between income, neighborhood environment, and movement behaviors among US children and adolescents using pooled cross-sectional 2022–2023 National Survey of Children's Health (NSCH) data (n≈68,000; ages 6–17). Survey-weighted bivariate associations were estimated, and structural equation modeling (SEM) was used to estimate indirect effects linking household income to movement behaviors via neighborhood conditions. The neighborhood environment was evaluated as (1) a single latent construct and (2) separate latent domains reflecting infrastructure and disorder. Additionally, we modeled safety as a mediator between income and each of the three movement behaviors. Measurement models supported a two-domain representation of neighborhood conditions (infrastructure and disorder). Higher income was associated with more favorable parent-reported movement behavior patterns, and neighborhood conditions partially mediated these associations. Indirect pathways through disorder were stronger than pathways through infrastructure (18% of the total effect through disorder versus 3% through infrastructure). Perceived neighborhood safety accounted for indirect associations between income and each movement behavior (about 54% of the total effect for screen time, 24% for sleep, and 47% for PA). Disorder-related neighborhood conditions may be more strongly linked to youths' movement behaviors than infrastructure. Place-based strategies to improve movement behaviors may benefit from pairing infrastructural investments with efforts to reduce visible disorder and improve perceived safety.

Health equity

A Randomized Controlled Trial of Concentrated Investment in Black Neighborhoods to Address Structural Racism as a Fundamental Cause of Poor Health Evan Spencer* Evan Spencer, Eugenia South, Atheendar Venkataramani, Hilena Addis, Rikley Costa Paixao, Helena Jeudin, Craig Terry, Ashley Tryba, Aditi Vasan,

Significance: Black individuals in the United States fare worse than White individuals across almost every social, economic, and health indicator, including chronic disease, chronic stress, and exposure to violent crime. Most interventions seeking to address racial health disparities focus on individual-level behaviors and outcomes, which may have limited impact. In this randomized controlled trial of concentrated investment in Black neighborhoods, we delivered a suite of evidenced-based environmental and economic interventions. **Methods:** We enrolled 571 participants from 58 predominantly Black, low-socioeconomic neighborhood clusters (~4×4 blocks each) in Philadelphia, PA from 9/29/22-11/3/23 through door-to-door recruitment by a team of community coordinators who represented the lived experiences of our population. Environmental interventions (vacant lot greening, tree planting, litter removal) were implemented across the intervention clusters. Our team connected participants living in intervention clusters to community organizations leading the economic interventions (financial counseling, connection to public benefits, tax preparation, and $400 microgrant) using a warm-handoff approach. Follow-up data collection was conducted from 9/30/24-1/30/26. For our secondary outcome of police reported crime, we used a two-stage difference-in-difference design to account for staggered enrollment. **Results:** Our population was 87.6% Black, 50.8% Female, and 58.7% had a household income < $45K yearly. In interventions clusters, 66 vacant lots were remediated, 6,500 bags of trash were collected, and 300 trees were planted. 75% of the intervention group received cash grants and financial counseling. Results for our primary health outcomes will be completed before the conference. Analysis of crime data showed a statistically significant decrease in crimes committed in intervention vs control neighborhoods during the study. Over 1200 crimes were averted due to study interventions.

Aging

Disability and Functional Limitations in Early Midlife Among U.S. Men, 2000-2016 Natalie Rivadeneira* Natalie Rivadeneira, Corina Mills, Rachael McCleary, Roland Thorpe,

Midlife is a critical period when disability and functional limitations often begin to emerge among men, reflecting the cumulative effects of chronic disease, occupational strain, and longstanding social inequities that shape functional health long before older age. Studies rarely define midlife before age 45, potentially obscuring early signs of functional decline, particularly among men not racialized as White, who may experience accelerated aging earlier in the life course. This study examines trends in disability and functional limitations among men ages 30–50 using four measures from the Medical Expenditure Panel Survey collected between 2000 and 2016 (n = 66,518): activities of daily living (ADL), instrumental activities of daily living (IADL), walking limitations, and work limitations. Using robust Poisson models, we estimate age-adjusted trends overall and conduct additional analyses stratified by race/ethnicity. Overall, there were no statistically significant changes in disability and limitation measures between 2000 and 2016. However, stratified models reveal important differences. Hispanic men experienced significant increases in IADL (PR = 2.55, 95% CI: 1.34-4.85), walking (PR = 1.92, 95% CI: 1.39-2.68), and work limitations (PR = 1.59, 95% CI: 1.15-2.20), and White men showed an increase in ADL limitations (PR = 1.71, 95% CI:1.01-2.91). In contrast, Black men exhibited significant declines in ADL (PR=0.28, 95% CI: 0.13-0.60), IADL (PR=0.49, 95% CI: 0.27-0.90), and work limitations (PR = 0.55, 95% CI: 0.40-0.76). These findings underscore that disability and functional limitations emerge before age 50 and vary meaningfully across racial or ethnic groups. Diverging functional health trajectories in midlife have important implications for later-life morbidity and aging processes.

Aging

How Living Arrangements Shape Grandparent Food Insecurity Madonna Harrington Meyer* Madonna Harrington Meyer,

Nearly half of US grandparents feed their grandchildren. For many the cost may be easily absorbed into the budget, but for low-income grandparents it may stretch tight budgets too far. Food insecure grandparents worry about where the next meals will come from, having enough nutritious food for themselves and their grandchildren, or being hungry due to a shortage of food. How do living arrangements shape grandparent food insecurity? Generally, the more grandchild care low-income grandparents provide, the more likely they are to be food insecure. Residential grandparents typically provide the most care and report the highest rates of food insecurity. But nonresidential grandparents also provide a great deal of grandchild care, which puts some at risk of food insecurity. Evidence that nonresidential grandparents make substantial contributions to grandchild care is growing. Only 10% of grandparents reside with their grandchildren, yet 47% of all grandparents feed them and buy groceries for them. Like residential grandparents, nonresidential grandparents may meet the bus, pick up grandchildren after school, keep them overnight, take them to doctor or therapy visits, help with homework, care for them before they drop them at school in the morning, buy groceries, prepare meals, and feed grandchildren. The US does not measure what proportion of nonresidential grandparents are food insecure due to feeding grandchildren, however, because the official USDA Food Security Scale asks residential, but not nonresidential, grandparents about food insecurity linked to feeding grandchildren. Drawing on sixty-three in-depth interviews with adults ages sixty and older living below 130 percent of the federal poverty line, and using a life course perspective, I show how common their daily experiences may be even though their residential settings differ. Both groups are likely to prioritize grandchildren’s needs over their own in ways that may fuel grandparent food insecurity. I explore three patterns residential and nonresidential grandparents adopt when feeding themselves and grandchildren on tight budgets including (1) delaying meals until after grandchildren have eaten their fill of the more nutritious food, (2) skipping meals, and (3) curtailing care for grandchildren when feeding them becomes financially untenable. These findings reveal that feeding grandchildren contributes to grandparent food insecurity across types of living arrangement, undermining grandparent health and wellbeing, and making grandparenting more challenging.

Aging

Living well in Nebraska: How satisfaction with public land and water opportunities shapes life satisfaction among White old adults Jae Man Park* Xiao Li, Jishu Zheng, Jordan Mitchell,

Background: Life satisfaction in later life is shaped by individual, social, and environmental factors. However, little is known about how satisfaction with environmental amenities, such as public land and water recreation opportunities, contributes to well-being among older adults.

Purpose: To examine the association between satisfaction with public land and water recreation availability and overall life satisfaction among White adults aged 65 and older in Nebraska.

Methods: Using data from the 2023 Nebraska Annual Social Indicators Survey, both frequentist and Bayesian ordinal regression approaches were applied to account for demographic, health, financial, and contextual characteristics.

Results: Both frequentist and Bayesian ordinal regression analyses revealed that satisfaction with public land and water recreation availability was strongly and positively associated with overall life satisfaction among older White adults in Nebraska. Individuals who were satisfied with these environmental opportunities had nearly threefold higher odds of reporting greater life satisfaction compared to those who were unsatisfied (Frequentist OR = 2.68, SE = 0.75, $p < 0.001$; Bayesian OR = 2.61, MCSE = 0.70). Life satisfaction was also positively linked to financial satisfaction, and political trust. At the contextual level, a greater number of social associations per capita was positively associated with life satisfaction, while a higher Food Environment Index was negatively related.

Conclusions: Environmental satisfaction is an important contributor to older adults' overall life satisfaction, especially when considered within rural social and ecological contexts exemplified by regions such as Nebraska.

Aging

Disability Prevalence in Older Adult Same-Sex and Different-Sex Couples in the United States Christopher Julian* Christopher Julian, Gilbert Gonzales,

Partnerships play a central role in later-life health, with partners serving as primary sources of informal care. Yet population-level estimates of disability patterning within couples remain largely absent for same-sex couples, leaving their potential care needs and circumstances poorly understood. Using American Community Survey data on couples in which both partners are aged 50 and older and drawing on a couple-level minority stress framework, we examine disability prevalence across the cognitive, independent living, self-care, and vision or hearing domains by couple sex composition. Compared to male-female couples, both male-male and female-female couples are more likely to have both partners experiencing difficulty across nearly all domains after sociodemographic adjustment. Female-female couples show the most consistent and pronounced pattern across all four domains, while male-male couples exhibit a similar but attenuated pattern. Within same-sex couples, female-female couples are more likely than male-male couples to have both partners experiencing difficulty in the cognitive and independent living domains, with more limited differences in self-care and no differences in vision or hearing. Notably, roughly 1 in 10 couples across all groups have both partners experiencing at least one difficulty — a circumstance that increases the likelihood of needing external support. This may be especially consequential for same-sex couples, whose support networks tend to center chosen family rather than the intergenerational bio-legal kin that different-sex couples more commonly draw on. Bio-legal kin are not only more likely to receive institutional recognition but are also less likely to be navigating their own aging health challenges. Together, these findings underscore the value of couple-level disability indicators and the importance of policies that recognize diverse caregiving arrangements in later life.

Aging

Goal-Striving Stress, Lifetime SES, and Black Women's Mental and Physical Health Jessica Shotwell* Jessica Shotwell,

This project centers Black women as a population at elevated risk for stress-related psychological and biological aging due to the persistent effects of structural inequities on the body. Although higher socioeconomic status (SES) is typically associated with better health, Black women experience diminishing health returns to SES, such that socioeconomic advantage does not consistently confer expected psychological or physiological benefits. One potential explanation is exposure to stress processes tied to striving for upward mobility, particularly goal-striving stress (GSS), defined as the perceived stress arising from the gap between aspirations and current achievements. Existing models may underestimate risk among socioeconomically advantaged Black women who continue to experience SES-related stressors despite high socioeconomic position. The overall goal of this project is to examine the role of GSS in shaping the impact of lifetime socioeconomic status (LSES) on anxiety symptoms (AS) and allostatic load (AL), a multisystem biological indicator of physiological dysregulation and accelerated aging, among Black women. This project will use data from 330 Black women participating in the Nashville Stress and Health Study (2011–2014), a National Institute on Aging–funded population-based study of Black and White adults in Davidson County, Tennessee. Participants will be stratified into age groups representing young adulthood (18–35 years), midlife (36–49 years), and older adulthood (50+ years) for exploratory analyses examining whether associations vary across stages of adulthood. Analyses will employ ordinary least squares and modified Poisson regression models, with interaction terms used to assess moderation by GSS. By investigating the factors that shape both psychological distress and accelerated biological aging among Black women, this study advances understanding of the pathways through which structural inequality becomes embodied over the life course.

Biomarkers or biological pathways

Housing Insecurity Across Childhood and Adolescence and DNA Methylation-Based Biological Aging: Evidence from the Future of Families and Child Wellbeing Study Aarti Bhat* Aarti Bhat, Nick Graetz, Bharat Thyagarajan, Michael Esposito, Theresa Osypuk,

Housing insecurity (HI) is a prevalent social determinant of health among U.S. children and adolescents and may influence biological processes related to aging through chronic stress and material hardship. This study examines whether exposure to housing insecurity across childhood is associated with epigenetic indicators of biological aging in adolescence. Data come from the Future of Families and Child Wellbeing Study, a longitudinal birth cohort of children born in large U.S. cities and followed from birth through adolescence. The analytic sample included 1,120 participants with DNA methylation data at age 15. Housing insecurity was assessed at child ages 1, 3, 5, 9, and 15 using caregiver reports of four hardships: inability to pay full rent or mortgage, eviction, moving in with others due to financial problems, or staying in a shelter or other temporary location. A cumulative measure captured the number of waves in which any housing hardship occurred. Epigenetic aging outcomes included Horvath, Hannum, PhenoAge, and GrimAge epigenetic age acceleration measures, as well as DunedinPACE of aging. Linear regression models estimated associations between cumulative housing insecurity and epigenetic aging while adjusting for race/ethnicity and household income. Preliminary results indicate that cumulative housing insecurity was associated with greater Horvath epigenetic age acceleration. Each additional wave of housing insecurity corresponded to approximately 0.24 years of accelerated aging. No significant associations were observed for Hannum, PhenoAge, GrimAge, or DunedinPACE measures. These findings suggest that repeated exposure to housing insecurity during childhood may influence biological aging processes. Further analyses will examine alternative measures of cumulative housing insecurity, including trajectory-based and high-risk exposure approaches, to better understand how early-life housing adversity relates to epigenetic aging.

Chronic disease

Sleep Duration and Cardiometabolic Risk in U.S. Adults: Does Educational Attainment Modify the Association? Ummat Safwat Sristy* Ummat Safwat Sristy, Muntasir Masum PhD,

Introduction: Whether sleep-health disparities reflect effect modification by socioeconomic position or shared upstream pathways is a central question for population health equity. We tested whether educational attainment modifies the association between sleep duration and hypertension in U.S. adults.

Methods: Cross-sectional analysis using NHANES 2021–2023 (N = 5,561 adults 18+). Hypertension: systolic BP ≥130 mmHg, diastolic BP ≥80 mmHg, or antihypertensive use. Sleep: short (<7 h), normal (7–9 h, reference), or long (>9 h). Educational attainment (<HS, HS/GED, some college, college+) was the potential effect modifier. Logistic regression estimated adjusted odds ratios (adjusted ORs) controlling for age, sex, race/ethnicity, BMI, smoking, and diabetes, with a sleep × education interaction term; all analyses used NHANES complex survey design.
Results: In crude models, both short sleep (OR = 1.28, 95% CI: 1.12–1.47) and long sleep (OR = 1.34, 95% CI: 1.15–1.57) were associated with higher odds of hypertension. After adjustment, short sleep attenuated to non-significance (adjusted OR = 1.07, 95% CI: 0.92–1.25), while long sleep remained independently significant (adjusted OR = 1.22, 95% CI: 1.02–1.47), suggesting residual cardiometabolic risk not fully explained by measured confounders. Lower educational attainment was independently associated with hypertension (HS/GED: adjusted OR = 1.34; Some College: adjusted OR = 1.17). No sleep × education interaction was detected, indicating the sleep–hypertension association did not vary across educational levels.

Conclusion: Although short sleep duration was associated with hypertension in unadjusted analyses, this relationship was attenuated by adjustment for sociodemographic and metabolic confounders. Educational attainment was independently associated with hypertension risk but did not modify the sleep–hypertension link. Critically, the null interaction itself is a substantive finding: sleep-related cardiometabolic risk appears to operate through pathways shared with SES rather than via effect modification. This underscores the value of upstream structural interventions targeting housing, work conditions, and neighborhood safety that simultaneously address sleep health and socioeconomic inequities.

Chronic disease

Perceived Neighborhood Walkability and Type 2 Diabetes: Insights from A Cross-Sectional Analysis of the 2024 National Health Interview Survey Roman Kassaraba* Roman Kassaraba, Muhammad Hudhud, Sana Khan, Kosuke Tamura,

OBJECTIVE: Despite the protective effects of walkable neighborhoods on type 2 diabetes (T2D), fewer studies have examined how perceived neighborhood walkability (PNW) may be associated with T2D among adults. This study aimed to examine the associations of PNW characteristics with T2D prevalence.

METHODS: Cross-sectional household survey data came from the 2024 National Health Interview Survey (n=31,566). Self-reported T2D status was used (yes/no). A composite PNW score was calculated by summing eight different perceived walking environment factors, with responses coded as yes (1) or no (0), and then categorized the total into low (0-2), medium (3-5), and high (6-8) composite groups. A greater score reflected a more favorable PNW. Weighted logistic regression models assessed associations of composite PNW and each perceived walking environment factor with T2D, sequentially adjusted by sociodemographic and health-related factors.

RESULTS: Those reporting medium and high PNW had consistently lower odds of T2D in the unadjusted, age-adjusted, and fully adjusted models ($p<.01$). In the fully-adjusted model, both medium and high PNW levels (vs low) were associated with lower odds of T2D (pOR=0.77, 95% CI=0.67, 0.89; pOR=0.64, 95% CI=0.56, 0.74, respectively). Furthermore, seven walkability measures were separately associated with T2D status in the fully-adjusted models. Favorable PNW characteristics, such as presence of transit stops and traffic safety while walking, were associated with lower odds of T2D (pOR=0.80, 95% CI=0.72, 0.88; pOR=0.80, 95% CI=0.87, 0.97, respectively).

CONCLUSION: Higher levels of walkability were related to lower T2D prevalence. In particular, the presence of transit stops and traffic safety appeared to matter. Future research should investigate how changes in walkable neighborhoods may be longitudinally related to T2D. Furthermore, local efforts to improve specific walkable neighborhood features to reduce diabetes risk are warranted.

Chronic disease

Neighborhood opportunity, historical redlining, and pediatric cardiometabolic healthcare use Eun Kyung Lee* Eun Kyung Lee,

Background: Neighborhood environments significantly influence children's health. Yet, most research has focused on the harms of disadvantaged areas rather than the potential benefits of thriving communities. The health effects for children currently living in higher-opportunity neighborhoods, particularly those in historically disinvested through redlining remain unclear. This study examined the associations between neighborhood opportunity, historical redlining, and children's cardiometabolic healthcare utilization.

Methods: We analyzed cardiometabolic disease (CMD)-related emergency department (ED) and outpatient visits among children aged 0-17 in New York State from 2018-2022 using all-payer data. Neighborhood opportunity was measured using the Child Opportunity Index (COI) 3.0 (44 indicators) and categorized into quartiles (very low to high). Poisson regression models adjusted for age, sex, and race/ethnicity. Analyses were stratified by historical redlining using Home Owners' Loan Corporation grades (A/B=non-redlined; C/D=redlined) and by CMD subtype.

Results: Among 335,111 CMD-related visits, mean age was 7.5 years (SD=5.9); 48.7% were female. Obesity accounted for 68.5% of visits, followed by type 1 diabetes (10.3%) and hypertension (7.4%). Overall, children in high- versus low-opportunity neighborhoods exhibited 48% higher CMD-related ED visits (95%CI: 1.42-1.55) and 17% higher outpatient visits (95%CI: 1.15-1.19), with similarly elevated patterns in redlined and non-redlined areas. Most CMD subtypes showed elevated rates in high-opportunity areas (ED RRs=1.00-2.72; outpatient RRs=1.57-2.50), except for obesity-related ED visits in redlined neighborhoods (RR=0.65; 95%CI: 0.64-0.66).

Conclusion: CMD-related visits were higher in high-opportunity neighborhoods, except for obesity-related ED visits, likely due to obesity being primarily managed as chronic care. This pattern may reflect either a higher observed CMD burden from greater ED use or better healthcare access and CMD management, as seen in increased outpatient visits. Stratifying analyses by race and ethnicity could further clarify and validate these findings.

Chronic disease

Addressing social needs to prevent chronic disease progression: Findings from a produce prescription RCT among food insecure renal disease patients Eliza Kinsey* Eliza Kinsey, Hope Kim, Julianna Catania, Nandita Mitra, Sarah Schrauben, Stefanie Hinkle,

More than 1 in 7 U.S. adults have chronic kidney disease (CKD). An estimated 25% of persons with CKD in the U.S. are food insecure, meaning they don’t have consistent access to enough food for an active, healthy lifestyle, and they are 38% more likely to develop kidney failure than food secure individuals with CKD. In addition to medication, evidence-based treatment to prevent CKD progression includes following a healthy diet. However, people with CKD report difficulty adhering to dietary guidance because of the high cost of healthy foods. Food Is Medicine approaches, and specifically produce prescriptions, provide patients with free or subsidized fruits and vegetables to facilitate disease management. Produce prescriptions have shown improved outcomes for people with diabetes and cardiovascular disease, but little research has examined these interventions in populations with CKD.

We conducted an RCT where people with CKD and food insecurity (n=100), recruited from patients at ambulatory clinics at an academic center, were randomized to either a control (usual care) or intervention group, which received twice monthly produce prescription vouchers ($40-60) for 6 months to purchase fruits and vegetables at local stores. Food and nutrition insecurity and diet quality were assessed at baseline, 3, and 6 months. We will compare 3- and 6-month outcomes in the 2 study groups using Generalized Estimating Equations.

In preliminary findings, the prevalence of food (78.0% to 63.3%, $p=0.11$) and nutrition (38.0% to 18.4%, $p<0.05$) insecurity decreased at 3 months compared to baseline in the intervention group, but not the control group (food: 56.0% to 56.3%, $p=0.98$; nutrition 30.0% to 31.3%, $p=0.89$). Study follow-up is complete and full analytic results are forthcoming. The findings we present will serve as critical early data on the efficacy of produce prescriptions within CKD populations and will inform the design of future patient-centered interventions to address social needs.

Environmental factors

Classifying neighborhood greenspace environments in Flint, Michigan Dustin Fry* Dustin Fry, Samantha Gailey, Richard Sadler,

A growing body of literature has identified mental and physical health outcomes associated with residential exposure to greenspace, and the strength of associations have been shown to vary between cities, by levels of neighborhood deprivation, and by race. This may be in part because of the greenspace exposure measures applied in research: commonly the normalized difference vegetation index (NDVI), a remote-sensing measure of vegetation density and health. The type and maintenance status of greenspace varies within and between cities, but NDVI alone cannot distinguish between well-maintained gardens, tree canopy coverage, fields, or overgrown vegetation in abandoned lots. Because these distinctions are relevant to how residents experience and interpret the greenspace around them, public health research should adopt measures that quantify different types of greenspace to better understand residents' actual exposure.

We present a classification of neighborhood-level greenspace composition in Flint, Michigan. We assigned exposure areas to block groups as one-kilometer circular buffers around their population-weighted centroids, then measured the park area, tree canopy coverage, area covered by maintained and unmaintained vacant lots, and mean NDVI within these exposure areas. We used agglomerative hierarchical clustering to identify 3 neighborhood classifications based on these measures. Most neighborhoods (Cluster 1, n=99) had approximately average values across all measures; 14 neighborhoods (Cluster 2) were characterized by high coverage by both maintained and unmaintained vacant lots and above-average NDVI; and 2 neighborhoods (Cluster 3) had high park area coverage, high tree canopy cover, and high NDVI. Cluster 2 was associated with a higher concentration of Black residents, and Cluster 3 was associated with lower population density. Better characterizing neighborhood-level greenspace exposures can improve research and lead to better policy recommendations.

Environmental factors

Patients in Hot Places: Multilevel Interactions and Population Health Risk of Severe Heat-Related Illness Andria Cimino* Andria Cimino,

Extreme heat is an increasing health threat in the United States, contributing to an estimated 12,000 deaths annually. Heat-related illness (HRI), although largely preventable, is a multifactorial condition whose risks are unevenly distributed across populations. Place-based factors are known to shape heat vulnerability, yet the mechanisms that moderate individual HRI risk remain unclear. This study examines how tract-level contextual factors interact with individual characteristics to shape the severity of HRI.

Using HRI case data from the University of Alabama at Birmingham Hospitals, multilevel logistic models were estimated for patients nested within residential Census tracts. Contextual predictors included housing stock age, redlining history, and neighborhood education, while individual characteristics included race, sex, age, insurance status, and heat-sensitive preexisting conditions (hypertension, obesity, and autoimmune disease).

Results revealed patterned cross-level heterogeneity in HRI severity. Sensitivity to built-environment effects was concentrated among White males, who were more than five times as likely to experience Severe HRI than Black females (OR = 5.12, 90% CI = 3.02–8.67). Higher neighborhood education was selectively protective for Black females, adults aged 30–49, insured patients, and non-obese individuals. Patients without preexisting conditions were more responsive to contextual tract-level effects than those who had them, suggesting saturation of individual vulnerability.

These findings highlight the importance of modeling cross-level interactions to identify mechanisms through which structural context shapes climate-related health risks. Population health interventions focused solely on individual risk factors may overlook structural neighborhood conditions that differentially shape vulnerability across population subgroups.

Environmental factors

Heat and Sexual Autonomy: Temperature Shocks and Women’s Ability to Negotiate Sex
Jorden Jackson* Jorden Jackson, Nigel James, Jasmin Abdel Ghany, Ursula Gazeley, Joshua Wilde,

Rising global temperatures are reshaping daily life, deepening structural inequities and threatening population health. While prior research has linked heat exposure to increases in sexual assault and intimate partner violence, little is known about how heat exposure shapes women’s sexual autonomy within intimate relationships. This study examines whether exposure to unusually high temperatures affects women’s ability to refuse sex. We theorize that heat-induced stress, sleep disruption, and economic pressure may exacerbate gender imbalances, increasing emotional coercion, partner aggression and transactional vulnerabilities. Drawing on nationally representative Demographic and Health Survey (DHS) from 36 low and middle-income countries. We link these data to high-resolution climate records and conduct logistic regression analysis to test the association between anomalously hot weather and sexual autonomy. Preliminary results suggest that hot temperatures are associated with increased ability to refuse sex. In the next stage of our analysis, we will examine heterogeneous effects to assess whether education, employment, and urban residence buffer the impact of heat on sexual autonomy; results forthcoming.

Health behaviors

Digital Dissemination Strategies for COVID-19 and Flu Vaccine Videos in Indigenous Communities in California: a three arm trial Alicia Riley* Nadia Diamond-Smith, Lucia Abascal, Alison Comfort, Anna Epperson,

Background: Despite the availability of effective vaccines, flu and COVID-19 uptake remains suboptimal, particularly among Indigenous communities who face unique barriers to accessing public health information. While previous research has evaluated health communication message content and design, fewer studies have systematically compared different dissemination strategies for the same intervention, leaving gaps in understanding optimal approaches for reaching marginalized populations.

Objective: We conducted a three-arm dissemination study designed to compare the effectiveness of different strategies for distributing COVID-19 and flu vaccine promotion videos targeting Indigenous Peoples residing in California, including American Indian, Alaska Native, Native American, and migrant Indigenous communities from Latin America.

Methods: Following extensive formative work including cross-sectional surveys, social network analyses, discrete choice experiments, and focus groups conducted with guidance from an Indigenous Community Advisory Board, we developed two 30-second vaccine promotion videos available in English, Spanish, and four Indigenous languages (Purépecha, Mam, Zapoteco, and Mixteco). We tested three dissemination strategies over one month: (1) paid social media advertisements on Facebook and Instagram targeting high Indigenous population areas, (2) distribution through community-based organizations using their established communication channels, and (3) peer-to-peer sharing through Indigenous community members (“seeds”) recruited from previous research. Follow-up surveys to measure reach, engagement, and message impact across dissemination strategies were conducted.

Results: We collected data from 507 people, including 208 from the “seeds” arm, 265 from social media and 34 from CBOs. Preliminary analysis suggests that intervention arm was not associated with the likelihood of someone planning to get the COVID or flu vaccine in the future. However, trust in the person sending them the message was strongly and significantly associated with likelihood of future vaccination.

Conclusions: This study addresses a critical gap in health communication research by providing a systematic methodology for comparing digital dissemination strategies within Indigenous communities. Our findings suggest that trust in the messenger might be the most important factor in behavior change.

Health behaviors

Social Position Stratification and HIV Care Outcomes Among Transfeminine Individuals in India: Implications for Building Trust Through Differentiated Service Delivery William Lodge II* William Lodge II, Jennifer T Tran, Jayakant Singh, Don Operario, Matthew J. Mimiaga, Katie B Biello,

Population health programs often rely on broad categories to guide HIV service delivery for key populations, but these classifications can hide important social differences that influence engagement in care and trust in health systems. Using cross-sectional data from 150 transgender individuals living with HIV in Mumbai and New Delhi, we identified distinct social position profiles based on self-reported gender identity, sexual orientation, education, and livelihood. Three groups emerged: (1) educated transgender women engaged in sex work, (2) heterosexual transfeminine individuals with limited education engaged in sex work, and (3) Hijra and related identities and LGBQ+ individuals involved in dual livelihoods of sex work and begging. Membership in Class 3 was associated with significantly lower odds of achieving optimal ART adherence compared with Class 1, after adjusting for age and city. These findings emphasize that broad population categories used in HIV programs can hide high-risk subgroups and limit the success of adherence interventions. The study advocates rethinking differentiated service delivery models to better reflect the lived realities and social positions marginalized communities face, with the aim of improving both equity and program effectiveness in HIV care and other chronic disease services.

Health behaviors

The Generosity of Labor Market Institutions and Behavioral Health Outcomes Megan Reynolds* Megan Reynolds, Jaclyn Schess,

Population behavioral health outcomes (including mental health and substance use disorders) have been worsening in the United States in recent decades, particularly amongst young- and working-age adults. The prevalence of anxiety, depression, as well as drug and alcohol use disorder have increased substantially amongst 18-25 year olds (Goodwin et al., 2020; Udupa et al., 2023; Weinberger et al., 2018). These outcomes, like many health outcomes in the United States, demonstrate a socioeconomic gradient whereby worse mental health outcomes are associated with lower socioeconomic status. While clinical treatments for mental ill-health have led to only modest improvements , growing evidence demonstrates the relationship between social, political and economic circumstances and behavioral health outcomes, highlighting a potential role for social policy in improving behavioral health. Income support policies (i.e. cash transfers, the Earned Income Tax Credit, and Supplemental Nutrition Assistance) have demonstrated consistent improvements in mental health and psychological wellbeing.

Given the strong economic gradient in behavioral health outcomes and the observed benefits of economic security policies, there is good reason to believe that labor market institutions (LMIs), including the minimum wage, labor unions and unemployment benefits, may play an important role in population behavioral health. Indeed, research shows that increased minimum wages decrease suicide rates in US adults (Dow et al., 2020) and evidence is mounting on the health effects of labor union membership (Malinowski et al., 2015) and unemployment insurance (Berkowitz & Basu, 2021).

To understand the combined economic value of LMIs, we construct a labor market institution generosity (“LMI generosity”) calculator to define the dollar value of LMIs in each state-year from 1999 to 2019. Our labor market institution generosity calculator estimates the total income from semi-annual employment and semi-annual unemployment benefits that a worker experiencing job loss might expect in a given state and year. The measure reflects minimum wage levels, union wage and health insurance premiums and unemployment insurance benefit formulas and durations. The resulting measure reflects how far labor market institutions in a given state and year lift a low-wage worker to the relative poverty line. Substantial cross-state and temporal variation allows for meaningful quasi-experimental investigation using the LMI generosity measure as exposure.

Using this novel calculator, we investigate how LMI generosity relates to behavioral health outcomes amongst adults in the United States. We merge state-year LMI generosity with the Behavioral Risk Factor Surveillance System microdata for 1999-2019. We restrict the sample to those aged 18-64 who are current working or recently employed and have less than a Bachelors degree. Our main specification uses state-year fixed effects with state-specific linear trends and rich individual and state-level controls. We also estimate a stacked event-study model, defining events as those with a change of LMI generosity of 1SD where there are two years prior without such a change.

This study utilizes the first comprehensive measure of LMI generosity across states in order to offer new evidence on how labor market institutions may serve as population-level interventions for improving behavioral health among adults in the US.

Health behaviors

Changes in Smoking Inequalities among U.S. Young Adults, 2017-2023 Mingyue Lu* Mingyue Lu, Nathaniel Tran,

Background

Tobacco is responsible for approximately 30% of cancer deaths, with significant racial, ethnic, and socioeconomic inequalities. A federal tobacco 21 (T21) law, which increased the minimum legal sales age of tobacco products in the U.S. from 18 to 21, was enacted in December 2019.

Methods

Data were drawn from the 2017-2023 Behavioral Risk Factor Surveillance System (BRFSS). We used linear regression techniques to estimate the pooled smoking prevalence in three periods: pre-T21 implementation (2017-2019), T21 implementation transition (2020-2021), and post-T21 implementation (2022-2023).

Results

In the overall sample of 62,626 U.S. young adults aged 18-20, 8.67% [95% CI 8.08 to 9.25%] of respondents were current smokers in the pre-T21 implementation period which declined to 5.01% [95% CI 4.48 to 5.54%] at T21 implementation transition, and declined to 4.17% [95% CI 3.62 to 4.72%] in the post-T21 implementation period, an absolute reduction of -4.50 percentage points (pp) [95% CI -5.30 to -3.69pp, p<.001]. The absolute reduction in current smoking was significant for all demographic subgroups. The relative inequality between subgroups was only significant by education level.

Conclusions

We find that current smoking significantly declined in the overall study sample, as well as across all subgroups studied. While smoking declined throughout the study period for all subgroups, federal T21 implementation was not associated with reductions in smoking inequalities by binary sex, household income, or sexual and gender minority (SGM) identity. Prevention and cessation policies that are accessible to SGM respondents and respondents from lower socioeconomic backgrounds are needed to mitigate tobacco-related harms.

Health care/services

Associations between Socioeconomic Deprivation and Stigma during Overdose-related Emergency Medical Services Interactions: Evidence from an Ongoing, Community-engaged Evaluation of a County-Wide EMS Overdose Intervention in King County, Washington

Ohshue Gatanaga* Ohshue Gatanaga, Allyn Liu, Kimiam Waters, Adonica Warth, Cece Wettemann, Esther Rourke, Grover Williams, Robert Pitcher, Nicky Cotta, Alden Gu, India Ornelas, Malika Lamont, Deaunte Damper, Maryam Jernigan-Noesi, Callan Fockele, Emily Williams, Omeid Heidari, Tessa Frohe, Jenna van Draanen,

Background: Socioeconomic deprivation (SED) is a fundamental cause of overdose (OD)-related disparities. Due to issues including housing instability, material scarcity, and limited social support, SED may increase stigma during OD-related healthcare interactions and discourage future engagement with substance use treatment and lifesaving services. While emergency medical services (EMS) and emergency departments (ED) are frontline responders to the OD epidemic, little is known about the association between SED and stigma experienced during overdose-related EMS and E D interactions.

Methods: In the context of a community-engaged evaluation of a population-based EMS OD intervention in King County, WA, we assessed associations between facets of SED and EMS- and ED-related stigma among OD survivors (n = 349). Facets of SED included social support and material resources measured using validated scales and housing instability (binary). Linear regression models estimated associations between SED and multi-item scales of perceived stigma (rescaled to a 1-5 composite score) during healthcare interactions adjusting for age, gender, race, drug use frequency, and lifetime overdoses.

Results: Among 349 OD survivors, 82 (23.5%) reported agreeing or strongly agreeing to EMS-related stigma; among those transported to the ED (n = 132), 53 (40.2%) reported ED-related stigma. Housing displacement within 30 days of an OD was associated with higher EMS- ($\beta = 0.37$, 95% CI: 0.12, 0.63) and ED-related stigma ($\beta = 0.70$, 95% CI: 0.24, 1.16). Each one-unit increase in material resources ($\beta = -0.043$, 95% CI: -0.080, -0.006) or social support ($\beta = -0.026$, 95% CI: -0.049, -0.002) was associated with lower ED- or EMS-related stigma, respectively.

Conclusions: Stigma during overdose-related EMS and ED care was commonly reported and was higher among survivors experiencing SED. Addressing SED may reduce stigma, rebuild trust in emergency care, and promote equitable engagement with lifesaving services.

Health care/services

“They are doing it for the money:” Women’s Accounts of Healthcare Workers Providing Abortions in Uganda. Charles Katulamu* Charles Katulamu,

Uganda criminalizes and restricts safe abortion care; coupled with stigma and inadequate healthcare resources, it is almost impossible for women to access care, as is the case in most sub-Saharan African countries. However, some girls and women have found ways to procure abortions from select healthcare workers, albeit. In this study, I seek to understand why some healthcare workers provide abortions despite the existing criminalization and restrictions around safe abortion care in Uganda.

Through semi-structured in-depth interviews, I spoke to 50 women who had ever terminated a pregnancy in Uganda to understand their perspectives on why healthcare workers provide abortions despite the existing criminalization and restrictions around abortion care in Uganda. Reports from women revealed that although some healthcare workers provided these abortions because they wanted to save women’s lives by preventing them from using unsafe abortion practices, they largely did so because of their financial motives. The criminalization and restriction of abortion prevent most providers from providing such care to avoid prosecution and protect their professions. Those who choose to provide the care do so at exorbitant costs to compensate for possible consequences. Additionally, in such circumstances, demand for the care exceeds supply, which also contributes to rising costs of obtaining it.

Therefore, for women to safely navigate such expenses, the country should adopt more progressive abortion laws to ensure (i) girls and women are able to access comprehensive abortion care, (ii) healthcare service providers are legally supported to provide the care, (iii) stigma against those who seek and provide abortion care is dismantled to weave support for women’s autonomy and reproductive choices, (iv) significantly reduce the financial burden associated with both abortion and post-abortion care, and (v) save women from life-threatening complications emerging from unsafe abortion practices.

Health care/services

Bridging data silos to understand homelessness & healthcare Paulina Kaiser* Paulina Kaiser, Andy Hertel, Stephanie Foster, Truman Ricks, Emily Chang, Carson Mowrer, Cory Hackstedt, Chris Campbell, Barbara Hudson-Hanley, Mark Edwards,

Understanding the relationship between homelessness and health requires integrating information across housing and healthcare systems, yet these data are typically siloed. As a multiagency collaborative representing a 3-county region in Oregon, we merged electronic medical records from two healthcare systems with data from the Homeless Management Information System (HMIS) that captures housing support services (e.g. emergency shelter, rapid rehousing, and homelessness prevention programs) provided by the region's state-designated Community Action Agency. We used privacy-preserving record linkage to match individuals without the need to share identifying information. The matched dataset included 5,433 individuals who received housing support services and had one or more healthcare encounters in 2023–2024. We examined emergency department (ED) utilization relative to receipt of housing services; among those that stayed at an emergency shelter, adjusted Poisson models showed that ED visits increased in the six months following the first emergency shelter stay compared to the six months prior (RR=1.25, $p<0.001$). However, ED utilization was higher in the 1-2 months preceding the initial shelter stay compared to previous months, suggesting the possibility of destabilizing events that elevated both ED use and the need for shelter. These patterns highlight challenges in estimating the causal impact of housing services using simple pre/post comparisons, given likely confounding events around the time of service entry. Pending analyses will assess total cost of care before and after service receipt and examine reasons for ED visits. This work advances understanding of healthcare utilization across housing statuses and program types, informing opportunities to refine service models and strengthen cross-sector coordination.

Health care/services

Mixed Methods Study of HIV Treatment Through the Public Health Department in the City of Lubbock, Texas Emily Ostermaier* Emily Ostermaier, James Felberg, Katherine Wells, Rocky Flores, Abdul Awal,

This project aimed to reduce the prevalence of HIV within an underserved population by providing HIV treatment, at no cost to the patient, through the City of Lubbock Public Health Department. This presents as a novel approach to improving HIV treatment adherence in an underserved population by not only providing medical care at no cost to the patient through a health department but also utilizing an HIV-focused case manager that actively addressed barriers to care on a case-by-case basis, thereby increasing self-efficacy amongst patients who face greater barriers to care due to low SES. We determined clinic efficacy in reducing rates of HIV in the community through a mixed methods approach. To understand overall HIV treatment success, a cross-sectional medical record review of patients attending the City of Lubbock Health Department for HIV related care between April 2024, and August 2025, was conducted. While there were no statistically significant changes in hematologic or immunologic markers between the first and last visits, according to the findings of the paired t-test, the substantial decrease in viral load, which correlates with the numerically significant but slightly improved CD4 counts, offers compelling evidence of a treatment response. To determine the overall impact this HIV clinic has had on the Lubbock community in terms of patient care, phone interviews were conducted with eligible participants and coded for major themes as related to their experiences receiving HIV-related care in community health settings and suggested improvements in self-efficacy. Lastly, a financial analysis of clinic operating expenses was conducted to understand the sustainability of this type of treatment model through a health department in the long run. This analysis suggested that this model is financially feasible through the reimbursements provided through charity and insurance programs and demonstrates promise of being implemented in health departments nationally.

Health Education

Using a Community-Engaged Approach to Develop the National Center for Engagement in Diabetes Research Online Resource Hub Sarah Eleshaky* Claire Cooper, Claire Cooper, Laura C Wyatt, Sarah Hussain, Aditi Luitel, Karina D Ramirez, Earle Chambers, April A Agne, Carol Agomo, Tabia Akintobi, Sandra Albrecht, Kristen Allen-Watts, Mona AuYoung, Felecia Barrow, Aaron Breslow, Janet Brown-Friday, Yelba Castellon-Lopez, Adrienne Dillard, Estelle Everett, Theodore C Friedman, Rodolfo J Galindo, Dympna Gallagher, Tannaz Moin, Susanne B Nicholas, Robin Ortiz, Rakale Quarells, Anthony Salandy, Megha K Shah, Cara Stephenson-Hunter, Nita Vangeepuram, Nadia Islam,

Introduction:

The National Center for Engagement in Diabetes Research (CEDER) fosters collaborations to expand community engagement in type 2 diabetes (T2D) research and programs. Leveraging a core partnership hub (PH), CEDER collaboratively develops its service delivery model and dissemination strategy. To improve accessibility, CEDER launched its online Resource Hub: a centralized source of free, curated resources for diverse audiences working in and impacted by T2D.

Methods:

The Resource Hub design was informed by PH member feedback from individual and group meetings (Feb-Apr 2024). Resources were collected via email and an online survey from 8 PH members, and through targeted online searches (e.g., ResearchGate) using standardized T2D and community engagement terms. Four staff members iteratively reviewed the resources for quality and PH representation prior to categorization using tags.

Results:

To date, 230 resources have been compiled, with 24% contributed by PH members and 76% identified through searches. 53% were publications, 15% toolkits, and 16% fact sheets. A multi-layer tag structure enables direct filtering across 8 audiences, 11 mediums, 5 priority populations, 12 topic areas, and 2 languages (English and Spanish), providing tailored access for community-based organizations, community health workers, healthcare providers, government agencies, patients/caregivers, policymakers, and researchers.

Conclusion:

Utilizing a community-engaged approach strengthened PH engagement and fostered shared ownership, yielding a nationally representative collection of resources encompassing diverse topics and communities. This process offers a replicable, equity-centered model for co-creating a free platform that reflects community priorities and supports long-term sustainability of the CEDER model. The hub will serve as a living repository, growing and adapting alongside community needs.

Health equity

Co-Creating Trustworthy Research: An Undergraduate Community-Engaged Research Partnership to Examine Institutional Trustworthiness in Breast Cancer Equity Quinn Valier* Quinn Valier, Kimani Cooper, Nick Costilla, Karley McComas, Nancy Le, Nomita Bajwa,

Black women in Harris County, Texas — home to Houston, one of the nation's most populous and racially diverse cities — face significantly higher breast cancer mortality than White women, mirroring a national disparity (27.6 vs. 19.7 per 100,000; USPSTF, 2024) driven by systemic barriers, delayed screening, and eroded institutional trust. Building that trust is complex and non-linear, requiring sustained partnerships beyond any single research cycle. This project embeds an undergraduate research team into an existing, trust-based community partnership — offering a meaningful entry point into community-engaged research (CEnR) without navigating the full arc of trust development.

Research Question: How can undergraduate researchers engage meaningfully within established community partnerships — and what can that engagement reveal about how organizations like the Texas Health Equity Alliance for Breast Cancer (THEAL) produce and sustain institutional trustworthiness to advance breast cancer equity?

Methods: A faculty-supervised undergraduate research team at UH Population Health is embedded into the existing partnership infrastructure of THEAL, engaging member organizations as thought partners and co-investigators — not research subjects. Using CEnR principles (co-learning, mutual respect, transparency) and Conversation Café methodology, students co-develop research questions, perform qualitative analysis, and produce policy briefs immediately useful to THEAL. Steering Committee guidance ensures community-centered continuity across cohorts.

Preliminary Findings/Implications: This model reframes undergraduate education as a site for building population health science capacity with communities. Early engagement reveals that centering community expertise reshapes research design, student professional identity, and the relationship between academic institutions and the communities they serve — offering a replicable model for trustworthy, co-created population health research.

Health equity

Centering LGBTQ+ youth of color "explicitly, unequivocally, and without apology" to deliver culturally and structurally responsive, evidence-based mental health services Shoba Ramanadhan* Shoba Ramanadhan, Davine Holness, Isabella de Sa, Morgan Mulhern, Sam Quest-Neubert, Breanna Wheeler, Emma-Louise Aveling,

Introduction: LGBTQ+ youth of color face profound mental health inequities driven by intersecting systems of oppression. Community-based organizations (CBOs) can mitigate this by offering safe spaces and essential services, but their impact is constrained by professionalized nonprofit infrastructure and an evidence base that focuses on privileged groups and individual-level interventions.

Methods: We conducted a three-year, participatory, case study of Boston GLASS, a long-standing CBO serving LGBTQ+ youth of color in Greater Boston, to elucidate how staff conceptualize and enact high-quality mental health services. The work was co-led by community- and university-based researchers and utilized interviews and focus groups with current and former staff, document review, and ethnographic observations with staff, peer leaders, and clients between March 2023 and December 2025.

Results: We found that GLASS staff conceptualize care not as a set of discrete clinical encounters but as a structurally and culturally responsive, relationship-centered ecosystem. Three forces animate the model: (1) connections to social movements and justice; (2) centering of joy, community, and humanity; and (3) elevation of lived, practice-based, and local expertise. The model is vulnerable to restrictive and fragmented funding, administrative burden, insufficient staff support, and a hostile sociopolitical environment.

Conclusion: The GLASS model problematizes dominant notions of who or what constitute "active ingredients" in mental health services. Implications include the need to broaden definitions of evidence and support structurally responsive, community-led frameworks, with accordingly broad metrics. The question that remains is how best to support funders, policymakers, and researchers in moving past top-down, individualistic efforts that maintain the status quo and instead support the conditions that allow vital, community-led models to not only survive but thrive.

Health equity

Racialized Assemblages of Muslim Death: Islamophobia, Death Governance, and Disenfranchised Grief Ans Irfan* Ans Irfan,

Background
Death is never neutral. In the US, Muslims encounter structural barriers to culturally congruent end-of-life and pastoral care that compound clinical suffering with spiritual exclusion. In palliative settings, this results in care models that manage physical symptoms while denying spiritual dignity. These exclusions are frequently justified through neutral policy, masking how racialization and Islamophobia shape access to pastoral presence, mourning, and dignified dying.

Aims
This project examines how racialized governance, including zoning regulations, licensure requirements, and institutional bias, obstructs Muslim access to pastoral and end-of-life care. It analyzes how these denials deepen disenfranchised grief and undermine health equity.

Methods
Using theoretical and case-based analysis, the project applies frameworks of racialized assemblages and necropolitics to two U.S. case studies: a blocked Muslim cemetery in Virginia and the denial of death certification authority to a Delaware imam under restrictive licensure laws. The analysis integrates interdisciplinary scholarship from palliative ethics, death studies, sociology, and Islamic pastoral care.

Results
Both cases demonstrate that Muslim death is governed as an administrative problem rather than a human experience requiring pastoral presence and communal recognition. Racialized policy and secular bias disrupt continuity of care, delay or prevent mourning practices, and deny spiritual support at the end of life. These practices reproduce disenfranchised grief and erode trust in healthcare and death-care institutions.

Conclusion/Implications
The findings show that health equity at the end of life cannot be achieved without addressing how racialized governance structures access to pastoral care and dignified dying. Integrating Islamic pastoral care into palliative practice and reforming exclusionary policies are essential steps toward ethical, equitable end-of-life care for Muslim communities.

Health equity

REACHing Us: Advancing Population Health Equity Through Public–Community Partnership: A Framework for Innovation, Cultural Cohesion, and Systemic Influence

Charlene McGee* Charlene Addy McGee, ACHIEVE Coalition ,

Situated in the IAPHS conference's host county, this panel highlights the Multnomah County REACH Program as a national model for transforming population health. The program's success stems from an innovative culture and a strength-based approach, rooted in trust and dedicated to cultivating community health, healing, and wellness, addressing health disparities within Black/African American/Black immigrant and refugee communities, and prioritizing community wisdom to mesh public health and evidence to implement culturally tailored and effective interventions.

This work is grounded in a structure of shared governance that actively fosters social cohesion and collective accountability. In partnership with the ACHIEVE Community Coalition (which guides strategic focus), the REACH Program staff, principal investigator, and cross-sector partners demonstrate how a robust public–community framework can operationalize equity.

Panelists will present original, unpublished work illustrating the impact of REACH's comprehensive, equity-centered strategy across four mutually reinforcing levers for redressing chronic diseases and promoting health: Built Environment & Physical Activity, Nutrition & Food Systems, Breastfeeding & Community-Clinical Linkages.

Through case examples, presenters will detail how this model, a key component of Multnomah County's commitment to public health equity, leverages community expertise to achieve measurable impact. The panel will examine how bridging public health, cultural organizing, private-sector engagement, and systems-level change offers a highly replicable and innovative framework for other jurisdictions seeking to build trust and influence. Attendees will gain critical insight into how multisectoral partnerships can advance population health, strengthen community power, and successfully embed equity and social cohesion into practice.

Health equity

The role of childhood homeownership in shaping multilevel trajectories of life course stress among pregnant people in Georgia Kaitlyn Stanhope* Kaitlyn Stanhope, Michael Kramer, Jade Stafford, Marisa Young, Shakira Suglia,

The Weathering Hypothesis posits that accumulation of exposure to adverse events and environmental threats drives excess risk of poor perinatal outcomes in marginalized communities. Yet this accumulation is often simplified in research as a count of events, ignoring context. Our objective was to create a multilevel longitudinal measure of life course stress and examine its association with early life wealth.

We used data from a cohort of 434 pregnant individuals in Atlanta Georgia who completed a resident address history and life course stress inventory. We fit group-based trajectory models to identify patterns of multilevel stress, including residence in a low-resource tract, traumatic stressor count, chronic stressor count, and life event stressor count for 5-year intervals up to current age. We used model fit to identify the optimal number and structure of trajectories and posterior probability to assign individuals to trajectories. We fit multinomial models to quantify the association between family homeownership in childhood and trajectory membership.

We identified four trajectories, characterized by differences in levels and patterns of stress exposure across the life course. The most common trajectory (35%), “Stable Low” was characterized by a consistently low stress exposure with peak probability of experiencing a stressor in each category ~25%. The rarest pattern (13%), “High exposure to multilevel stressors in childhood” was characterized by high report of all three event-based stressors in early childhood (>50%), with ~25% also residing in a low-resource neighborhood. Individuals whose family never owned their home in childhood were 5.7 times more likely to belong to the riskiest (“High exposure”) pattern compared to the stable low pattern (95% CI: 2.3, 14.4).

Family homeownership in childhood may prevent exposure to adversity across the life course, supporting calls for housing provision to prevent childhood adversity.

Health equity

Food Embarrassment as a Social Driver of Health: Quantifying Its Independent Impact on Psychological and Cardiometabolic Outcomes Brennan Rhodes-Bratton* Brennan Rhodes-Bratton, Melody Goodman, Stephanie Cook, Jonathan Odumegwu, Adolfo Cuevas, Anna-Michelle McSorley, Saba Rouhani, Niyati Parekh,

Background: Food embarrassment, the self-consciousness, shame, or anxiety due to perceived or actual judgment of food practices, is an understudied form of internalized stigma. Despite evidence that identity-based stigmas generate psychosocial stress, no study has quantified the independent health burden of food embarrassment among a racially diverse sample.

Methods: Data from the 2023 Survey of Racism and Public Health (N = 4,854) were analyzed using logistic regression to estimate associations between food embarrassment and four health outcomes: general self-rated health (SRH), chronic conditions, cardiometabolic health, and psychological distress. Models adjusted for subjective social status (SSS), food security, cumulative racial discrimination, and sociodemographics. Interaction terms tested for effect modification between race/ethnicity and cumulative discrimination.

Results: After full adjustment, food embarrassment was independently associated with poor SRH (OR=1.38, 95% CI: 1.15–1.64), cardiometabolic conditions (OR=1.33, 95% CI: 1.11–1.59), and psychological distress (OR=2.75, 95% CI: 2.31–3.28). The association with psychological distress was the largest observed and persisted after adjusting for SSS and food security, confirming food-specific embarrassment carries a burden distinct from generalized marginalization. SSS was inversely associated with all outcomes. Cumulative discrimination’s impact on SRH varied by race/ethnicity, while for distress, it showed a significant positive main effect. Very low food security was associated with 3.50 times the odds of psychological distress.

Conclusions: Food embarrassment is an independently consequential psychosocial stressor. Its health burden—most pronounced for psychological distress—is not reducible to social standing or material deprivation, establishing food embarrassment as a distinct contributor to health inequity that warrants dedicated public health attention.

Health equity

The role of dependence in the relationship between platform work and mental health: a mixed methods investigation Emilia F. Vignola* Emilia F. Vignola, Nevin Cohen, Mustafa Hussein, Zoey Laskaris, Rositsa T. Ilieva, Sherry Baron,

Gig work has spread rapidly in the US, where 16% of adults in 2021 reported ever earning income through an online platform. Of the 9% of US adults who earned income this way in the previous year, one third depended on platform work as their main job. Recent evidence suggests high-dependence platform workers experience greater psychological distress than low-dependence platform workers (those who consider platform work a secondary job). Dependence on platform work is related to social position and thus may have health equity implications, but its operationalization to date likely oversimplifies a multi-dimensional construct. In 2025 we launched a quantitative survey-based cohort study to assess the associations between platform work, dependence, and health among approximately 500 app-based food delivery workers in New York City. Leveraging that ongoing cohort study, this explanatory sequential mixed methods study aims to: 1) deepen understanding of the drivers and manifestations of platform work dependence through thematic analysis of 45-60 in-depth interviews among delivery workers at different levels of dependence; and 2) investigate how dependence might modify the platform work-mental health relationship through integration, comparison, and synthesis of the qualitative interview findings and quantitative cohort study results. Findings will advance scholarship on this emerging topic and support policy efforts to ensure workers' needs are factored into the rapidly growing gig economy. The presentation will focus on preliminary findings and on the utility of a mixed methods approach to study and confront platform work as a social determinant of health and health equity.

Health equity

How Health Shapes Reentry Concerns Among a National Sample of Incarcerated Adults Sentenced to Juvenile Life Without Parole (JLWOP) Dylan B. Jackson* Dylan Jackson, Jeffrey T. Ward, Daphne M. Brydon, Leah Ouellet, Laura S. Abrams,

Research on the health sequelae of incarceration often centers on people serving shorter sentences, often for non-violent offenses. Less attention, however, is given to the 1 in 7 people in prison serving life sentences, including those sentenced as juveniles to life without parole (JLWOP, or juvenile lifers). Recent U.S. Supreme Court decisions have opened the door to a second chance at freedom for juvenile lifers. While ~1200 now reside in the community, many juvenile lifers remain incarcerated awaiting the possibility of release. Still, there has been no quantitative data that unpacks the health and functioning of incarcerated juvenile lifers – many of whom have already served decades in prison. Moreover, we know little about how their health and functioning structure concerns about critical domains of reentry (e.g., housing, transportation, employment, financial and technological literacy, relationships). To fill this gap, we surveyed a sample of 430 incarcerated adults (ages 29-73) in 19 states who were sentenced to JLWOP prior to 2012 using robust, validated measures of mental and physical health and a 25-item inventory (alpha = 0.93) capturing varied concerns about returning to the community. Respondents had spent an average of 25.5 years in prison and reported an average of >6 reentry concerns, with the most common concerns being the stigma of their criminal history (54%), financial literacy (38%), adjusting to being free (33%), using technology (33%), supporting oneself financially (32%), and obtaining housing (32%). Findings indicate that, net of sociodemographic factors and childhood adversity, compounding mental and physical health diagnoses exert a strong and statistically significant effect on the number of reentry concerns. Additionally, myriad health difficulties in the 12 months prior to the survey also significantly elevated reentry concerns, regardless of age. Implications for policy and practice will be discussed.

Health equity

Repeated Emergency Department Utilization Patterns Amongst Houseless Individuals
Hannah Jones* Hannah Jones, Jung Yoo,

Background: Unhoused individuals experience disproportionately high rates of emergency department (ED) use, reflecting reliance on EDs for care due to limited access to healthcare or insurance. While population-based studies focused on houseless individuals have shown high rates of ED usage, few have examined patterns of repeated EDs utilization and escalation of care intensity with housed peers.

Methods: We conducted a retrospective age and gender matched cohort study using the PearlDiver Mariner database, to evaluate the associations between houselessness and ED utilization. Unhoused were identified using ICD-10-D code Z59.0, and matched 1:1 to housed controls aged 18-70 years. ED and inpatient utilization were captured over a two-year follow up period using CPT codes for emergency encounters. Utilization frequency was stratified into increasing thresholds (≥5, ≥10, ≥20 and ≥50 encounters) to assess patterns of use. Chi-square tests compared utilization distribution between cohorts, and t-tests evaluated differences in age. Stratified analyses were conducted to assess demographic balance within higher-utilization subgroups.

Results: Among the 170,937 individuals that met inclusion criteria, unhoused individuals demonstrated significantly higher ED utilization across all examined thresholds of repeated use. Unhoused individuals had greater odds of ≥ 5 ED encounters (OR = 5.06, $p < 0.001$), ≥10 encounters (OR = 5.62, $p < 0.001$), and ≥25 encounters. (OR = 6.68, $p < 0.001$). At the most extreme threshold of ≥ 50 encounters included 3.5% of unhoused individuals, and this represented over 30-fold higher risk compared to housed peers. Age disparities widened with increasing ED utilization, while gender differences varied by threshold.

Conclusions: Housing instability is strongly associated with ED utilization, and unhoused individuals are a disproportionately affected ED-utilizing population, underscoring the need for structural interventions and systemic change.

Health systems

When health systems earn trust: Rethinking population health from the frontlines of rural Kenya Nema Aluku* Nema Aluku,

Background: Trust in the primary health care systems plays an essential role in shaping workforce stability, service delivery and population health outcomes. In low- and middle-income countries like Kenya, fragile workplace environments and weak supervisory structures limit trust between primary health workers and health institutions hence contributing to workforce instability in rural settings. In Kenya, shortages and migration of nurses and clinical officers from rural primary health care (PHC) facilities continue to limit equitable access to essential health services. This study examines how trust building processes within health systems influence the retention of frontline health workers in rural western Kenya.

Methods: A cross-sectional mixed methods study was conducted in government of Kenya PHC facilities in Kakamega County. A total of 93 participants were included: 42 health workers currently employed (“Stayers”), 23 who had recently left their positions (“leavers”), and 28 facility administrators and managers. Quantitative data were collected using structured questionnaires and analysed using descriptive statistics, chi-square tests, and multinominal logistics regression. Qualitative data from key informant interviews and focus group discussions explored health workers’ perceptions of leadership, recognition, and support systems that influence trust in health institutions.

Results: Trust related facility dynamics were strongly associated with health worker retention. Health workers who reported encouragement from supervisors, fair performance evaluation and recognition for good work were significantly more likely to remain in rural PHC facilities. Perceptions of competent and committed facility leadership were also positively associated with retention, suggesting that credible management strengthens trust in the health system. Structural conditions like – manageable workloads, access to equipment necessary for service delivery, and flexibility to balance professional and personal responsibilities – further reinforced health workers confidence in their PHC facilities. On the contrary, lack of recognition, heavy workloads, and limited managerial support eroded trust and contributed to decision to leave rural facilities.

Conclusion: Strengthening trust within health systems is central to improving PHC facility workers stability and advancing population health in rural underserved communities. Supportive leadership, fair management practices, and enabling facility environments can foster trust in primary health workers and influence the sustainability of rural PHC services.

Health systems

Building Capacity and Community Trust: An Undergraduate Student Corps Model to Support the Public Health Workforce Adriana Wisniewski* Adriana Wisniewski, Josh Snodgrass, Angela Long, Jeffrey Measelle,

Public health workforce shortages have emerged as a critical national challenge. In the U.S., a 10% decrease was observed from 2012 to 2019. Chronic underfunding and growing demands on public health systems have worsened these shortages, which were further exposed by the COVID-19 pandemic.

In response, in 2020, the University of Oregon, with support from Lane County Public Health (LCPH) and the Oregon Health Authority (OHA), developed the “Corona Corps,” later called the Oregon Public Health Corps (OPHC). OPHC is an undergraduate student workforce program designed to support local public health response efforts while creating career pathways to public health careers for students. The program provided structured onboarding, training, supervision, and placement of students directly into applied public health roles, such as case investigation, contact tracing, resource coordination, and community outreach.

OPHC mobilized and employed over 200 students, approximately 62% from STEM backgrounds and the rest from diverse liberal arts backgrounds, to support state and local COVID-19 responses. From July 2020 to September 2021, students contributed more than 11,900 contacts in Lane County and nearly 14,000 support interactions. During the case management phase (Sept 2020 – April 2023), students supported over 2,000 individuals with over 6,000 resource referrals and follow-ups. The program has expanded to support ongoing public health priorities, such as tuberculosis exposure investigations, student-led epidemiologic research, and placements within OHA.

This model demonstrates how universities can serve as trusted partners in strengthening and expanding public health workforce capacity, while providing effective student training that produces real-world outcomes. It addresses workforce shortages and builds sustainable pipelines into public health careers.

Health systems

Does hospital system affiliation matter for patient experience during COVID-19 pandemic? A three-level multilevel panel analysis Jae Man Park* Xiao Li, Jing Li, Wilton Choi,

Objective: This study examines whether health system affiliation influences hospital patient experience during the COVID-19 pandemic, focusing on differences between system-affiliated and independent hospitals.

Methods: We conducted a three-level multilevel linear panel analysis using multiple nationwide datasets from 2020 to 2022, with a total of 5,583 year-observations nested within hospitals and hospitals nested within health systems. Seven patient experience domains were analyzed, adjusting for hospital organizational, financial, and market characteristics.

Results: Independent hospitals consistently reported lower patient experience ratings compared with system-affiliated hospitals, with significant differences in doctor communication, nurse communication, discharge information, care transitions, and overall rating. Hospital size was a strong negative predictor across all domains, and the interaction between independence and size showed that larger independent hospitals experienced disproportionately lower ratings. Financial capacity mattered: higher Medicare and commercial payer mixer and stronger net profit margins were associated with better patient experience. Patient experience declined in 2021 compared to 2020 and rebounded in 2022. Additionally, we found that more than 20% of the variation in patient experience was attributable to differences between health systems.

Conclusions: Hospital system affiliation significant shaped patient experience during COVID-19 pandemic. The structural supports, resource depth, and coordinated practices available in health systems likely helped sustain patient-centered care during a period of exceptional operational strain, while independent hospitals, particularly larger ones, faced greater challenges. These findings highlight the need for strategies that enhance the organizational capacity of independent hospitals to maintain high quality care in both routine and crisis conditions.

Infants/children/youth

The Social Biology of Belonging: Peer Victimization, School Belonging, and Epigenetic Aging Among Children of Latino Immigrants Rebeca Alvarado-Harris* Rebeca Alvarado-Harris, Krista Perriera,

Children of Latino immigrants often begin life with health advantages, yet the developmental conditions that sustain or erode these advantages remain unclear. Guided by social safety theory and the concept of conditional belonging, this study examined whether peer victimization and school belonging in late childhood predicted changes in epigenetic aging across adolescence. We also tested whether these patterns differed for Latino youth with immigrant versus U.S.-born mothers. Data were drawn from the Future of Families and Child Wellbeing Study (N = 341). Peer victimization and school belonging were self-reported at age 9, and Pediatric-Buccal-Epigenetic clocks were assessed at ages 9 and 15. At age 9, children of immigrant mothers (COI) exhibited slower epigenetic aging than children of U.S.-born mothers, but this advantage eroded by age 15. Among COI, greater victimization predicted faster aging, whereas stronger school belonging predicted slower aging; yet under high victimization, belonging instead accelerated aging. These patterns were not observed for youth with U.S.-born mothers, for whom poverty at birth predicted faster aging. Findings suggest heightened biological sensitivity to social inclusion and exclusion during a developmental period when peer belonging becomes central to identity, shaping whether early health advantages are sustained or lost.

Infants/children/youth

Does the intergenerational transmission of intimate partner violence extend to technology-facilitated intimate partner violence? Michelle Livings* Michelle Livings,

Previous work demonstrates an intergenerational transmission of intimate partner violence (IPV); individuals who witness parental IPV are more likely to become perpetrators or victims of IPV in their own relationships. Given the high prevalence of technology-facilitated IPV (TFIPV), particularly among youth, I pose the question: Does the intergenerational transmission of IPV extend to TFIPV?

I use data from the Future of Families and Child Wellbeing Study (FFCWS), a contemporary survey of a birth cohort of young adults. I focus on 1,033 young adults in the Year-22 FFCWS survey who reported that they were in a serious relationship, engaged, or married. In earlier FFCWS survey waves, mothers reported whether their partner sometimes or often (or never) slapped or kicked them, hit them with a fist or object, and/or tried to make them have unwanted sex. At Year-22, young adults reported experiences of TFIPV, specifically whether their partner pressured them to “sext,” to respond quickly to texts or calls, or to share their location; shared their naked photos with other people or logged into their social media or email without permission; or posted a mean public message about them on social media.

Logistic regression results show no significant associations between mother-reported IPV and a binary outcome indicating “any experience of TFIPV.” However, there is evidence that mother-reported IPV is associated with higher odds of individual TFIPV experiences, specifically young adult reports that their partner logged into their accounts without permission (OR=1.6, 95% CI 1.0-2.5) and that their partner posted a mean public message about them (OR=3.8, 95% CI 1.2-11.6). This study suggests that the intergenerational transmission of IPV may indeed include TFIPV. Effective interventions designed especially for TFIPV may help to interrupt this harmful cycle.

Infectious or Microbial

A multi-site cross-sectional study of factors associated with COVID-19 vaccine uptake among healthcare personnel in the United States Utsav Nandi* Utsav Nandi, Benjamin Walker, Nicholas Mohr, Anusha Krishnadasan, Eric Kontowicz, Karisa Harland, Karin Hoth, Howard Smithline, David Talan, Project PREVENT Network ,

Introduction

The rapid development and distribution of the novel mRNA-based COVID-19 vaccines have been credited with saving millions of lives globally. However, concerns about COVID-19 vaccines contributed to hesitancy in their uptake. Understanding vaccine uptake among healthcare personnel (HCP) is especially important, as this group faces elevated occupational exposure risk, plays a critical role in preventing transmission to vulnerable patients, and strongly influences public vaccine confidence through their own vaccination decisions and recommendations. We assessed the association between sociodemographic factors, vaccine decision-making considerations, and influential sources of information with the initial uptake of recommended COVID-19 vaccines among a cohort of HCP based at healthcare systems in 12 U.S. states.

Methods

We analyzed responses from a cross-sectional survey of HCP enrolled in a multi-site vaccine effectiveness study between January 7, 2021, and May 1, 2022. We included demographic characteristics, participants' reported considerations for vaccine decision making, and trusted sources of vaccine information and used a mixed-effect logistic regression model to identify factors associated with prior COVID-19 vaccine uptake.

Results

Of the 5,777 participants analyzed, 5,018 (86.9%) received at least one COVID-19 vaccine dose before enrollment. Vaccinations occurred between December 14, 2020, and January 7, 2022, with the majority (90%) occurring by March 27, 2021. The first site vaccine requirement began on August 23, 2021. Concern about adverse effects was a major barrier to vaccination (adjusted odds ratio [aOR] = 0.39, CI = 0.30–0.51) whereas desire to protect family and friends (aOR = 3.16, CI = 2.03–4.92) and to avoid getting COVID-19 (aOR = 2.97, CI = 2.31–3.82) were significant facilitators. Employers were considered influential sources of information for HCP (aOR = 1.61, CI = 1.28–2.03).

Conclusion

We found a high proportion of COVID-19 vaccine uptake early in the COVID-19 pandemic among HCP, driven primarily by their concerns about contracting and spreading the virus. Notably, 90% of vaccine uptake occurred prior to any site vaccine requirements. Employers were considered to be a trusted source of information. Proactive efforts by employers to share relevant information rapidly may help address concerns about potential adverse effects and may lead to increased vaccine acceptance and uptake when responding to future epidemics.

Interventions/Programs

Evaluating “NYC Baby Boxes”: A Mixed-Methods Study of a New York City Government-Led pilot to reduce early stress among families with newborns Rachel Massar* Rachel Massar, Alex Gingerella, Sarah Sisco, Kayla Fennelly, Carolyn Berry,

Early financial and material stress is a major concern for new parents, particularly in low socioeconomic and minority populations. In 2025, New York City government launched a pilot initiative called “NYC Baby Boxes”, an inter-agency effort designed to support families with newborns and reduce early sources of stress during the postpartum period. As part of the pilot, families giving birth at four hospitals in the city’s public hospital system, the largest in the nation, receive a free box containing essential newborn and postpartum supplies, along with a health guide and a family resource guide that connect parents to available services and supports. Our team of researchers from NYU Grossman School of Medicine is conducting an external, mixed-methods evaluation of the Baby Boxes program focused on patient acceptability and early experiences among families receiving the intervention. We have launched telephone surveys with mothers who received Baby Boxes approximately 1-2 months post-delivery to assess satisfaction, utilization of Baby Box items, engagement in postnatal and pediatric care, parental and financial stress, confidence and self-efficacy to care for an infant, and engagement with resources; fielding ends in May 2026 and we anticipate a sample size of at least 200 completed surveys. Thirty-two in-depth virtual interviews with a subset of mothers who received Baby Boxes explore experiences receiving and using Baby Box supplies and elicit recommendations for program improvement. We will analyze interviews using rapid qualitative methods. Findings from this evaluation will provide early evidence on the acceptability of a city-led Baby Boxes program and its potential to reduce early stressors among parents of newborns and assessing trust building with City systems.

Interventions/Programs

Building Trust Through Practice Facilitation: What Fidelity Data May Reveal About Influence in Population Health Improvement Demetria Hubbard* Demetria Hubbard, Olakunle Alonge, Anne Brisendine, Larry Hearld, Kimberly Smith, Andrea Cherrington, Matthew Fifolt,

As population health initiatives increasingly rely on primary care to deliver evidence-based care, building trust in scientific evidence among frontline practices is essential. Yet little empirical work examines how implementation processes may contribute to the development of trust in these initiatives. This study used practice facilitation (PF) fidelity data to examine how patterns of PF delivery shaped adherence to improvement efforts and, theorize how adherence may contribute to credibility of interventions in real-world settings.

We analyzed data from 45 primary care practices participating in a statewide cardiovascular health improvement initiative. Fidelity was measured using a composite adherence score and indicators of facilitation “dose,” including frequency, mode, and total time spent between facilitators and practices over 12 months. We also examined organizational characteristics, including the role of the designated practice champion.

Adherence to different PF activities was moderate, but total adherence was uncommon. Practices that spent more total time with facilitators and had more in-person or virtual interactions demonstrated higher adherence, while email contact alone was not associated with adherence. In addition, practices with champions embedded in day-to-day clinic operations showed higher adherence than those relying on more distant leadership roles.

Although trust was not directly measured, the observed associations between relational intensity, mode of facilitation, and local leadership roles are consistent with theorized pathways through which trust and credibility in evidence-based population health initiatives may be built. These findings suggest that implementation data can offer insight into the processes that support sustained engagement and influence in real-world settings. Explicit measurement of trust should be a priority for future population health research seeking to strengthen the relevance and impact of scientific evidence.

Interventions/Programs

Prescription Fruit and Vegetable Program Evaluation of Patient and Community Outcomes in Rural Wisconsin Tami Swenson* Tami Swenson, Kari Due, Tara Draeger, Ian Pfaff,

In Wisconsin, the Aspirus hospital and clinic service area encompasses 38 of the 72 counties and reaches through the central and northern regions of the state. All five of the top counties in Wisconsin with the highest food insecurity rates as measured by Feeding America are within the service area (Sawyer 12.9% food insecurity rate, Forest 13.2%, Adams 14.0%, Ashland 14.0%, and Menominee 16.1%). Starting in 2014 in Wausau, Aspirus partnered clinical champions with local farmers markets to create a fruit and vegetable prescription (FVRx) program. The thought being that if patients were given a prescription and a resource to purchase produce at the farmers market, it would be a meaningful way to help them actively engage in their health, while supporting the local economy. Over time, the Aspirus FVRx program has expanded to over 20 markets and become a well-known resource for patients, especially those experiencing food insecurity and chronic conditions. This program provides support to patients to make access to produce easier and affordable. As an academic-community partnership, Aspirus and the University of Wisconsin – Stevens Point have been able to research and design the FVRx program to best meet the needs of patients, clinical staff, and farmers. The evaluation plan is to determine if the project demonstrates an impact on the short-term and intermediate outcomes of (1) the improvement of dietary health through increased access and consumption of fruits and vegetables and (2) the reduction of individual and household food insecurity; and on the long-term outcomes of (3) improved self-management of diabetes, health behaviors, and health outcomes and (4) reduced health disparities related to type 2 diabetes. Using survey data from program participants and redeemed farmers market vouchers matched to medical records, the finalized results from this currently ongoing evaluation will be presented.

Interventions/Programs

Evaluating implementation of a statewide community health worker training program in Arizona using the RE-AIM Framework Binoli Herath* Binoli Herath, Lindsey Burns, Jen Jondac, Alicia Hernandez, Claire Reynolds, Gilbert Arvizu, Mindy L. McEntee,

Introduction and Objectives: Community Health Workers (CHWs) play a key role in advancing health equity and chronic disease prevention, particularly in medically underserved communities. In Arizona, policies such as voluntary CHW certification and Medicaid reimbursement aim to support a sustainable CHW workforce. Funded by Health Resources & Services Administration, Arizona State University launched the CHW Training Program (ASU CHW-TP) in 2023 to recruit, train, and place CHWs statewide. This paper evaluates the program's reach, effectiveness, and adoption and identifies support for CHW workforce sustainability.

Methods: Secondary analysis of administrative records, trainee tracking, and feedback surveys evaluated the ASU CHW-TP using Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM). Reach was assessed by number and characteristics of trainees; effectiveness by completion of curriculum and field placements; and adoption by the number of community partnerships and placement opportunities.

Results: A total of 710 applications were received after removing duplicates and incomplete submissions; 297 were eligible and 277 admitted. Participants represented diverse racial/ethnic groups: Black/African American (37%), Hispanic/Latino (32%), Non-Hispanic White (24%), AIAN (11%), and Asian (3%). Many trainees came from disadvantaged backgrounds (48% economically and 36% environmentally). Overall, 206 (74%) completed the curriculum and 40 (14%) dropped out. Eighty-one trainees (29%) completed field placements. The program established 57 partnerships (34%) out of 167 organizations approached. In total, 102 trainees (37%) completed both curriculum and placements and were eligible for CHW certification.

Conclusions: The ASU CHW-TP trained a diverse CHW cohort but faced barriers including competing demands, technical challenges, limited placements, and low compensation. Improving work conditions, leadership support, fair wages, and certification fee subsidies may strengthen CHW workforce sustainability in Arizona.

Interventions/Programs

Implementation of a Bridge Support Program for Suicidal Youth Kayla Fennelly* Kayla Fennelly, Rachel Massar, Anne Buchanan, Jennifer Agostino, Nitin Toteja, Carolyn Berry,

In 2024, New York City Health + Hospitals (H+H), the largest urban safety-net system in the US, launched the Caring Transitions Program (CTP) in partnership with the NYC Department of Health and Mental Hygiene (DOHMH) to serve youth who present to the Emergency Department (ED) with serious suicidal behavior or a suicide attempt and their families. Located in 2 boroughs (Bronx and Queens) and serving 5 ED's, the CTP provides support and connections to outpatient care for youth and their families in the 90 days following a suicide attempt or serious suicide-related behavior. The CTP team includes Peer and Family Advocates with lived experience who work closely with youth participants and their caregivers, as well as Transition Coordinators and Social Workers. As part of a rigorous mixed-methods evaluation, the NYU Grossman School of Medicine study team conducted 30 key informant interviews between July 2025-January 2026 with program staff and mental health/ED providers to help understand barriers and facilitators to successful program implementation. Overall, the program successfully launched at all 5 sites, with one notable challenge being administrative barriers to filling the Family Advocate role in the Bronx. Other challenges include scarcity of available space in which to privately see patients, difficulty meeting patients in person across multiple H+H facilities, appropriate supervision structure for peer advocates, and early communication challenges with outpatient psychiatric providers. Facilitators to implementation include clear understanding of program goals amongst CTP staff and ED staff and providers, successful integration of a program referral pathway into the electronic health record, and clear leadership and oversight from H+H Central Office staff. These findings will inform future program expansion at H+H as well as other hospital systems seeking to implement similar bridge programming for this highly vulnerable population.

LGBTQ+

Using the Minority Stress Model to Understand Parent and Caregiver Reactions to Gender Affirming Medical Care Ban for Minors in Iowa Libby Fry* Libby Fry,

Although 27 states have now implemented bans on gender affirming medical care (GAMC) for minors (Kaiser Family Foundation, 2025), due to their relatively new nature, research is meager about the impacts of such policies. In March 2023, Iowa signed such a ban, Senate File 538. This law impacts not only transgender and gender diverse (TGD) minors, but also their parents/caregivers who must ultimately make decisions about how to navigate the change in healthcare access for their minor child. Semi-structured interviews are being conducted with a sample of these parents/caregivers to better understand how they are impacted by the law. Recruitment and interviews started in August 2025 and will continue through the end of April 2026.

Participants are asked questions about parenting experiences along the timeline of SF 538 from introduction to implementation, as well as coping strategies and social supports. Interviews are recorded, transcribed, and coded, using several rounds of deductive coding and then several rounds of inductive coding.

This project uses the Minority Stress Model as a framework for understanding the experiences parents/caregivers of TGD minors report having in relation to the ban on GAMC for minors in Iowa. Participants shared experiences that can be categorized as general stressors such as financial issues, distal stressors such as having to find accessible out-of-state GAMC providers for their minor child and paying for out-of-state care, and proximal stressors such as expecting negative outcomes for their child because of the law. In addition, participants shared coping mechanisms such as engaging in advocacy around the law and building community and social supports such as affirming family and friends that helped mitigate stress they associated with the GAMC ban. At least one participant reported feeling relief in response to the law, rather than stress, since they did not support their minor child accessing GAMC before the age of 18.

LGBTQ+

Patterns of Food Insecurity by Sexual Orientation and Gender Beth Martin* Beth Martin, Gabe H. Miller, Christie Caruana, Hannah Lindl, Kayli Morrison,

Background

Existing research on food security has established a disparity for lesbian, gay, and bisexual (LGB) individuals in the U.S., compared to their heterosexual counterparts. Several nationally representative studies report that, across the board, LGB individuals are more likely to experience food insecurity than heterosexual individuals. Additionally, women are more likely to experience food insecurity compared to men. Fewer studies have examined intragroup differences in food insecurity for sexual orientation and gender. In this paper, we examine inter- and intragroup differences in food security screening based on sexual orientation and gender.

Methods

To examine food insecurity at the intersection of sexual orientation and gender, we estimate logistic regression models using National Health Interview Survey Data from 2013 to 2024. The independent variable is a cross classification of sexual orientation and gender (straight man, straight woman, gay man, lesbian woman, bisexual man, bisexual woman), and the dependent variable is a binary food-security variable based on individual scores from a 10-question food security screening supplement. We control for a host of sociodemographic and socioeconomic covariates and employ complex survey weights across analysis.

Results

In the final model, straight men had the lowest odds of screening positive for food insecurity, followed by straight women. Gay men, lesbian women, and bisexual men had the second highest odds, but did not differ from each other, and bisexual women had the highest odds of screening positive for food insecurity.

Conclusion

In addition to intergroup differences between straight and LGB individuals, there is evidence for intragroup differences in food insecurity, specifically between bisexual men and women. There is no evidence for intragroup differences between gay men and lesbian women, though they each have higher odds of food insecurity than both straight men and women. These findings highlight the importance of considering intersecting social positions when examining health inequity.

Life-course/developmental

The potential for building life course residential histories through retrospective neighborhood data Lisa Miller* Lisa Miller, Paul Delamater, Jaime Slaughter-Acey,

Introduction

Research on the longitudinal health impacts of neighborhoods is often limited by residential data that are either cross-sectional or limited to birth address obtained from vital records. This study presents a novel approach to building life-course residential history using participant recall in a sample of postpartum Black women.

Methods

Data were from the LIFE-2 cohort (2023-2025, Detroit, MI). Participants reported their current address, their address at birth, and their ages at 10 and 18 years. Address data was considered “Complete” if street-level, zip code, cross street, or landmark data was provided and “Incomplete” if data was missing or only city/state-level data was provided. Address completion was evaluated among participants who completed at least 50% of the survey (n=577). Birth address completion was further evaluated among a subset of mothers (n=202) with linked birth certificate (BC) data. We compared self-reported demographic and neighborhood characteristics by address data completion status at ages 18 and 10 to assess the potential impact of missingness.

Results

Among 577 participants, completion for residential address data was 100% for current address and 77.8%, 76.5%, and 55.6% for age-18, age-10, and birth addresses, respectively. For mothers with linked BC data, birth address completion rose to 99%. Compared with participants with incomplete age-18 address data, those with complete data were more likely to report a stable place to sleep during both pregnancy and childhood. Participants with complete (vs. incomplete) age-10 address data also reported higher mean current neighborhood safety and longer residence in their current neighborhood.

Conclusion

High completion rates support the use of address recall as a promising method for building life-course residential history, especially when combined with BC data. Missingness was unrelated to demographics but associated with current neighborhood characteristics.

Mental health/function

The association between telling an adult about bullying victimization and adverse mental health outcomes due to bullying; examining positive school relationships as a potential moderator Noah Westfall* Noah Westfall, J'Mag Karbeah, Katie Berry, Kelly Searle,

Introduction: Existing research is mixed about whether telling an adult at school about bullying victimization is beneficial to the victim, and may actually exacerbate the situation. This study assesses the association between telling an adult about bullying victimization and self reported adverse mental health outcomes (i.e., negative impact on family and peer relationships).

Methods: This descriptive study uses the 2022 School Crime Supplement (SCS) to the National Crime Victimization Survey (NCVS), a nationally representative survey of 12-18 year olds living in the United States.

Findings: Just under half (44%) of respondents (n=885) reported telling an adult about bullying victimization. In bivariate logistic regression models, individuals that told an adult about victimization had 1.8 (CI= 1.2 – 2.8) times the odds of reporting bullying having a negative impact on relationships with family or friends. When controlling for school relationship factors, having a peer that listens was associated with 72% lower odds (CI= 0.10 – 0.77) of reporting a negative impact on relationships due to bullying compared to individuals without a peer that listens. Finally, there is evidence that the relationship varies based on one's social supports when added as an interaction [(told adult*peer that listens) = 4.9, SE: 3.9, $p < .05$] and controlling for bullying frequency and school level. Overall, individuals that did not tell an adult about victimization and didn't report having a peer that listens had the highest probability of the adverse outcome at 52% (CI= .25 – .80). In contrast, individuals that did not tell an adult about victimization, but reported having a peer that listens had the lowest predicted probability of the adverse outcome at 14% (CI= .10 – .18).

Conclusion: Though not causal, these findings suggest that a universal precaution to not tell an adult about bullying victimization may be inappropriate, depending on the quality of social support one has at school.

Mental health/function

Examining Factors Influencing Positive Mental Health: A Neural Network Approach

Memuna Aslam* Memuna Aslam,

Mental health challenges among college students have risen significantly, highlighting the need to better understand the key determinants influencing psychological well-being. Using data from the Healthy Minds Study (HMS) 2022–2023, covering students across 530 colleges in the United States, this study examines the relative importance of factors such as overall health, sleep patterns, current financial situation, substance use, and obesity in predicting positive mental health outcomes.

Traditional statistical approaches often overlook complex, non-linear relationships and may oversimplify how multiple risk factors interact. To address these limitations, this study applies an Artificial Neural Network (ANN), a computational model inspired by human brain functioning, to improve prediction accuracy and capture multidimensional interactions among variables. After standard preprocessing procedures including data cleaning, scaling, encoding, and dataset splitting, a neural network with two hidden layers was trained using robust optimization techniques.

Results indicate that overall good physical health has the strongest positive importance score in predicting positive mental health, while obesity shows the highest negative importance score. Substance use is also associated with a substantial negative influence on positive mental health outcomes. In contrast, sleep on weeknights demonstrates a relatively negligible importance score in the model. Additionally, current financial situation shows a meaningful positive importance score, suggesting that better financial conditions are associated with improved mental well-being among students.

These findings demonstrate that ANNs can effectively capture complex and non-linear relationships that may be missed by traditional regression models. However, limitations include reduced interpretability due to the “black box” nature of neural networks and potential risks of overgeneralization. Future research should incorporate additional psychosocial and environmental variables and explore more advanced neural network architectures to enhance predictive performance and policy relevance.

Mental health/function

Neighborhood Social Vulnerability and Post-Pandemic Anxiety and Depression in Young Adults Craig Caudill* Craig Caudill, Joshua Goode, Colter Mitchell, Helen Meier,

Background: The COVID-19 pandemic disrupted adolescents' education and social environments, potentially exacerbating mental health risks. Anxiety and depression are closely associated with social vulnerability, yet little research has examined how global pandemics influence this relationship.

Objective: This study examined the association between neighborhood social vulnerability and anxiety and depression among young people following the onset of the COVID-19 pandemic.

Methods: Data were from the Fragile Families and Child Wellbeing Study (FFCWS) (n=2,990). Anxiety and depression were measured using the CIDI-SF at age 22. Neighborhood social vulnerability was measured using the CDC/ATSDR Social Vulnerability Index (SVI), integrating socioeconomic status, household characteristics, racial/ethnic minority status, and housing type/transportation. Logistic regression modeled the relationship between SVI and young adult anxiety and depression, adjusting for sex, race, ethnicity, mother's marital status, cohabitation with father, mother's education, household income, and residential mobility.

Results: Total neighborhood social vulnerability was associated with lower odds of depression (OR=0.71; 95% CI: 0.48–0.99). Among SVI domains, socioeconomic status (OR=0.66; 95% CI: 0.48–0.93) and household composition/disability (OR=0.73; 95% CI: 0.55–0.98) were negatively associated with depression. The minority status/language domain (OR=0.55; 95% CI: 0.32–0.94) was the only domain significantly associated with decreased anxiety.

Conclusions: Unexpectedly, greater neighborhood social vulnerability was associated with lower odds of anxiety and depression among young adults following the COVID-19 pandemic. Further research will examine potential resilience mechanisms underlying this negative association.

Mental health/function

Relationship of Clinical Factors, Self-reported Quality Metrics, Social Determinants of Health, and Treatment Frequency with Long-term Suicide Severity Outcomes Sarah Mazen* Sarah Mazen, Peyton Williams, Akhil Reddy, Nicholas Carson, Gareth Parry, Benjamin Cook, Albert Lo,

Background: Suicide among adolescents and young adults is a major public health concern, highlighting the need to understand risk and protective factors. Yet, little is known about the clinical, psychosocial, and treatment-related factors influencing long-term suicide outcomes. This study aims to identify such factors among youth receiving community behavioral health (BH) care.

Methods: The study included 100 adolescents who received outpatient (BH)treatment in a safety-net health system. In 2023, participants completed a follow-up survey, including the (Computerized Adaptive Test – Mental Health; CAT-MH) for current suicide risk and two retrospective self-report measures: treatment experiences (Consumer Assessment of Healthcare Providers and Systems; CAHPS) and social determinants of health (CONNECT-S). Covariates associated with suicide severity were identified using a LASSO model including EHR-based sociocontextual, diagnostic, and service use variables, time to follow-up, CONNECT-S and CAHPS scores. Ordinary Least Squared (OLS) regression provided estimates of the associations between LASSO-selected covariates and treatment frequency (≥4 vs <4 visits per 3-month quarter) and interaction between CAHPS and treatment frequency.

Results: Ten covariates were selected by the LASSO model. OLS found that any emergency department use during the initial treatment period was associated with an increase in suicide severity of 17.1 [95% CI 1.9, 32.2; p = 0.03]. Preliminary evidence indicated that higher treatment frequency was associated with lower suicide risk severity approximately five years later among youth reporting more positive care experiences; in this group, a 1-point increase in care rating corresponded to a -0.4 reduction in suicide severity [95% CI: -0.8, 0.02; p = 0.06].

Conclusions: Preliminary findings suggest higher intensity care is only likely to be of value if it is of high patient-reported quality. Larger sample confirmatory studies are needed.

Mental health/function

Mental Health and Substance Use Among U.S. Medical Students Following the Dobbs v. Jackson Women's Health Organization Decision. Alaxandria Crawford* Alaxandria Crawford, Parvati Singh,

The U.S. Supreme Court's decision in Dobbs v. Jackson Women's Health Organization changed the national landscape of abortion care. For medical professionals, this decision may have introduced unique stressors, including concerns about providing evidence-based care, legal risks, uncertainty about clinical training, and the future of reproductive care practice. These challenges may have been particularly salient among medical students and trainees. We examined whether the Dobbs decision preceded adverse mental health outcomes among medical students in the U.S., from Fall 2018 to Winter 2025.

We retrieved data on mental health outcomes among medical students from the Health Minds Study – Student Survey database, a repeated cross-sectional nationally representative survey of college students in the U.S. We defined our exposure as the timing of the Dobbs decision, defined as pre-Dobbs (through Winter 2022) and post-Dobbs (Fall 2022 onward). Binary outcomes included: clinical depression, clinical anxiety, suicidality, non-suicidal self-injury, and substance use. We conducted difference in difference analysis using (survey-weighted) logistic regression models. The interaction between the Dobbs indicator (referent = pre-Dobbs period) and medical student status (referent = all other students) served as the main coefficient of interest.

Overall, we observed no change in any of our 5 outcomes pre- versus post-Dobbs across all students. However, medical students exhibited higher odds of adverse mental health outcomes, relative to all other students, following the Dobbs decision. These included clinical depression (OR=1.41; CI:1.16,1.72), substance use (OR=2.10; CI:1.70,2.59) and non-suicidal self-injury (OR=1.34; CI:1.06,1.69). We failed to reject the null for clinical anxiety (OR=1.12; CI:0.94,1.34) and suicidal ideation (OR=1.02; CI:0.74,1.40).

The Dobbs decision preceded increased clinical depression, self-harm, and substance use among medical students in the U.S.

Mental health/function

Cannabis use trajectories and mental health among US Adults Celina Morales* Celina Morales,

Introduction: In the United States, cannabis is becoming more readily accessible due to recent legislative changes. However, cannabis is associated with adverse mental health outcomes, posing a significant public health concern. More longitudinal research is needed to examine cannabis use trajectories over time and associated mental health trends. In this study, we first examine past-year cannabis use trajectories across four consecutive waves to understand longitudinal patterns of use. We then determined whether adults with high cannabis use were more likely to have lower mental health scores over time than adults with low or no cannabis use.

Method: We use data from the Population Assessment of Tobacco and Health, a national longitudinal project that measures substance use at yearly intervals. We used four consecutive years of data. Cannabis use was measured as any past-year use. Mental health was measured using the Patient-Reported Outcomes Measurement Information System scale. We employed group-based trajectory modeling to classify cannabis use trends, and conducted a generalized estimating equation analysis to examine the relationship between the cannabis use trajectories and mental health over time.

Result: Two trajectory groups were identified: a low/no-use group (76%) and a high/increasing group (24%). Compared with the low and no use group, the high and increasing use group had significantly lower mental health scores (= -3.24; 95% CI -3.57, -2.91; p <.001), and mental health scores remained constant over time.

Conclusion: Our study describes the cannabis use profiles of the general adult population in the US. Consistent cannabis use across years is linked with poorer mental health over time. These findings may be used by practitioners to identify adults at a high risk of poor mental health and provide guidance when needed. The rapidly accessible cannabis environment may increase the risk of poor mental health among adults who may use it.

Methodological approaches to studying public health

Correlation is Not Prediction: Self-Assessed Overall Health as a Predictor of Mortality Rob Warren* Rob Warren,

I quantify the degree to which people’s self-assessed overall health (SAOH) predicts their subsequent mortality. Prior research has justified using this measure in substantive research by claiming it has high predictive validity; many authors subsequently suggest that the measure has clinical utility because of its validity in predicting mortality. I computed risk of death within 1, 3, 5, and 10 years as a function of responses at baseline to a question about whether people’s health is generally excellent, very good, good, fair, or poor. Data come from the 1986 to 2018 U.S. National Health Interview Surveys and the 2014/2015 High School and Beyond study—each linked to mortality records. People offering worse ratings of their health were substantially more likely to die within 1, 3, 5, and 10 years. Nevertheless, SAOH has low sensitivity and a high false positive rate (regardless of how it is dichotomized). Results are consistent across samples and sociodemographic groups. SAOH is an important measure of well-being and should continue to be used in epidemiological and other research. However, it is not predictive of individual-level mortality; claims about its clinical utility for targeting interventions or resources at people at highest risk of death are not supported.

Methodological approaches to studying public health

From Popcorn to Population: Improving Methods for Estimating the Number of People Who Inject Drugs Bow Suprasert* Bow Suprasert,

Background

Three-Sample Capture-Recapture (3S-CRC) is considered the gold-standard method for estimating the size of hidden populations. The approach relies on 3 or more lists of the target population (e.g., receiving services, outreach intercepts) and models the total number based on the probabilities of appearing in 1, 2, or 3 “captures”. However, 3S-CRC presents theoretical and practical challenges, including: 1) misaligned definitions of the population; 2) non-independence between captures, 3) missing important sub-populations; 4) duplicates within capture rounds; and 5) matching individuals across rounds. In updating estimates for the number of people who inject drugs (PWID) in San Francisco, we developed innovations to address these issues.

Approach

Captures using service databases often had misaligned definitions of PWID (i.e., injection not recorded), place (i.e., geographic area), and time (i.e., past-year injection), and had incomplete identifiers. We therefore recommend 3 field captures. To improve independence between captures, sampling methods were diversified using street intercepts (rounds 1 and 3) and respondent-driven sampling (RDS, round 2). RDS, a peer-referral recruitment method, reaches less visible subgroups and allows the collection of biological specimens and in-depth behavioral data. Formative mapping ensures geographic alignment and inclusion of subgroups. A $10 incentive for all screened (regardless of eligibility) discourages falsifying criteria and reduces within-round duplication. Distinct-colored popcorn facilitates recall of participation in the current and prior rounds, both needed to measure capture-recapture probabilities. Matching between rounds uses a unique alphanumeric code from participant-known elements (e.g., initials, dates) while maintaining anonymity. Finally, we advocate changing the “capture-recapture” terminology to the human-centered “Multiple Engagement Size Estimation” when referring to this gold standard method.

Methodological approaches to studying public health

Analyzing Modern Data Quality Control Approaches on Crowdsourced Data from Prolific
Jon Agley* Jon Agley, Yunyu Xiao, Mikyoung Jun,

Introduction: Crowdsourced research studies conducted using tools like Amazon's Mechanical Turk and Prolific represent potential opportunities to rapidly study issues of interest to the population health sciences. Unfortunately, there are many factors that can reduce the quality of data obtained from these platforms. Such risks include, but are not limited to, respondents' inattention or dishonesty, bots, virtual private networks, and now, large language models (LLMs) and computer-using assistants (CUAs).

Objective: Given Prolific's extensive identity verification procedures, including unscheduled, live video monitoring to prevent LLM use, we chose that platform to assess 13 study-level modifications to facilitate data quality control.

Method: We recruited a US-based nationally-representative sample by cross-sections of age, race/ethnicity, and sex from Prolific (n=450) to analyze raw quality check failure counts for each of 13 approaches, identify the total count of failed checks per participant, and obtain strength-of-association data for each bivariate pair of control checks (i.e., whether a given pair of failed checks is likely to co-occur, and the strength of that association).

Results: Of the 450 participants, 366 (81.3%) did not fail any checks, 66 (14.7%) failed one check, 12 (2.7%) failed two checks, and 6 (1.3%) failed three checks. Only one pair of quality checks were strongly associated: positive-valence and negative-valence LLM jailbreaking prompts ($V=.717$, $p<.001$).

Discussion: We will highlight implications for future crowdsourced studies, including the likely importance of using multiple different checks given a lack of strong associations between failed checks. We also discuss nuances for conducting checks using prompt leaking text and address ongoing concerns about the lack of "ground truth" prevalence data on LLM and CUA use by participants.

Disclosure: Portions of this abstract, including some verbatim text, are from a journal article under review.

Methodological approaches to studying public health

Examining body mass index among the Indigenous Shuar of Ecuador: Application, limitations, and population-specific cutoffs Alanna Melchor* Alanna Melchor, Madeleine Getz, Melissa Liebert, Felicia Madimenos, Samuel Urlacher, Joshua Schrock, Theresa Gildner, C.J. Harrington, Alicia De Louize, Tara Cepon-Robins, Aaron Blackwell, Dorsa Amir, J. Josh Snodgrass, Lawrence Sugiyama,

Body mass index (BMI), waist circumference (WC), waist-to-stature ratio (WSR), and sum of skinfolds (SoS) are widely used proxy measures of adiposity with variable performance across populations. Given the relationship between body fat and cardiometabolic disease, BMI, WC, and WSR are often used in clinical and public health settings to screen for risk. Because body composition, body size, and fat distribution vary between populations, these measures are strengthened using population-specific morbidity risk to determine thresholds for obesity. Unfortunately, few references are available for Indigenous populations, particularly those undergoing rapid market integration and experiencing increased burdens of cardiovascular and metabolic disease. Here, we compare the accuracy of BMI, WC, WSR, and SoS in predicting metabolic health in Ecuadorian Shuar using biomarkers collected as part of the community-centered, long-term Shuar Health and Life History Project. We compare the results of the proxy measures and examine establishing population-specific cutoffs for clinical categories using metabolic syndrome to improve the accuracy of screening tools. Results show BMI has the highest correlation with metabolic markers in the population, and matching metabolic syndrome prevalence to U.S. references raises the overweight and obesity thresholds to 27kg/m2 and 34 kg/m2. These results reduce the prevalence of overweight and obesity in the Shuar and are distinct from other population-specific BMI thresholds. These findings are important for understanding how metabolic health and excess adiposity interact through population-level research, and for interpreting health information for participants and healthcare patients.

Methodological approaches to studying public health

Touching Grass in a Digital World: How SocialsVoice Reimagines Participatory Mixed Methods to Maximize Impact of Social Media and Mental Health Research Melissa DuPont-Reyes* Melissa DuPont-Reyes, Alice Villatoro, Victoria Mello, Lu Tang,

Background: To support participatory research about social media (SM) and mental health, we co-designed SocialsVoice with community stakeholders—a Photovoice adaptation using SM, theory, and a convergent mixed methods randomized design. Prior studies have excluded qualitative and SM narratives from youth and instead relied on survey or smartphone data, limiting trust and impact.

Method: In 2025, youth ages 13-24 (N=41) from U.S. community-based organizations were randomly assigned to share SM clips showing mental health positive or negative content as defined by youth. In 7 video-chat group sessions, youth discussed clips, authored captions, screened co-created summary videos, and completed pre-posttests. Data from SM and qualitative codes, were triangulated with ANOVA statistics to explore participatory effects and meta-inferences on mental health symptoms, self-perceptions, stigma, and SM use behaviors.

Results: The negative vs positive theme group improved CES-DC and PHQ-4 scores ($p<.05$). In contrast, the positive vs negative group reported improved self-rated mental health ($p<.01$). Mental illness knowledge/attitudes declined in both groups while social distance improved in the negative group only; these trends were not significant. The negative vs positive group reduced neurobiological and increased psychosocial causal attributions ($p<.10$). Lastly the negative vs positive group reduced SM problem use, social contact, peer comparison, and body/image concerns, though not significant. The presentation will share joint display tables of mean scores with SM and qualitative excerpts to form meta-inferences (confirmation, discordance, expansion).

Conclusion: SocialsVoice goes beyond typical data science by power-sharing to co-create an integrated database of real-world SM experiences documenting both the harms and benefits of SM for mental health. To advance pragmatic policy about SM safety and utility, a free educational book on SocialsVoice findings was sent to participants, policymakers and key stakeholders.

Mortality

Period and cohort differences in educational mortality disparities: Evidence from Utah's Wasatch Front, 2000–2023 David Curtis* David Curtis, Felix Yao,

Question: How have educational disparities in adult mortality recently changed, including during the Great Recession and COVID-19 pandemic, after accounting for birth cohort differences?

Significance: National evidence demonstrates widening education gaps, but period effects and compositional differences by cohort are often conflated.

Methods: Using state administrative and vital records linked via the Utah Population Database, mortality was observed over a 24-year-period for 687,828 adults aged 25 to 74 who resided in the urban core of Utah in 2000. Educational attainment was coded as three categories: no high school diploma, high school diploma/some college, and four-year college degree or more. We fit sex-stratified flexible parametric survival models using age as the time scale and included education-by-period interactions that represented four periods (2000-Nov2007; Dec2007-2013; 2014-Feb2020; Mar2020-2023). Models adjusted for race/ethnicity, marital status, adult migration, cohort (1925-44; 1945-54; 1955-64; 1965-75), and education-by-cohort.

Results: In 2000-2007, adults with a college degree had ~40-45% lower mortality hazard than adults without a high school diploma. Adding cohort terms attenuated educational differences and revealed substantially steeper disparities in younger cohorts. Relative educational disparities were stable during the first three periods but narrowed during COVID-19 (e.g., HRs for college degree relative to no high school diploma shifted from 0.60 to 0.73 for women and 0.57 to 0.76 for men), as mortality rose across groups. However, absolute mortality differences remained similar across periods. When allowing education and period associations with mortality to vary by age, educational differences in cumulative mortality widened during COVID-19.

Conclusions: Separating cohort dynamics from period shocks and illustrating relative alongside absolute disparities provides clearer evidence of how educational disparities have changed.

Place/Communities

Gentrification and housing affordability trajectories: Implications for health inequities
Mark Hernandez* Mark Hernandez, Gina Lovasi, Gabriel Schwartz,

Housing affordability is a key determinant of physical and mental health. Neighborhood gentrification is often theorized to exacerbate housing affordability issues and contribute to health inequities. However, few quantitative studies have examined how it shapes housing affordability trajectories over time, despite this being a chief concern among residents, community organizers, and policymakers. Using data from the Panel Study of Income Dynamics (2001-2021), we address this gap by 1) identifying housing affordability trajectories among US families, 2) estimating associations between gentrification and trajectory class membership, and 3) assessing heterogeneity in these associations by income and housing tenure (rent vs. own).

Housing cost ratios (HCR) – the proportion of family income spent on housing – were calculated at each biennial wave. Gentrification status of respondents' baseline census tract was computed using socioeconomic and housing cost changes (2000-2010) and categorized as: not gentrified, moderately gentrified, intensely gentrified, or ineligible to gentrify. We used group-based trajectory models to identify distinct HCR trajectories. We used multinomial logistic regression to estimate associations between gentrification and trajectory class membership, adjusting for baseline covariates.

Among 6,303 respondents living in core-based statistical areas at baseline, four trajectory classes were identified: stable low (74%), moderate-low (17%), high-moderate (4%), and increasing HCR (low to high; 5%). In the full sample, gentrification was not associated with trajectory class membership. However, among low-income respondents, intense gentrification was associated with higher odds of belonging to the increasing HCR trajectory.

These findings suggest that gentrification-related affordability pressures disproportionately burden lower-income residents, highlighting the need for equitable housing and neighborhood development policies.

Place/Communities

Healthcare Deserts Under Water: Community Health Workers, Trust, and Climate-Vulnerable Primary Care in Jakarta Clarisza Runtung* Clarisza Runtung,

Background:
Jakarta faces an accelerating dual crisis. Rapid coastal land subsidence combined with projected sea-level rise threatens to inundate large areas of the city, while the climate resilience of its primary healthcare infrastructure, anchored by community health centers (puskesmas), remains poorly understood. These risks are not evenly distributed. North Jakarta's coastal kampung neighborhoods are home to communities with long-standing flood adaptation practices, yet urban planning policies have often labeled these areas informal or illegal and subject to eviction rather than support. Chronic flooding therefore intersects with structural marginalization and shapes who can access care and who remains most vulnerable.

Objectives:
This study identifies "healthcare deserts" in Jakarta, defined as areas where coastal flood exposure and limited primary care access converge, and estimates the population living within these compound vulnerability zones.

Methods:
A descriptive spatial analysis was conducted in ArcGIS Pro using multiple geospatial datasets. Low elevation derived from 8-meter resolution DEMNAS digital elevation models was used as a proxy for chronic flood vulnerability given Jakarta's extreme rates of land subsidence. Flood-prone zones were overlaid with georeferenced locations of all 315 puskesmas. Two-hour travel-time service area catchments were modeled to identify access gaps where flood exposure intersects with limited primary care reach. Population exposure was estimated using 100-meter gridded population data. Complementary qualitative fieldwork engages residents and kader posyandu (community health workers) through interviews and participatory workshops grounded in radical listening and community partnership.

Results:
Approximately 847,000 residents live within identified healthcare desert zones, and 94 puskesmas face operational risk during flood events. Vulnerability is concentrated in coastal North Jakarta where environmental exposure overlaps with displacement pressure and longstanding spatial inequities.

Conclusion:
Climate-related health system vulnerability in Jakarta is closely linked to spatial inequalities in urban development and service distribution. Integrating spatial analysis with community knowledge, particularly that of neighborhood health workers, can support more equitable and climate-responsive primary care planning in coastal cities. This study contributes to population health science by integrating spatial epidemiology with community-informed perspectives from neighborhood health workers.

Place/Communities

Where is food access in the recipe against gentrification? Policymaker and stakeholder perspectives from Seattle Jane Dai* Jane Dai, Barbara Baquero, Jessica Jones-Smith,

Gentrification may create barriers to food access for legacy residents through food environment change and displacement. While research on gentrification and food access often focuses on quantifying neighborhood food environment change and describing individual experiences with those changes, less is known about how cities protect legacy residents' food access in gentrifying neighborhoods. Seattle offers a compelling case study of this; a newly revised Food Action Plan and Comprehensive Plan both provide policy directions for equitable housing, transit, and food systems community development against gentrification. In July 2025, we conducted a cross-sectional study with key informant interviews (n=14) to gather policymaker and stakeholder perspectives on Seattle's approach to mitigating gentrification. We used the focused Rapid Assessment Process to collect and analyze data across four domains of food sovereignty. Themes revealed how the city and community-based organizations (CBOs) planned against gentrification, mostly without food access in mind. In the Material domain, we found that food access was of material concern only for city departments directly involved with the Food Action Plan and for CBOs focused on food systems. In the Meaning domain, addressing gentrification meant addressing displacement of residents and businesses. In the Competence domain, city programs were well-received by CBOs if they prioritized capacity-building and centered legacy resident perspectives in new development initiatives. In the Future of Food domain, there was a collective vision for co-located access to food, housing, and transit—but affordable housing and equitable transit-oriented development were considered urgent policy targets. We attribute Seattle's focus on non-food systems (housing, transit) because they may drive investment and economic growth during budget shortfalls. Our findings highlight a food access gap in policy approaches to address gentrification in Seattle.

Place/Communities

Do Neighborhood Effects on Type 2 Diabetes Replicate Across Facility and Claims Data?
David Curtis* David Curtis, Ken Smith, Huong Meeks, Lori Kowaleski-Jones,

Background: Environmental attributes (e.g., greenness, air pollution, walkability) have been associated with type 2 diabetes (T2D) incidence, but this literature has notable biases (e.g., residential self-selection, ascertainment bias). We examine whether place-based T2D associations replicate across two complementary population health data sources and test whether BMI mediates these associations.

Methods: We used the Utah Population Database to follow a parent and offspring cohort residing in the four-county Wasatch Front region in Utah. Incident T2D was identified independently using the Healthcare Facility Database (HCFD; encounter data from all state-licensed hospitals/emergency departments/surgery centers; 1996-2019; n = 896,204) and the Utah All-Payer Claims Database (APCD; insurance claim data, including from Medicaid; 2013-2019; n = 550,275). To document the validity of each data source and potential limitations, we compared diagnosis timing and comorbidity profiles among cases observed in both sources, assessed screening-related ascertainment bias due to overweight status, and documented the magnitude of socioeconomic disparities. Cox models were used to estimate associations between environmental attributes and T2D and test body mass index as a mediator.

Results: Among 22,032 individuals diagnosed in both sources from 2013-2019, APCD recorded T2D 1.2 years earlier whereas HCFD diagnoses had more disease comorbidities (i.e., kidney disease in 9.1% vs 5.7% and cardiovascular disease in 24.1% vs 18.4%). Higher tract-level greenness and active commuting rate were protective (HR=0.94 per 0.1 NDVI; HR=0.96 per 10% active commuting rate), while greater PM10 increased risk (HR=1.10 per 10 ug/m3). BMI minimally mediated greenness (~5%) but accounted for at least half of the active commuting and PM10 associations.

Conclusions: Triangulating across health data sources and testing mechanisms can strengthen confidence in T2D evidence, informing potential place-based interventions.

Place/Communities

Longitudinal Effects of Housing Instability and Economic Well-Being on Mental and Physical Health of Mothers: A Nationally Representative Analysis Olumayowa Idowu*
Olumayowa Idowu,

Abstract

Background: Housing instability and low economic well-being can hurt health. Moving often can break social ties, interrupt care, and raise stress. Poverty can also limit access to safe housing and resources. Many studies look at these problems at one point in time, but few follow the same families over many years.

Objective: This study tests how **housing instability** (how often mothers move) and **economic well-being** (poverty ratio) relate to **mental health (depression)** and **physical health (self-rated health)** of mothers in the Future of Families and Child Wellbeing Study (FFCWS) from when their child is 3 years old to 15 years old.

Data and Methods: We used mothers followed across Waves 2–5 for national-weight analyses, and Waves 2–4 for replicate-weight analyses. We estimated survey-weighted longitudinal models. For depression, we fit logistic regression using national weights (Waves 2–5) and a replicate-weight design (Waves 2–4). Models adjusted for wave, race/ethnicity, education, age, poverty ratio, rent, moving frequency, and marital status.

Results: Across both longitudinal models, moving **3+ times** was strongly linked to higher odds of depression compared with moving once. The effect was large and statistically significant in both the national-weight model and the replicate-weight model. In the replicate-weight model, Hispanic mothers had lower odds of depression than White mothers, and mothers with a college degree had higher odds of depression than mothers with less than high school.

Conclusions: Frequent residential moves are a clear risk factor for worse mental health. Policies that reduce forced moves (such as eviction prevention, rent support, and stable affordable housing) may help improve population mental health.

Keywords: housing instability; residential mobility; depression; self-rated health; poverty; survey weights; FFCWS.

Place/Communities

Mothers of Sierra Leone: Building Health Through Community Amanda Lee* Michael Kramp,

Mothers of Sierra Leone (MOSL) began in 2019 as an ambitious attempt to leverage documentary storytelling to improve maternal health in Sierra Leone. As an interdisciplinary effort, we have learned many lessons over six plus years, but one lesson remains paramount: improving maternal health requires meaningful and consistent community partnerships. To develop these community partnerships vital to maternal health in low-income settings, we have adhered to three practices: patience, listening, and curated storytelling.

Sierra Leone endures massive economic and social challenges that impede maternal health, and these massive challenges prompt external charities and social impact agencies to offer immediate assistance. But such efforts rooted in immediacy dismiss patience, and MOSL has learned that patience is vital to appreciating the complexities of individual lives and communities in low-income settings. The health challenges of Sierra Leone are not those of the West, and patience is required to understand the difference and earn community trust.

In the six plus years that we have operated in Sierra Leone, MOSL has patiently listened to women, healthcare workers, and men about their hopes and concerns. We have not mothers about their health and instead listened to women, amplifying their voices in documentary films. As listeners, we have shared the stories of women in Sierra Leone as a method to improve their health experiences.

By listening to people in Sierra Leone, MOSL has been able to curate filmic stories that express both obstacles to maternal health and the opportunities to improve maternal health. Our data from multiyear, mixed-methods research studies demonstrate how women in Sierra Leone become more confident to advocate for themselves in healthcare settings when they see and hear other Sierra Leonean women share their own stories of maternal health. Our work has helped to advance community trust; our work depends on community partnerships.

Place/Communities

Narrative Power to Advance Health Equity: Results from Survey Research to Support Tenant Organizing Yusra Murad* Yusra Murad, Jamila Michener, Norman Porticella,

Growing evidence across academia and community organizations is illustrative of the power of narratives in shifting public perception about health and housing. In the U.S., dominant narratives center the wealth and power associated with homeownership, while overlooking dire conditions facing tenants – particularly within marginalized communities. But a rising tenant movement is challenging these narratives. While existing research suggests that such alternative narratives can shift how the public contextualizes the "housing crisis" and the health inequities inherent to it, **there is a gap in evidence measuring how these narratives shape outcomes most relevant to tenant organizers.**

Alongside a community partner which convenes tenant organizations, we designed this experiment to test how alternative narratives about housing, wealth and inequality shape beliefs and intentions toward engaging with the housing system. We explore the effects of three alternative narratives on intentions to advocate and organize; perceptions of solidarity between renters and homeowners; and perceptions of blame, relative to a dominant narrative and a no-exposure control group.

We used a randomized, between-subjects design. Participants were recruited using YouGov (n = 4,500) and randomly assigned to one of five conditions (control, dominant narrative, and three alternative narrative conditions). The alternative conditions framed the housing crisis in the context of an unequal economy, connecting the struggles of homeowners and tenants alike.

Preliminary findings found evidence consistent with our hypotheses; alternative narratives can motivate tenant-owner solidarity and intentions to advocate, increase support for health-protective housing policies, and shift attributions of blame for housing issues to political and economic institutions, rather than individuals.

Our results suggest **alternative narratives stemming from tenant organizers can shift public consciousness about the housing crisis**, and indicate the potential for survey research as a rapidly responsive tool to sharpen narrative strategy for community organizations in their ongoing efforts to unite people for the purposes of advancing population health and housing justice.

Place/Communities

Community-Wide Behavioral Health and Early Academic Achievement Myah Houghten* Myah Houghten, Yoshie Sano, Brittany Cooper, Jane Lanigan,

Early success at school supports ongoing school engagement and connectedness, high school graduation, and positive adult outcomes across the life-course. Individual and family-level behavioral health factors are well known for their positive association with early academic achievement, yet few studies have examined community-level protective factors for their contribution to early academic achievement. This study integrates the risk and protective factor paradigm with the social-ecological framework to examine if aggregate community-wide protective factors in five dimensions—youth, family, school, peer, and community—contribute to early academic achievement and if that contribution is sustained even in the face of poverty. Publicly available secondary third-grade education data and youth behavioral health data were compiled from 178 public school districts in Washington State. Community-wide protective factors were measured with individual youth experiences averaged at the level of the school district and applied to each school district as a community characteristic. Multiple linear regression was used to examine if the aggregate community-wide protective factors are associated with higher levels of academic achievement for third-grade students, and the extent that community-wide protective factors retain a positive association with achievement when poverty is added to the analysis. Findings show that community-wide youth, family, peer, and community protective factors were significantly associated with both math and ELA achievement outcomes. Results also indicate that the impact of poverty reduces the strength of association with achievement for each of the protective factor dimensions. Study results confirm the importance of community-wide behavioral health to help offset the influence of poverty, while also pointing to youth-specific community characteristics and trust-building dynamics that help reduce the negative impacts of poverty on children’s learning.

Place/Communities

Is Racial and Economic Segregation associated with Racialized Health Inequalities across Canadian Cities? Alexis Dennis* Alexis Dennis, Trent Lebans,

A robust body of research from the United States shows that residential segregation is a fundamental cause of health inequality because it shapes access to health protective socioeconomic resources, exposure to health-related environmental risks, and engagement in health behaviors. There is evidence that Canadian cities also experience moderate levels of racial and socioeconomic segregation, but to our knowledge, no study has investigated whether residential segregation in Canada is associated with patterns of racial health inequality. To address this gap, we used data from the 2016 Canadian Census to construct racial and economic Index of Dissimilarity (DI) measures for 21 Canadian cities. The DI measures were merged with population survey data from Wave 3 of the Longitudinal and International Study of Adults (collected in 2016, n=9,050). Ordered logistic regression models were used to estimate associations between patterns of racial and economic residential segregation and disparities in self-rated health for Black, Chinese, Filipino/Southeast Asian, Latin American, Arab/West Asian, Japanese/Korean, and Aboriginal visible minority groups. Our preliminary findings show that after adjusting for sociodemographic and spatial characteristics, Chinese and Black Canadian populations are both sensitive to high levels of economic segregation, but in disparate ways. High economic segregation may be health protective for Chinese Canadians, buffering an initial health disadvantage in comparison to White Canadians. It, however, may be detrimental to the health of Black Canadians, eroding an initial health advantage in comparison to White Canadians. Additionally, increases in racial residential segregation were modestly associated with worse self-rated health among Aboriginal, in comparison to White, Canadians. The next step in this analysis is to run a series of robustness checks. Our findings advance the small but growing Canadian literature on racialized health disparities.

Policy

Wood County THC Environment Surveillance Scan: An Ongoing Academic-Community Partnership Tami Swenson* Tami Swenson, Jacob Wagner, Tanik Pontloff,

In 2022, Wood County was the first state locality to set an age restriction on purchasing hemp-related products in Wisconsin. The Wood County THC Community Environment Surveillance Scan looked at THC and intoxicating hemp (such as Delta-8, Delta-10, and THC-A) product availability in 2023 and 2025 as a academic-community partnership between the local health department and the University of Wisconsin – Stevens Point. The project conducted a three-phase environmental scan of THC retailers by investigating online websites, social media pages, and state licensing records to locate potential retailers and identify products offered; phone interviews with retailers to verify sales information and clarify product types; and in-person visits to confirm findings, observe store layouts, check for age verification measures, and, when possible, speak with owners or managers. Of 244 potential retailers in 2025, 76 were confirmed to sell THC (intoxicating hemp) products, a 245% increase from the 22 retailers identified in 2023. Based on initial phone conversations with retailers who do not sell but indicated that they will sell in the future, this number is expected to continue to increase over the next few years. Other major findings included: 25% of the identified THC retailers are Bars and Taverns; 20% of the scanned retailers sold psychotropic mushroom products; several stores scanned in-person did not restrict access to products for individuals under 21; a clerk offered free THC vape samples to an underage individual while vaping at the counter; and one retailer reported that they had 12 attempts by underage individuals to make purchases in the last month. Inconsistent age verification and sales raised concerns about youth access. The findings from this report were used by the Wood County health department to develop additional tools with local businesses to help monitor age compliance checks for persons under the age of 21.

Policy

Fentanyl Test Strip Policy in US and Overdose Deaths, 2016–2023 Shutong Huo* Shutong Huo,

Background: The U.S. overdose crisis accelerated with the spread of illicitly manufactured fentanyl. Fentanyl test strips (FTS) offer a low-cost drug-checking tool that can prompt safer decisions. In recent years, many states have moved to legalize FTS. However, evidence linking FTS legalization to population-level mortality remains limited. We evaluate whether decriminalization of FTS coincides with decrease in overdose deaths and whether effects differ among different domains of policy, as well as before versus after COVID-19.

Methods: We constructed a state-month panel from National Vital Statistics System Multiple Cause-of-Death micro-records, 2016–2023. Outcomes included age-adjusted deaths per 100,000 for any drug, any opioid, and synthetic opioids, coded via ICD-10. We ARIMA-detrended each state outcome series to reduce confounding from nonstationary trends. We coded policies monthly for first enforceable month in domains, possession, sale, and free distribution. Causal effects used Callaway–Sant'Anna difference-in-differences.

Results: Before COVID-19, legalization that created distribution or retail channels aligned with lower mortality. For any-opioid deaths, sale and free distribution reduced rates by about 3.4 per 100,000 (sale −3.40; free −3.47), while possession showed no detectable change (−1.64). Synthetic-opioid results mirrored this pattern (sale −3.16; free −3.21; possession −1.89). Any-drug deaths declined modestly (sale −1.84; free −1.93). After COVID-19, estimates clustered near zero across domains. Full-period averages therefore appeared null, reflecting opposing pre- and post-COVID dynamics. Analyses on unfitted age-adjusted rates produced the same directions and domain rankings.

Discussion: Findings indicate that legal pathways that expand access, sale authorization and funded free distribution, coincided with mortality declines during the late-2010s surge, whereas possession alone did little. Post-COVID attenuation likely reflects service disruptions, market shifts, and broader stressors that muted policy leverage. Policy implications include pairing FTS legalization with financed distribution through syringe services and community partners, retail clarity for pharmacies and vendors.

Policy

Not all legalization is equal: exploring how recreational cannabis regulatory approaches shape cannabis use and risk perceptions in US states and DC Ariadne Rivera-Aguirre* Ariadne Rivera-Aguirre, Ellicott Matthay, Ivan Diaz, Alvaro Castillo-Carniglia, Silvia Martins, Magdalena Cerda,

Recreational cannabis laws (RCLs) in the US vary widely. However, most evaluations treat legalization as a binary exposure or use aggregate scores, obscuring how specific policy combinations influence public health. We examined the effect of distinct RCL approaches on cannabis use and risk perceptions overall (ages 12+) and across adolescents (12-17), young adults (18-25), and adults (26+).

Using latent class analysis (LCA) on 2019-2022 cannabis policy data from the Alcohol Policy Information System, we identified four RCL models: No RCL, Pre-commercial (minimal regulation, no retail framework); Full Access (retail sales, home delivery, and on-site retail use); and Dispensary Access (retail sales for off-site use only and prohibiting public use). Linking these to the 2022–2023 National Survey on Drug Use and Health, we estimated effects on past-year, past-month cannabis use and perceived risk of frequent cannabis use using Longitudinal Targeted Minimum Loss-based Estimation (LTMLE) with Super Learner to account for time-varying confounding. We estimated average treatment effects via pairwise contrasts and evaluated hypothetical shifts between Full Access and Dispensary Access models.

Relative to No RCL, all RCL models were associated with higher cannabis use and lower perceived risk, with the largest prevalence differences (PD) among young adults and adults. However, the magnitude of the differences depended on the regulatory approach, particularly among adults (Dispensary Access vs. Pre-commercial: PD=-3.09; 95%CI: -3.66, -2.52). Effects among adolescents were generally small or null. Hypothetical shifts from Full to Dispensary Access yielded small and directionally consistent reductions in use (CIs included the null).

Public Health Communication and Trust

Use, needs, and features for effectiveness: Seeking user input for development of a San Joaquin Valley tobacco data dashboard Yeng Vue* irene yen, Arturo Durazo,

Surveillance is an important tool for tobacco control. Data dashboards, a form of surveillance, have increased in recent years. However, data dashboards have been historically designed without users' data capacities or needs in mind, particularly in rural and Tribal communities, which are at high risk for tobacco use, and in which data remain sparse. To inform a planned community-tailored data dashboard for California's San Joaquin Valley (SJV) and local foothills, a predominantly rural and agricultural region, our team sought out SJV-based tobacco control advocates and community leaders to identify crucial data needs and features for a future tobacco control data dashboard. We conducted surveys and interviews with rural and Tribal advocates and leaders, gathering perspectives from 29 people. A consistent issue was insufficient accessible for program planning, reports, and grants. Different programs collect hyper local data and combining these data in the region would contribute greatly to planning and grant writing. We learned that a wide variety of data were sought including: youth and adult smoking rates, e-cigarette/vaping rates, retailer locations, local tobacco control policies, secondhand smoke exposure, locations of primary care providers, and smoking cessation programs. Prospective dashboard users were not familiar with data dashboards. In exploring what could support their work, they mentioned: year-over-year comparisons of tobacco use trends, geospatial and mapping capabilities by rurality, demographic, and health data, and policy and compliance tracking. Tribal advocates specifically wanted the ability to disaggregate by county, Native heritage, and multi-ethnic identity. These findings inform us of the various data needs of the SJV region, highlighting the importance of first gaining insight on user perspectives in developing a community-tailored dashboard tool.

Public Health Communication and Trust

Building Analytic Infrastructure for Neglected Public Health Topics: A Case Study in Equity-Informed Eating Disorder Surveillance Ariel Beccia* Ariel Beccia, Dougie Zubizarreta, Jill Kavanaugh, Haley McGowan,

Eating disorders (e.g., anorexia nervosa, bulimia nervosa) affect an estimated 7% of U.S. youth, with disproportionate burdens among LGBTQ+ youth, youth of color, and youth experiencing food insecurity and other forms of economic strain – yet they receive far less public health attention, funding, and guidance than comparably prevalent concerns. Furthermore, state and local health agencies that do collect eating disorder data often lack the specialized knowledge needed to analyze and communicate findings rigorously and equitably, limiting the reach and impact of the data they already have. To help bridge this gap, the Eating Disorders Public Health Surveillance Working Group, a multi-state collaboration of researchers, public health professionals, and practitioners, developed two freely available resources for agencies working with youth eating disorder surveillance data: a best practices guide for survey item selection, and a comprehensive data analysis guide. Together, these tools support the full data lifecycle: asking the right questions, analyzing data with equity principles embedded throughout, and translating findings into communications that can inform prevention and health planning at every level. This presentation uses the development of these resources as a case study in building accessible, equity-centered support for under-resourced public health topics. We describe how interdisciplinary collaboration and ongoing input from public health agencies and community organizations shaped tools that are practical, field-ready, and designed to elevate awareness of eating disorders – and conditions like them – as urgent, preventable public health concerns. We close with lessons applicable to researchers, advocates, and public health and medical professionals working to strengthen evidence and action in other under-resourced domains.

Public Health Communication and Trust

Participatory Filmmaking as a Community-Driven Strategy to Strengthen Maternal Health Engagement and Healthcare Trust Lesly Dominguez Alvarez* Lesly Dominguez Alvarez, Julia Killar, Rejoice Obiora, Fathima Wakeel, Michael Kramp,

Our evaluation study advances population health science by integrating narrative-based intervention strategies while centering women as the knowledge producers rather than recipients of clinical messaging. The intervention demonstrates how community-owned storytelling can function as a pragmatic and scalable tool to improve maternal health engagements and strengthen relationships with the healthcare system and providers.

In Sierra Leone, structural barriers and communication gaps between healthcare providers and patients contribute to delayed care-seeking and poor maternal health outcomes. Mothers of Sierra Leone (MOSL) positions community storytelling as a trust-building infrastructure by shifting health communication power from institutions to women themselves, generating new insights into how participatory storytelling interventions can strengthen trust and engagement with maternal healthcare systems and offer a replicable framework for low-resource settings. MOSL is a community-based population health communication intervention that uses participatory filmmaking workshops to address maternal health disparities and distrust in the healthcare system.

Our 12-month mixed-methods research study is guided by the research question: *How does participatory filmmaking influence maternal health knowledge, health-seeking behaviors, and trust in the healthcare system among women in Sierra Leone?* This research initiative emphasizes a community-based participatory research design in which women collaboratively create short films using smartphones to share lived experiences, address misinformation, and identify locally relevant maternal health concerns.

To evaluate impact, we administered pre- and post-intervention surveys assessing maternal health knowledge, care-seeking, intentions and behaviors, and trust in healthcare providers. Focus groups and surveys further explored these changes in perceptions of the health system, communication dynamics, and community empowerment.

Race/Ethnicity

A Child-Centered Approach to Structural Racism: Measure Construction and Health Implications Zi Wan* Zi Wan, Han Liu,

This study aims to first develop a child-centered measure of structural racism (SR) for four racial/ethnic groups (Black, Hispanic, American Indian/Alaska Native, and Asian/Pacific Islander) and then evaluate the validity of this child-centered SR measure by testing its association with children's health in a multilevel analysis. State-level SR will be based on indicators from the American Community Survey and the Stanford Education Data Archive, capturing both children's direct SR exposure and mediated

exposure through their families. Individual-level data on children's health and controls come from the National Survey of Children's Health. Preliminary results based on six indicators (median household income, housing instability, poverty rate, rental housing, bachelor's degree, and segregation) reveal noticeable divergence between the child-centered and adult-oriented approaches (lowest correlation: 0.476). This limited alignment affirms the theoretical and empirical value of child-specific measurement for understanding how structural racism gets under the skin from a life course perspective.

Race/Ethnicity

Development of a Theoretical Model for Multiracial Mental Health Inequities Noah Yee Westfall* Noah Yee Westfall,

Current research on multiracial adolescents suggest that multiracial individuals tend to have poorer mental health outcomes compared to monoracial peers.[1],[2] This presentation is responding to the urgent need to better theorize and understand multiracial populations.[3] In this presentation, I will present the preliminary development of a theoretical model which I hope will provide the theoretical grounding for my eventual dissertation work on this topic. I aim to gain a better understanding of multiracial mental health inequities, which will rely primarily on identity theories, empirical descriptions of bullying/social exclusion and theories of monoracism.

I aim to develop a theoretical explanation for multiracial mental health inequities, which as I will argue, can be partially explained by the experience of identity based bullying. We already have a robust body of evidence about the adverse impacts of bullying on mental health in general.[4],[5] In this paper, I will extend the existing bullying literature to multiracial individuals by arguing that the disproportionate burden[6],[7] of bullying experienced by multiracial adolescents is a manifestation of monoracism. This work fits squarely within the domain of social psychology, which bridges individual psychological and sociological factors together.

Bullying is a complex phenomenon that has predominantly been framed as an individual level issue. However, more recent developments in the field have expanded this work into sociology and population health. My goal with this presentation is to merge identity theories found within social psychology with empirical research on the lived experiences of multiracial individuals in order to provide an explanation for observed mental health inequities.

I will argue that one possible contributing explanation for multiracial mental health inequities is due to identity-based bullying in adolescence. Individuals that experience microaggressions and invalidation of their identities by monoracial peers may perceive these interactions as bullying. Bullying traditionally includes a perceived power differential and so I will make the case that identity invalidation from monoracial peers may be perceived as a manifestation of this power differential and thus experienced negatively as bullying.

Conceptual Model

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Race/Ethnicity

How Stress and Discrimination affect Cardiovascular Risk in First and Second Generation South Asian Immigrants Khushi Chopra* Khushi Chopra, Rohan Patel, Preethi Saravanan,

Individuals of South Asian origin have an increased risk of cardiovascular disease (CVD) and heart failure with onset occurring ~10 years earlier and a 2–3-fold increased risk compared to US whites and other ethnic groups. Many studies also demonstrate how chronic stress can adversely impact physical health, which has been associated with chronic low-grade inflammation, elevated blood pressure, and increased risk of CVD. Given South Asians already have a predisposition to experiencing CVD, and discrimination and mental stress are modifiable risk factors, future research in this area could be crucial. In recent decades, following major national crises such as 9/11 or the COVID-19 pandemic, there was seen to be a rise of anti-Asian hate crimes across the United States, and current restrictive immigration policies may also contribute to higher stress in this population. This study examines how such experiences of stress and discrimination impact CVD risk in first- and second-generation South Asians. Our mixed methods approach combines quantitative analysis of survey data from a stress scale, discrimination scale, the American Heart Association survey, My Life Check, which measures cardiovascular health, and semi structured interviews among a subsample. Preliminary results show that on average, South Asians that experience lower rates of stress and discrimination have a more favorable My Life Check score, corresponding to lower risk for CVD.

Race/Ethnicity

Trauma Pathways Linking Racial Microaggressions to Psychological Distress Aldo Barrita*
Aldo Barrita,

Background: Racial-based traumatic stress (RBTS) is a well-documented transdiagnostic risk factor linked to poorer mental and physical health among people of color (POC). RBTS may emerge following a single discriminatory event or develop cumulatively through repeated exposure to racial stressors. Racial microaggressions, subtle and often ambiguous forms of discrimination, are particularly harmful because their repeated occurrence can produce substantial psychological burden over time. Although prior studies have documented bidirectional associations between racial microaggressions and posttraumatic stress symptoms, little research has directly examined whether microaggressions predict RBTS or how individual risk and resilience factors influence this relationship.

Methods: A racially diverse sample of POC (N = 880; Mage = 23.4, SD = 3.24) completed an online cross-sectional survey assessing racial microaggressions, RBTS, psychological distress, coping strategies, and ethnic identity. Structural equation modeling was used to test parallel mediation and moderated mediation models.

Results: Racial microaggressions predicted psychological distress indirectly through both immediate and current RBTS, while the direct effect was nonsignificant, indicating full mediation. Negative coping amplified the association between microaggressions and RBTS, whereas positive coping weakened this link. Affirmed ethnic identity showed context-dependent effects, providing protection when adaptive coping was high and maladaptive coping was low. Conditional indirect effects indicated that trauma-related pathways were strongest under conditions of high negative coping and low positive coping.

Conclusion: Findings suggest that racial microaggressions contribute to psychological distress primarily through trauma-related mechanisms, including immediate trauma responses. Coping strategies and ethnic identity shape these pathways, highlighting the clinical importance of promoting adaptive coping and identity-affirming practices to mitigate the mental health impact of racial stressors.

Race/Ethnicity

Measuring racialized temporal inequality: Daily time use and the emotional meaning of daily activities Linnea Evans* Linnea Evans,

Time is increasingly recognized as a social resource inequitably distributed across ethnoracial groups, with implications for mobility, stress, and health. Yet group differences in time use are often interpreted as reflecting individual values rather than structural racism and racialization processes. Drawing on racialized time theory and intersectionality frameworks, this study examines variation in daily time use and its emotional experience across ethnoracial and gender groups among U.S. adults. I analyze data from 2009-2019 American Time Use Survey and affect data from the ATUS wellbeing modules for White, Black, and Hispanic adults aged 18-64 (n=80,922), across contracted, committed, necessary, and free time domains. Ethnoracial differences in daily time are meaningful and vary by gender, yet are often obscured by aggregate categories. White adults spent more time in active and entertainment leisure and non-core household tasks. Hispanic women devoted substantially more time to core domestic work and caregiving. Black adults reported more downtime, but less time in entertainment leisure, ad experienced the least time eating. Black men reported significantly less paid work time, largely reflecting employment disparities. Sociodemographic adjustment narrowed by did not eliminate these differences. Using the wellbeing module, I examined group differences in the emotional. Experience of time via the unpleasantness index (U-index). Race-specific U-indices revealed that minoritized groups rated institutional interactions – financial, medical, and government services as more unpleasant, while reporting more positive experiences during leisure. Overall daily unpleasantness varied modestly across groups, though Hispanic women consistently reported more. Results differed by whether aggregate or race-specific indices were applied, highlighting the importance of measure choice. A planned third stage will incorporate state-level structural racism indicators to examine macro-social drivers of these patterns.

Race/Ethnicity

Defining and validating multidimensional economic wellbeing among Black Emerging Adults Frankie Greene* Frankie Greene, Sarah Andrea, Deborah Karasek, Holly Nishimura, Will Dow, Rain Mocello, Abigail Arons, Sheri Lippman, Margaret Libby, Marguerita Lightfoot,

Background: Economic security and independence are critical components of health and wellbeing, associated with access to health care, mental health, as well as chronic disease. Emerging adults (ages 18-24) experience the highest poverty rates of any age group in the U.S., with deep inequities by race. However, the multidimensional nature of economic well-being has not been explored or defined in emerging adults – making measurement a challenge.

Objective: This study aims to develop and validate a comprehensive conceptual model of economic wellbeing specifically tailored for Black emerging adults (BEA).

Methods: The project leverages baseline and 12-month follow-up data from a cohort of low-income BEA from San Francisco and Oakland who enrolled in BEEM guaranteed income and financial mentoring trial. Through a theoretical literature review and preliminary analysis, we have established six core domains of economic wellbeing for BEA and mapped available measures to each domain. As next steps, we are conducting initial Exploratory Factor Analysis (EFA) and subsequent Confirmatory Factor Analysis (CFA) to validate this conceptual model.

Results: Among a sample of 300 BEA, 41.3% indicated not having $400 to pay an emergency expense and 90% were food insecure, illustrating the degree of financial hardship. Correlations across constructs revealed sufficient variation across measures within domains to apply factor analysis. We developed 6 domains: Independence, investment in the future, stability and security, supporting others, supportive context/access to quality resources, and attaining desired lifestyle.

Conclusion: We will describe recommendations for a theoretically and empirically tested construct of financial wellbeing among BEA.

Reproductive health

When Miscarriage Becomes a Crime: Media Representations of Pregnancy Loss Criminalization in the Post-Dobbs United States Taylor Riley* Taylor Riley,

Pregnancy criminalization is a growing public health issue in the United States. Since the Supreme Court Dobbs decision, a growing number of women have been investigated, arrested, and prosecuted for how they navigate pregnancy loss, including miscarriage and stillbirth. Pregnancy loss is common; approximately one in four known pregnancies end in miscarriage. Rather than receiving support and health care following these common medical events, women have been increasingly charged with crimes such as “abuse of a corpse” or murder. These cases can be highly publicized, which has implications for people’s legal and medical understanding of pregnancy loss. Media representations of criminalized pregnancy loss may contribute to fear, medical mistrust, and uncertainty around healthcare seeking. This study qualitatively examines how pregnancy loss criminalization is depicted in print news media after the June 2022 Dobbs decision. Using ProQuest news-related databases and key search terms, we identified 5,068 newspaper/news articles from June 24, 2022 to February 28, 2026 in our initial search. After removing duplicates and screening for relevance, we selected 91 articles that met inclusion criteria. Preliminary findings from our content analysis suggest media coverage often prioritizes preliminary law enforcement reports over the criminalized individual’s account. Reporting often equates a fetus, regardless of gestational age, as an unborn child with legal rights. These findings will have implications for clinical care and public health messaging to counter misinformation, clarify legality and legal resources, and rebuild trust in seeking health care for pregnancy loss.

Reproductive health

Structural racism and racial gaps in hypertensive of disorders of pregnancy in Georgia

Sheree Boulet* Sheree Boulet, Reem Abdelghany, Ran Zhang, Rachel Kienle, Kaitlyn Stanhope, Jasmin Eatman, Michael Kramer, Sierra Carter,

Objective: We aimed to identify latent constructs of structural racial discrimination (SRD) and evaluate their associations with Black-white disparities in rates of hypertensive disorders of pregnancy (HDP) in Georgia.

Methods: Using 12 county-level indicators of SRD representing historic, criminal justice, residential, and political domains, we conducted a Bayesian exploratory factor analysis (EFA) to identify latent factors and estimate county scores. We linked the scores to 2020-2024 Georgia natality data and used Bayesian conditional autoregressive linear models to estimate associations between factor scores (categorized into tertiles) and Black-white differences in rates of HDP among birthing people aged 15-44, adjusting for age, urbanicity, and county Black-white voting ratios. HDP included chronic and gestational hypertension and eclampsia as reported on the birth certificate.

Results: The EFA identified two latent factors: Historic and Polarization. Among 206,438 births to Black individuals and 265,693 births to white individuals, HDP rates were 15.5% and 13.1%, respectively. The mean county-level Black-white risk difference in HDP rates was 28.9 per 1000 births. Compared with the first tertile of Historic factor scores, scores in the second (T2) and third (T3) tertiles were associated with increased Black-white HDP disparities (T2: 6.2, 95% CI: 3.0-15.4; T3: 5.0, 95% CI: 5.4-15.4). Increasing Polarization scores were similarly associated with widening Black-white disparities in HDP (T2: 9.5, 95% CI: 0.2-18.4; T3: 9.8, 95% CI: 1.5-21.1).

Conclusions: Structural racism contributes to maternal racial disparities in HDP, particularly in states like Georgia where historic practices remain embedded in contemporary legal, political, and social systems.

Reproductive health

Comparing Enhanced Prenatal Care Delivery Models and Their Impact on Perinatal Social Determinants of Health: Evidence from the EMBRACE Study in California. Vincenzo Cornacchione* Vincenzo Cornacchione, Chuck Mcculloch, Miriam Kuppermann, Deborah Karasek,

Background: Rising income inequality in the United States highlights the need for interventions targeting economic and social conditions among low-income pregnant people. Enhanced prenatal care programs may complement or increase access to public assistance by addressing social determinants of health (SDOH), although enhancements and types of support vary across delivery models. We compared two types of enhanced models: enhanced group prenatal care (eGPC) and enhanced individual prenatal care (eIPC).

Objective: To determine whether randomization to eGPC improved pregnant individuals' food and financial security compared with eIPC.

Methods: We used longitudinal data from the Engaging Mothers and Babies–Reimagining Antenatal Care for Everyone (EMBRACE) study, a randomized comparative effectiveness trial including low-income and primarily Latine pregnant individuals in California's Central Valley. We used mixed effects logistic and linear models to estimate associations between eGPC randomization and two self-reported outcomes at 3rd trimester (3T) and 3-month postpartum, compared to eIPC randomization. Outcomes included a dichotomous measure of household food security based on the Household Food Security Scale, and a dichotomous and continuous measure of financial security based on the CFPB Financial Well-Being Scale. Models were adjusted for time, monthly household income at baseline, and language preferences.

Results: 678 participants were randomized into eIPC (n = 371) and eGPC (n = 298). We did not observe significant differences between eGPC and food security, compared to eIPC [3rd trimester aOR = 1.44 (95% CI: 0.67, 3.07)]. Participants randomized into eGPC had higher odds of very low to medium-low financial well-being compared to those in eIPC [(3rd trimester aOR = 2.26 (95% CI: 1.08, 4.70)].

Conclusion: Based on the data from the EMBRACE study, we saw few differences in food security and financial well-being between participants of both models. While delivery may not determine important SDOH outcomes, future research should examine specific pathways to improving SDOH through enhanced prenatal care offerings.

Reproductive health

Public hospital-based care for abortive events in Mexico: complication rates and socio-demographic factors, 2018-2022 Laura Jacobson* Laura Jacobson, Biani Saavedra-Avendano, Raffaela Schiavon, Blair Darney,

Background: Abortion-related complications are difficult to measure due to lack of standardized definitions and limited available data. We describe the proportion of abortive events that result in a documented complication in Mexico's public sector hospitals.

Methods: We used ICD-10 codes from Mexico's hospital discharge system (2018-2022), Subsistema Automatizado de Egresos Hospitalarios (SAEH), to describe abortive events admitted to hospitals: complications for excessive bleeding, infection, embolism, and unspecified; patient socio-demographic and clinical characteristics; and municipality-level structural vulnerability. We estimate complications by pregnancy duration, describe types of complications, identify characteristics associated with the presence of a complication using multuvariable regression, and calculate complication rates (proportion of abortive event that result in a complication treated in a public sector hospital per 1,000 women of reproductive age) by state in 2022.

Findings: There were 399,405 abortive events that received hospital-based care in Secretaria de Salud (SS) hospitals between 2018-2022. Ninety-two percent had no complication reported. The adjusted predicted probability of a complication was higher among patients at > 13 weeks' gestation (8.9%; 95% CI 8.1-9.7%) compared with ≤ 13 weeks (6.6%; 95% CI 6.0-7.2%). Higher parity, care at a tertiary hospital, and high marginalization at place of residence were positively associated with presence of a complication. States with higher complication rates are primarily in the central and southern regions.

Conclusions: In Mexico, 92% of patients who seek care for all abortive events (induced, spontaneous, post-abortion) in SS hospitals have no complications. Marginalized patients are more likely to have a complication and to seek care at later pregnancy durations. Routinely conflating care-seeking and complications leads to overestimates of the risk of abortion.

Keywords: Abortion Complications; Health Services Research; Induced Abortion; Maternal Morbidity; Mexico; Post-Abortion Care; Spontaneous Abortion.

Reproductive health

Preterm Birth and Postpartum Depression: The Role of Prenatal Care Adequacy and Maternal Nativity Tenzin Khando* Tenzin Khando,

Preterm birth is a major public health concern associated with adverse maternal and infant outcomes, including postpartum depression (PPD), yet less is known about wheter prenatal care adequacy and maternal nativity shape this relationship. This study examines the association between preterm birth and postpartum depression and assesses whether prenatal care adequacy and nativity modify this association. Data come from the Pregnancy Risk Assessment Monitoring System (PRAMS) Phase 8 (2020–2021), a population-based surveillance system of mothers with recent live births in the United States (N = 56,778). Preterm birth was defined as delivery before 37 weeks of gestation. Postpartum depression was measured using PRAMS indicators of persistent sadness, hopelessness, or loss of interest after childbirth. Prenatal care adequacy was assessed using the Adequacy of Prenatal Care Utilization (APNCU; Kotelchuck) Index.

Survey-weighted logistic regression models showed that 9.1% of mothers experienced a preterm birth and 13.2% reported symptoms consistent with postpartum depression. In adjusted models, preterm birth was associated with higher odds of postpartum depression (OR = 1.31, 95% CI: 1.23–1.39). Prenatal care adequacy was modestly associated with PPD in partially adjusted models but did not significantly modify the association between preterm birth and postpartum depression. Predicted probabilities suggested persistent disparities in PPD risk among foreign-born mothers across prenatal care categories. These findings indicate that while preterm birth is associated with increased postpartum depression risk, adequacy of prenatal care visits alone may not mitigate this association, highlighting the role of broader structural and psychosocial factors shaping maternal mental health. Strengthening postpartum mental health screening and improving the quality and cultural responsiveness of perinatal care may help address disparities in maternal mental health outcomes.

Reproductive health

Displaced Networks, Constrained Intentions: A PEN-3 Model Analysis of Birth Spacing Among African Immigrants in the US Comfort Olorunsaiye* Comfort Olorunsaiye, Redate Kibret, Madison Thai, Grace Hatridge, Triphine Sodjinou, Joanna Okusaga, Ucheoma Nwaozuru, Amal Anilkumar, Tanbira Zaman, Larissa Brunner Huber,

Background: Population health research has often problematized immigrant cultural practices without accounting for positive attributes of this determinant of health behavior. Guided by the PEN-3 Cultural Model and a community-engaged research approach, including partnerships with immigrant-serving organizations, community forums, and a seven-member advisory board, this study examines how social and cultural norms shape birth spacing among African immigrants and whether migration disrupts these norms.

Methods: We conducted in-depth interviews with African immigrant women (n=12) and men (n=8) born in Nigeria, Ghana, Liberia, and Sierra Leone, as part of phase 1 of a mixed methods study. Data were inductively coded and thematically analyzed based on the PEN-3 Model's Cultural Empowerment domain.

Findings: Participant age ranged from 22-63 years, most of whom were married, college-educated, and had been living in the US for 6 to 35 years. In preliminary analysis, we identified **P**ositive and **E**xistential cultural practices, including community postpartum support networks and breastfeeding practices that facilitated birth spacing before migration, but are weakened or absent in the US context; constraining participants' ability to achieve desired fertility intentions. **N**egative influences included persistent cultural taboos around discussing birth spacing and male resistance to contraception, which limited reproductive negotiation among couples and reduced the reach of clinical counseling. Data collection is ongoing, and findings will be updated pre-conference.

Conclusion: Applying PEN-3 Model within a community-engaged study approach reveals that effective birth spacing interventions must build on, not disregard, culturally embedded practices, while addressing the structural losses migration poses. These findings will inform a novel sociocultural measure of birth spacing norms, advancing culturally centered population health science with and for African immigrant communities.

Reproductive health

Impact of prenatal care initiation on adverse perinatal outcomes in patients with anemia

Meghana Narahari* Meghana Narahari, Bharti Garg, Amelia Gagliuso, Ashley Benson, Aaron Caughey,

Objective: Iron deficiency anemia (IDA) in pregnancy is common and associated with worse maternal and neonatal outcomes. While early prenatal care is known to improve outcomes for many pregnancy-related conditions, its impact on IDA in pregnancy remains unclear. The objective of this study is to investigate the association between timing of prenatal care initiation, stratified by trimester, and adverse outcomes in pregnant individuals with anemia.

Study Design: This is a retrospective cohort study using California's linked vital statistics and hospital discharge data (2008-2020). We included pregnant individuals with a singleton gestation, delivering between 23 and 42 weeks, with diagnosis of anemia. Individuals were classified by trimester of prenatal care initiation. Chi-square tests and multivariable Poisson regression models were used to assess the risk of outcomes among patients who started their care in the 2nd or 3rd trimester as compared to the first trimester (reference group).

Results: Among the 373,098 pregnant individuals with IDA, 83.7% started care in the first trimester, 12.4% in the second trimester and 3.9% in the third trimester. Third trimester prenatal care initiation was associated with increased risks of hypertensive disease of pregnancy (aRR =1.05, 95% CI 1.00 – 1.10), preterm birth <34 weeks (aRR=1.34, 95% CI 1.20 – 1.50), severe maternal morbidity (aRR=1.25, 95% CI 1.19 – 1.33), maternal blood transfusion (aRR=1.32, 95% CI 1.24 – 1.40) and maternal ICU admission (aRR=1.33, 95% CI 1.08 – 1.65). Neonates of individuals with late prenatal care initiation had a higher risk of NICU admission (aRR=1.34, 95% CI 1.29 – 1.41) and infant death (aRR=1.82, 95% CI 1.39 – 2.37).

Conclusion: Initiation of prenatal care in later trimesters is associated with increased risk of adverse maternal and neonatal outcomes among individuals with anemia.

“““

Table 1: Maternal and Neonatal outcomes by trimester of prenatal care initiation for anemia among pregnant individuals in California, 2008–2020

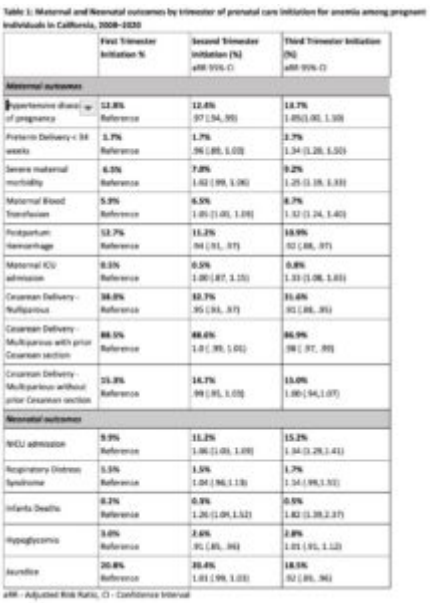

Table 1: Maternal and Neonatal outcomes by trimester of prenatal care initiation for anemia among pregnant individuals in California, 2008–2020

	First Trimester Initiation %	Second Trimester initiation (%) aRR 95% CI	Third Trimester Initiation (%) aRR 95% CI
Maternal outcomes			
Hypertensive disorders of pregnancy	12.8% Reference	12.4% (97 [.94, .99)	13.7% 1.05(1.00, 1.10)
Preterm Delivery < 34 weeks	1.7% Reference	1.7% .96 (.89, 1.03)	2.7% 1.34 (1.28, 1.50)
Severe maternal morbidity	6.5% Reference	7.0% 1.02 (.99, 1.06)	9.2% 1.25 (1.19, 1.33)
Maternal Blood Transfusion	5.9% Reference	6.5% 1.05 (1.00, 1.09)	8.7% 1.32 (1.24, 1.40)
Postpartum Hemorrhage	12.7% Reference	11.2% .94 (.91, .97)	10.9% .92 (.88, .97)
Maternal ICU admission	0.5% Reference	0.5% 1.00 (.87, 1.15)	0.8% 1.33 (1.08, 1.65)
Cesarean Delivery - Nulliparous	38.8% Reference	32.7% .95 (.93, .97)	31.6% .91 (.88, .95)
Cesarean Delivery - Multiparous with prior Cesarean section	88.5% Reference	88.6% 1.0 (.99, 1.01)	86.9% .98 (.97, .99)
Cesarean Delivery - Multiparous without prior Cesarean section	15.8% Reference	14.7% .99 (.95, 1.03)	13.0% 1.00 (.94,1.07)
Neonatal outcomes			
NICU admission	9.9% Reference	11.2% 1.06 (1.03, 1.09)	15.2% 1.34 (1.29,1.41)
Respiratory Distress Syndrome	1.5% Reference	1.5% 1.04 (.96,1.13)	1.7% 1.14 (.99,1.31)
Infants Deaths	0.2% Reference	0.3% 1.26 (1.04,1.52)	0.5% 1.82 (1.38,2.37)
Hypoglycemia	3.0% Reference	2.6% .91 (.85, .96)	2.8% 1.01 (.91, 1.12)
Jaundice	20.8% Reference	20.4% 1.01 (.99, 1.03)	18.5% .92 (.85, .96)

aRR - Adjusted Risk Ratio, CI - Confidence Interval

[caption id="attachment_62943" align="alignnone" width="216"] Screenshot[/caption]

Reproductive health

Association between parental incarceration and fertility trajectories among young adults

J'Mag Karbeah* J'Mag Karbeah,

Background: Experiences in childhood and adolescence have the potential to influence long-term fertility desires, fertility timing, and fertility outcomes for emerging adults. While there is a body of research that has explored how criminal offending impacts fertility outcomes of emerging adults, there is less research examining how parental incarceration (PI), a form of criminal legal system exposure that has been shown to have immediate and longitudinal impacts, may shape fertility trajectories.

Methods: The current study uses the Future of Families and Child Wellbeing study to examine whether young adults (mean age= 22.3) who experienced PI during early life (i.e., birth to age 15) have different fertility outcomes, fertility desires, and child spacing goals than their peers who have not experienced PI. We begin by conducting bivariate analyses examining the relationship between PI and our fertility outcomes of interest (e.g., having biological children, fertility desires, ideal family size, and intended birth spacing). Next we conducted logistic regressions to determine if there was an association between PI history and fertility desires. Next, we conducted ordered logistic regressions to examine potential relationships between PI history, ideal family size, and intended birth spacing (i.e., intended number of years between first or next birth).

Results: In our analytic sample (n=2,542) we find that individuals with parental incarceration histories were twice as likely (20.7% versus 10.3%) to have children at age 22 than their peers without this exposure.Among individuals without children, individuals with PI histories were just as likely to report not wanting to have children (10%) compared to peers without PI histories. In our ordered logistic regressions we find a statistically significant association between PI history and intended fertility timing. Youth who experienced PI and reported wanting children were more likely to report wanting to have children within the next two years (RRR=1.6; P<0.01; CI=1.1,2.4) than delay their first/birth 5 or more years.

Conclusion: These findings suggest that unlike peers who have not experienced parental incarceration, young adults who experience this exposure have different fertility desires and intentions. Considering how common parental incarceration exposure is in the US, investing in programmings that strengthen families impacted by incarceration may yield population-level benefits.

Reproductive health

Crowdsourcing Contraception: A Content Analysis of IUD-Related TikTok Comment Sections Nicole Quinones* Muna Hassan, Madeline Mahoney, Abby Grabowski, Mitchelle Kennedy, Gabby Hester, Asha Hassan,

Social media platforms like TikTok serve as a source of medical information and a platform for users to share their health(care) experiences. Discussions of contraception, particularly intrauterine device (IUD) insertions and experiences, are prominently featured. Previous studies find that IUD TikTok videos are overwhelmingly negative and highlight patient distrust after insertions due to lack of pain management. The comment sections of these videos have yet to be explored.

To address this gap, we utilized Apify, a web scraping tool, to compile a list of the top 50, publicly available TikToks under the search “iud”. We performed 2 separate data scrapes (1: videos 2: comments) to create our dataset. 3399 Comments were coded thematically by the study team.

Commenters discussed personal IUD insertion and removal experiences (36.4%), contraceptive experience more broadly (22.3%), and side effects (10.5%). Commenters’ experiences reflected themes of provider credibility (3.3%) and criticism (5.5%), sharing advice (4.5%), questions or requests (10.8%), gaslighting/betrayal (2.8%), contraceptive decision making (8.2%), and sexism in pain management (2.9%). Commenters frequently identified sexism as the reason for limited pain management options for IUD insertion. When commenters recounted their IUD insertion experience, whether they praised or criticized their healthcare provider was often tied to communication and pain management options offered.

This research finds TikTok may serve as an important place for people to unpack experiences and beliefs about IUDs and elucidates upon potential gaps in provider/patient trust.

Reproductive health

Trust, Influence, and the Ballot Box: Healthcare Providers in State-Level Abortion Debates
Ri’enna Boyd* Ri’enna Boyd, Caitlin McMurtry, Victoria Anders,

The Supreme Court’s 2022 Dobbs v. Jackson Women’s Health Organization decision decentralized abortion policy, triggering a wave of state-level ballot initiatives. This decision placed reproductive health decisions in the hands of voters, allowing democracy to function as a social determinant of health. By the end of 2024, 16 states considered 18 measures, with outcomes carrying profound implications for health equity and access to care, particularly among marginalized communities already bearing disproportionate burdens of reproductive health disparities.

Navigating complex health policy at the ballot box, voters often rely on trusted messengers. A December 2024 Gallup poll found that 76% and 53% of Americans rate nurses and physicians, respectively, as highly honest and ethical – compared to just 8% for members of Congress. This trust differential uniquely positions healthcare providers as credible voices in abortion debates, yet little is known about how providers communicate about ballot measures or how political elites leverage that credibility to influence public opinion and, ultimately, health policy outcomes.

This project examines television and newspaper coverage of abortion ballot initiatives in four states (KS, KY, MI, MT) that voted on reproductive rights measures in 2022. We analyze how healthcare providers framed supportive and oppositional arguments in news media versus televised political advertisements to assess how professional expertise is deployed across contexts. Our analysis explores variation by state context, ballot measure content, and medium.

Our findings highlight how provider credibility shapes state-level health policy debates and how expertise functions within direct democracy. As institutional distrust grows, health disparities widen, and more states consider ballot initiatives in 2026, understanding how trusted health professionals influence democratic processes, and the health outcomes that follow, becomes increasingly necessary.

Reproductive health

World Café as a Participatory Action Method to Explore Youth Perceptions of Sexual Stigma and Imaginings of Life without Stigma in western Kenya Abigail Lee* Abigail Lee, William Story, Yvonne Wanjiru, Cyril Okeka, Valentine Mukoya, Sylvia Ambani, Maureen Wanjiru, Nema Aluku,

Background: Youth in Kenya experience high rates of pregnancy and HIV. These outcomes are due, in part, to stigma related to sexual behavior, which is distressing for youth. This study uses a novel participatory action approach, called World Café, to explore youth perceptions of sexual behavior stigma and what life may be like without stigma.

Methods: This study engaged 38 youth ages 15-18 in a World Café event in Kakamega, Kenya. During World Café, youth discussed things that were important to them, their perceptions of sexually active youth, and what life would be like if there was no judgment around sexual behavior. Follow-up in-depth interviews were conducted with 4 youth aged 18. Group discussions and interviews were audio recorded with consent, transcribed, and translated to English. Transcripts were thematically coded using Dedoose and code summaries were developed to describe main and deviant narratives.

Results: Youth held negative perceptions of sexually active adolescents, believing they lack parental guidance, do not listen, do not care about their lives, and are “useless.” Most youth thought that a lack of judgment around sexual behavior would lead to negative outcomes for young people. Without this judgment, youth said they would feel lonely and like no one cared about them or their futures, additionally describing that sexually active youth would not achieve their dreams. Some youth believed removing sexual behavior judgment would improve health and future aspirations.

Conclusions: Findings suggest youth are entrenched in sexual behavior stigma, and they have mixed views of what life may be like without this judgment. Information about the role of stigma, involvement of caretakers, and mental distress emerged and require further inquiry. Adolescent sexual and reproductive health interventions in western Kenya should involve caretakers and work to shift narratives about the worth and potential of sexually active youth to improve their mental health.

Social/relational factors

Collective Well-being as a Determinant of Individual Cardiovascular Outcomes Brita Roy Roy* Brita Roy, Jiangyuan Zhu, Jeph Herrin, Carley Riley, Megan Dacey-Koo, Erica Spatz, Dan Witters, Harlan Krumholz,

Background: While higher well-being at the population level (collective well-being, CWB) is linked to lower cardiovascular (CV) disease incidence and mortality, it is unknown if the collective well-being of a community influences CV risk beyond the individual-level well-being of those in that group. This cross-sectional study investigated the association between CWB, individual well-being, and individual CV outcomes.

Methods: We linked 2010-2012 combined ZIP code-level CWB from the Gallup Well-being Index to individual life satisfaction, clinical factors, and behavioral factors from the Reasons for Geographic and Racial Differences in Stroke study (n=17,014). We estimated mixed effects generalized linear regression models where CWB and individual well-being (both measured as self-reported current life satisfaction) were independent variables, Life's Simple 7 score and CV outcomes were dependent variables, including a random effect for county. Mortality was analyzed using a Cox proportional hazards model. In secondary analyses we also adjusted for socioeconomic factors.

Results: Higher CWB was significantly associated with higher Life Simple 7 overall score (OR=1.15, P<0.001), as well as higher rates of non-smoking (OR=1.22, p<0.001), physical activity (OR:1.08; 95%CI: 1.02-1.15; p=0.005), glucose metric (OR:1.11; 95%CI: 1.03-1.19; P=0.004), healthy body mass index (BMI) (OR=1.17, p<0.001) and healthy blood pressure (OR=1.11, p=0.002), and lower CV mortality (HR=0.87, P=0.012), independent of the individual's life satisfaction. After adjusting for individuals' socioeconomic factors, CWB remained significantly linked to healthy BMI (OR=1.07, p=0.019).

Conclusion: This study shows that the CWB of the population within which an individual lives influences their CV risk independent of their individual well-being and risk factors. Enhancing CWB could be an effective strategy for reducing individual CV disease risk.

Social/relational factors

Equal Care, Unequal Suffering: Kinlessness and Stratified End-of-Life Experiences Zheng Lian* Zheng Lian,

Kinlessness in later life has become increasingly common across many societies. Despite its growing prevalence, research on what it is like to die in this social context remains limited. Prior studies tend to treat kinlessness at the end of life as a homogeneous experience, overlooking its intersection with other social factors. This study uses data from the Survey of Health, Ageing, and Retirement in Europe (SHARE) to examine whether and how kinlessness is associated with end-of-life symptoms and care quality. Multinomial logistic regressions were estimated to assess the relative risk of dying with undesirable end-of-life outcomes versus desirable outcomes among kinless decedents compared to those with kin. Kinlessness was also interacted separately with gender, education, and economic stability to examine moderation effects. Results show that kinlessness is associated with an 87 percent greater risk of experiencing managed pain versus no pain and a 136 percent greater risk of experiencing unmanaged pain versus no pain. No association is observed between kinlessness and receiving respectful, high-quality end-of-life care. The greater symptom burden associated with kinlessness is more pronounced among men and individuals with lower educational attainment. Economically stable kinless individuals, however, are more likely to encounter difficulties receiving respectful and high-quality care. Overall, equal care but unequal symptom burden characterizes the experiences of kinless individuals at the end of life. These findings highlight the need for interventions to address the greater symptom burden faced by kinless older adults and draw attention to the heterogeneity of dying experiences within this rapidly growing population.

Social/relational factors

Caregiving Responsibilities and Sleep Patterns Among Emerging Adult College Students
Yuna Tomimasu* Yuna Tomimasu, Francesco Osso, Jiwoon Bae, Lindsay Hoyt, Alison Cohen,

Background: With an aging population, more people are becoming caregivers for family members. Emerging adult college students who are also caregivers face multiple burdens, including academic and career pursuits. While increased caregiving responsibilities are associated with poorer sleep quality and duration in adults, how caregiving burden relates to sleep among emerging adults remains unclear.

Methods: The analysis included 630 emerging adults aged 18-24 attending two universities in California. After completing a baseline survey (including a question on caregiving hours per week), students could opt into an 8-day smartphone-based daily diary sub-study, including questions from the Consensus Sleep Diary. Linear mixed models were used to analyze associations between caregiving and self-reported sleep duration and quality. All models adjusted for race/ethnicity, gender, sexual orientation, poverty level, commute time, and work time.

Results: Caregiving intensity was not statistically associated with sleep duration (1-10 hours of caregiving: β=0.04, 95% CI: -0.10 to 0.17; >10 hours of caregiving: β=0.00, 95% CI: -0.28-0.27) or sleep quality (1-10 hours: β=0.01, 95% CI: -0.12-0.14; >10 hours: β=-0.03, 95% CI: -0.30-0.24). Sensitivity analyses restricting the sample to participants with at least 5 days of sleep data and winsorizing for extreme values yielded similar results.

Conclusions: There was no statistically significant association between caregiving and sleep duration and quality. Although the prevalence of caregiving among emerging adults was low, our sample had sufficient statistical power. However, it is possible that our measure of caregiving was not nuanced enough, and/or that we had too few participants who had high caregiving burdens, which could have reduced our statistical power. We encourage future research to build upon these null findings and interrogate them further.

Social/relational factors

Who teaches health services and policy researchers how to theorize? Natalie Bradford*
Natalie Bradford, Taylor Rogers, Alysha Garcia,

Put simply, a theory is an explanation. Thus, to theorize is to explain. Half of the foundational public health learning objectives the Council on Education for Public Health (CEPH) requires accredited public health doctoral programs to assess are about explaining the effect of cultural, economic, environmental, political, and social factors on population health. In other words, theory and theorizing, especially social theory and sociological theorizing, are foundational knowledge for public health researchers. However, CEPH's most recent accreditation criteria do not explicitly mention theory once.

Health services and policy research (HSPR), a subfield of public health, focuses on the ways health care access, cost, and quality are affected by individual and contextual factors including social and structural factors. Two of the authors are HSPRers who recently graduated with doctoral degrees in HSPR and received backlash for engaging in sociological theorizing and centering critical social theory in our dissertation research. In our experience, public health doctoral students, especially in HSPR programs, must find courses outside their discipline to learn about social theories and how to theorize.

This descriptive study examines the extent to which 237 CEPH accredited HSPR doctoral programs include courses on social theory and sociological theorizing. Our results reveal curricular gaps in HSPR doctoral programs that may impede the advancement of knowledge and action on social and structural determinants of health care (equity). Higher education institutions across the world, including schools of public health, are currently restricting their course offerings in response to governmental and organizational political demands. Investigating the absence of social theory and theorizing in HSPR doctoral programs may contribute to work that disrupts these trends, challenges epistemic oppression, and supports transdisciplinary modes of knowledge construction.

Social/relational factors

EHRsupport, an electronic health record-based social support measure, and breast cancer treatment and clinical outcomes in an integrated health care system Candyce Kroenke* Candyce Kroenke, Rhonda Aoki, Jane Liang, Salene Jones, Lawrence Kushi, David Cronkite, Jess Mogk, Lauren Mammini, Shaila Strayhorn-Carter, David Mosen, Stacey Alexeeff,

Background: Social support is related to treatment and clinical outcomes in breast cancer. We evaluated associations of EHRsupport, an electronic health record (EHR)-based measure of social support, with treatment and clinical outcomes in the full Kaiser Permanente Northern California (KPNC) population of women with breast cancer.

Methods: This study included 45,717 women from KPNC, an integrated health care system, who were diagnosed with invasive breast cancer from January 2006-June 2024 and had social support terms identified in the EHR. The EHRsupport score included information about spouse/partner status, parenthood status, (clinical) visit support, living situation (alone or with others), friend or other support, positive social support, negative (lack of) social support, deceased person, transportation issues, relationship conflict or stress, social isolation, and emergency contact within state. We used log-binomial regression, logistic regression, and survival analysis to evaluate associations of EHRsupport with treatment and survival outcomes.

Results: Lower EHRsupport scores were associated with poorer treatment and clinical outcomes. The lowest (vs. highest) tertile of the EHRsupport score was associated with surgery delays (prevalence ratio (PR)=1.15, 95% confidence interval (CI): 1.11-1.20, p-trend across tertiles <0.001), chemotherapy delays (PR=1.20, 95% CI: 1.10-1.31, p-trend=<0.001), adjuvant endocrine therapy (AET) noninitiation (PR=1.14, 95% CI: 1.10-1.18, p-trend=<0.001), AET discontinuation (HR=1.31, 95% CI: 1.24-1.39, p-trend=<0.001), breast cancer mortality (HR=1.18, 95% CI: 1.08-1.28, p-trend<0.001), and overall mortality (HR=1.21, 95% CI: 1.14-1.29, p-trend<0.001). Comparable associations were seen in women from diverse race and ethnic groups and by cancer stage.

Conclusions: EHRsupport, an EHR-based social support measure, was related to breast cancer treatment and clinical outcomes, supporting its use as a clinical tool and research measure.

Socioeconomic status

THE RELATIONSHIP BETWEEN SOCIOECONOMIC STATUS AND POLYGENIC RISK SCORES ON BODY MASS INDEX AMONG NON-HISPANIC WHITE AMERICANS Tomiwa Ayetigbo* Tomiwa Ayetigbo, Wisdom ,

There is a high prevalence of obesity in the United States, particularly among individuals of low socioeconomic status. Very few studies have jointly investigated the combined influence of both genetics and social factors, such as early socioeconomic status and education, in relation to obesity. Genetic factors may increase the risk of obesity among individuals with low socioeconomic status. Therefore, this study examines whether the association between polygenic risk for BMI and Body Mass Index is independently modified by early life SES and adult education. The Health and Retirement Study (HRS) was used for this study. Linear regression was used for the analysis, and I find out the association between PGS-BMI varies by levels of education but is not modified by early-life SES. This research indicates the influence of the social environment and genetic interaction on health outcomes.

Socioeconomic status

WILLINGNESS OF UNPAID CAREGIVERS TO SHARE SOCIAL DETERMINANTS OF HEALTH INFORMATION WITH HEALTHCARE PROVIDERS Babatope Ogunjesa* Babatope Ogunjesa, Sunita Dodani,

Introduction: Unpaid caregivers in the United States navigate substantial social and economic burdens while coordinating care for others, yet their willingness to have social determinants of health (SDOH) information shared across health care providers remains unexplored in nationally representative data. This study examined factors independently associated with willingness to have SDOH information shared with other providers among unpaid caregivers, using data from the Health Information National Trends Survey, Cycle 7 (HINTS 7), a nationally representative cross-sectional survey of U.S. adults conducted by the National Cancer Institute.

Method: The outcome, willingness to share SDOH with other providers, was dichotomized from a 4-point comfort scale: willing (very/somewhat comfortable) versus not willing (very/somewhat uncomfortable). The analytic sample was restricted to unpaid caregivers (n = 692). A survey-weighted binary logistic regression model was estimated, adjusting for caregiving condition type, sociodemographic characteristics, health system trust, prior medical discrimination, patient-centered communication quality, and five binary indicators of personal SDOH burden.

Result: The type of condition being cared for was not independently associated with SDOH sharing willingness after full covariate adjustment, with all condition-type estimates clustering near the null. Patient-centered communication quality (PCC) was the strongest and most consistent predictor: each 10-point increase in PCC was associated with approximately 27% greater odds of willingness to share SDOH with other providers (OR = 1.024 per unit, 95% CI [1.009, 1.039], p = .002). Hispanic caregivers had nearly three times the odds of being willing to share SDOH information compared to Non-Hispanic White caregivers (OR = 2.86, 95% CI [1.24, 6.58], p = .015). Caregivers with household incomes of $100,000 or more demonstrated significantly greater willingness to share relative to those with incomes below $35,000 (OR = 3.33, 95% CI [1.20, 9.27], p = .022). Housing instability showed a near-significant positive trend (OR = 2.55, 95% CI [0.97, 6.70], p = .058).

Conclusion: These findings indicate that, among unpaid caregivers, willingness to share SDOH information across providers is primarily driven by the relational quality of patient-provider communication, racial and ethnic identity, and income, rather than by the type of condition being cared for. Efforts to improve SDOH information sharing in caregiving populations should prioritize strengthening patient-centered provider communication and addressing structural barriers to health system trust, particularly among lower-income and non-Hispanic White caregiver groups, which demonstrated comparatively lower willingness to share in this analysis.

Keywords: unpaid caregivers, social determinants of health, patient-centered communication

Structural factors

Structural Racism, Natural Disaster, and Health: A Spatio-Temporal Analysis, 1989-2019
Arinala Randrianasolo* Arinala Randrianasolo, Jessie Slepicka,

Racial disparities in health outcomes associated with natural disasters are well documented in the United States, yet the structural mechanisms producing these inequalities remain underexamined. Existing research often focuses on disaster-specific mortality rates or qualitative case studies, leaving limited understanding of how broader systems of racial stratification shape differential health vulnerability across hazards, places, and time. This study examines whether structural racism functions as a key mechanism linking natural disaster exposure to racial disparities in population health.

We integrate county-level natural hazard data from the Spatial Hazard Events and Loss Database for the United States (SHELDUS), covering 1989–2019, with newly constructed measures of structural racism at both the state and county levels. State-level structural racism is operationalized using a latent construct capturing racial inequality across economic, educational, political, criminal-legal, and residential segregation domains. County-level measures capture Black–White disparities in incarceration, homeownership, educational attainment, income, unemployment, poverty, and segregation. These measures are linked to race-disaggregated health outcomes derived from national surveillance systems (e.g., Behavioral Risk Factor Surveillance System, National Vital Statistics System mortality data, Decennial Census).

Using spatiotemporal analytic approaches, we examine whether structural racism mediates or amplifies the relationship between disaster exposure and racial disparities in morbidity and mortality. By integrating environmental hazard data with multidimensional measures of structural racism across multiple spatial scales, this study advances environmental justice and population health scholarship by empirically evaluating structural racism as a mechanism producing unequal health consequences of disasters. Anticipated findings will inform disaster preparedness, recovery policy, and public health interventions aimed at reducing racialized health vulnerabilities in an era of increasing climate-related hazards and risks.

Structural factors

Embodied Politics of the Carceral State: Advancing a Structural Perspective of the Carceral State as a Determinant of Women's Health Kendall Riley* Kendall Riley,

Black women disproportionately experience signs of unhealthy aging, marked by elevated levels of morbidity, cognitive impairment, and accelerated biological aging. Notably, the magnitude of these health disparities varies across U.S. states. Efforts to quantify the origins of health inequalities overlook the structural violence produced by states' public institutions—including welfare, healthcare, immigration, child welfare, and education—that employ coercive, surveilling, and disciplinary practices akin to the criminal legal system. By adopting these carceral logics, each institution operates as tentacles of the carceral state. The carceral state is a set of institutions, policies, and practices that use punitive social control to regulate marginalized populations by restricting access to resources. I develop a "structural carceral control" perspective to investigate the carceral state as a root cause of racialized, gendered, and spatial health inequalities. Using administrative, policy, and economic data, I construct novel state-level measures of punitive social control across institutions in the carceral state. These measures were linked to Black and White women's health data from the Health and Retirement Study. Unhealthy aging was assessed using indices of cognitive impairment, epigenetic aging, and disability. Multilevel modeling was employed to assess how states' mobilization of punitive social control shapes women's health. My findings highlight the complexity of the carceral state and its health consequences. I find that exclusively focusing on the criminal legal system misrepresents how states mobilize the carceral state. Moreover, the carceral state emerged as a predictor of unhealthy aging, with several institutions being particularly deleterious for Black women. Altogether, this study develops methodological and theoretical tools that can be used to interrogate the multidimensionality of the carceral state and its downwind social consequences.

Structural factors

Resilience as a Blessing, not a Choice: How Black Men and Women Cope with Residential Segregation in Adolescence on Cardiometabolic Risk in Adulthood Ariayana Harrell* Ariayana Harrell,

Structural racism shapes unequal access to power, opportunities, and resources, using race/ethnicity (a social construct upheld by racial stratification) to produce large Black-White health disparities through one manifestation, residential segregation (measured using proportion same race neighborhoods), reflecting segregated patterns of concentrated disadvantage by racialized social status and rooted in the historical legacy of enslavement. Evidence suggests neighborhood-level racial inequality limits social cohesion among Black adults. Still, we lack evidence of how within-race sex differences drive health disparities and resilience, and if the timing of this exposure varies health impacts. This study tests whether social cohesion mediates the association between neighborhood disadvantage and Black people's cardiometabolic risk (CMR), an indicator of stress-related physiological dysfunction. Neighborhood disadvantage among Black adults, a consequence of residential segregation proliferating stress, and social cohesion, a psychosocial mechanism buffering stress, can be used to link residential segregation to health outcomes by offloading stress with neighbors. Using data from Waves I and V of Add Health (N = 1,087), I employ sex-stratified structural equation modeling to assess the relationship between residential segregation and CMR among Black adults through social cohesion and concentrated disadvantage. Results show little evidence that residential segregation during adolescence is associated with elevated CMR in adulthood. Results reveal strong evidence for concentrated disadvantage as a key mechanism but weak evidence for within-race sex differences. These findings provide new insights into the phenomena linking racialized neighborhood deprivation to health across the life course to understand how Black adults become resilient in the face of structural oppression.

Structural factors

Radical Spatial Practices Against Militourism in Hawai‘i Bryce Takenaka* Bryce Takenaka,

Background: The modern health issues of Kānaka ʻŌiwi (Native Hawaiians), especially māhū and LGBTQ+ ʻŌiwi, must be analyzed through the nexus of militarism and tourism (militourism). A participatory photomapping qualitative study, involving neighborhood walking tour interviews, photovoice, and GIS mapping, was conducted to explore how māhū and LGBTQ+ ʻŌiwi understand and experience the apparatus of militourism.

Methods: I attempt to map the intersections of Black, Indigenous, and Geography Studies to assess the contours of militourism as a colonial and capitalistic technology for statecraft, and its possibilities of placemaking for māhū and LGBTQ+ ʻŌiwi. With the partnership, approval, and continued engagement with several Kānaka ʻŌiwi leaders and organizations, including Hawai‘i Peace & Justice and Papa Ola Lōkahi, interviews were conducted with 10 māhū and LGBTQ+ ʻŌiwi from various generations on O‘ahu, Hawai‘i.

Results: The historical, structural, institutional, neighborhood, and individual-levels of intimacies and experiences shaped through militourism emerged as prominent themes from the interviews. Key themes included: (1) settler colonial and capitalistic spaces [re]produce on ʻāina, (2) organized abandonment of Kānaka ʻŌiwi communities as a product of the militourism industrial pipeline, (3) contradictions to resisting militourism, (4) ʻŌiwi cultural values and practices are central foundations for joy and surviving within carceral conditions.

Conclusion: These conversations elicit a more complex understanding of the entanglements of militarism and tourism in Hawai‘i, and how these spaces of leisure simultaneously serve as conduits of settler colonialism, racial capitalistic management, and sexual and gendered violence. This study demonstrates that the interventions of relational studies illuminate how māhū and LGBTQ+ ʻŌiwi are already participating in radical spatial practices for alternative futures.

Aging

Examining Reciprocal Influences of Discrimination, Loneliness, and Social Isolation on Cognitive Trajectories of Black Adults Heather Farmer* Heather Farmer, Jeffrey Stokes,

The prevalence of Alzheimer's disease and cognitive decline is especially elevated among Black Americans. Emerging work has shown that perceived discrimination is implicated in accelerated brain aging, cognitive decline, and worse global cognition, but the mechanisms underlying these associations remain unclear. As a form of social rejection, discrimination may lead to alienation, reduced sense of belonging, and social withdrawal. Therefore, loneliness and social isolation may be downstream consequences of discrimination that also contribute to lower cognition. Research suggests that people who are socially isolated and/or lonely appear to show heightened vigilance to social cues during interactions, which may increase perceived discrimination in the future, as well. This study examined the reciprocal processes among loneliness, social isolation, and discrimination and their associations with changes in cognition. The study included 1,281 Black adults ages 50+ from pooled half-samples in the 2010 to 2020 waves of the Health and Retirement Study. Random intercept cross-lagged panel models (RI-CLPM) estimated bidirectional relationships over time. Results indicated that perceived discrimination was significantly associated with increased social isolation over time. Social isolation was also a significant predictor of greater perceived discrimination and worse cognition over time. However, loneliness was not associated with discrimination or cognition in these models. Findings indicated that social isolation, but not loneliness, was a precursor and outcome of discrimination, and that social isolation may be a critical mechanism linking discrimination to worse cognitive outcomes. Future research is needed to examine protective factors that may moderate (e.g., social support, purpose in life) this association.

Aging

How Much Longer Will We Care? Kinship Care Life Expectanacy of U.S. Women by Race/Ethnicity Onyekachukwu Arah* Onyekachukwu Arah,

Background: Over 63 million adults in the United States provide assistance in activities of daily living for adults or children with a disability. Kinship caregiving is strongly related to demographic processes including fertility, morbidity, and longevity. Care work, which is prevalent among women – especially Black and Hispanic women – impacts caregiver health, family relationships, and the labor market. No known studies investigate Care Life Expectancy, or the number of years and proportion of adult life that people will spend as caregivers, in the United States and how this may vary by race/ethnicity. My research asks: Do Black and white women differ in (a) Care Life Expectancy, (b) care life duration, (c) care intensity, and (d) care schedule?

Data and Methods: Using data from the Behavioral Risk Factor Surveillance System, I identify women who care for a friend or relative with a health problem or disability. I operationalize care duration as the length of time spent as caregivers and care intensity as the number of hours spent caregiving each week. I employ National Vital Statistics System life tables to approximate the number of person-years spent in the caregiving state for five-year age groups ranging from 18-80+, adjusting for mortality. I will use Sullivan’s method to calculate average Care Life Expectancy for the entire sample and for Black, Hispanic, and white women.

Expected Results: Generally, I expect Black and Hispanic women to have above-average Care Life Expectancy. Preliminary analyses of 2024 data reveal that Black women (9%) make up 18% of caregivers aged 35-39 and a disproportionate share of those who have been caregivers for five years or more. Hispanic women (6%) make up 18% of caregivers aged 25-29. Both groups are overrepresented among full-time caregivers. This study can elucidate cultural care traditions; disparate care needs across racial groups; and the social, health, and economic implications of caregiving over the life course.

Aging

Caregivers are everywhere: systematic identification of caregivers during outpatient care
Jennifer Makelarski* Jennifer Makelarski, Emily Abramsohn, Soo Borson, Soma Chaudhury, Missie Johnson, Elbert S. Huang, Carolyn Lenhart, Eva S. Ren, Katherine Thompson, Stacy Tessler Lindau,

One in every four U.S adults is a caregiver to someone with a medical condition or disability. Policymakers, practitioners, public health advocates and caregivers are calling for interventions to support caregivers. Healthcare encounters are opportune for delivery of these interventions. However, because caregiver status is rarely systematically assessed, caregivers are largely invisible to clinicians. We established feasibility and acceptability of implementing a validated caregiver screener into outpatient intake processes.

Using SmartData elements in the electronic medical record (EMR), two validated caregiver screening questions were embedded into the patient intake workflow and history at a large, urban academic medical center. Adult ambulatory patients scheduled for an outpatient appointment at 24 clinics were prompted to complete the caregiver screening as part of the digital intake process via the patient portal.

From 7/21/25 – 1/31/26, 9,893 unique patients were presented with the caregiver screening items during the digital outpatient appointment intake process; 99% answered the first question assessing caregiver status and 8% identified as a caregiver. Nearly all caregivers (99%) answered the second item identifying the main health condition of the care recipient. The most common care recipient conditions were Alzheimer’s disease, dementia or other cognitive impairment disorder (18%) followed by old age/infirmity/frailty (17%) and cancer (10%). Of note, 16% of respondents selected “other.” No clinician or patient complaints regarding the screening process were registered.

EMR integration of validated caregiver screening questions into adult outpatient care is feasible and acceptable. Ubiquitous digital clinical intake workflows can be used to rapidly and systematically identify caregivers during outpatient care and drive meaningful change among the aging U.S. population.

Aging

Do Academic Majors Matter? Field of Study and Cognitive Functioning in Late Midlife Fabio Bolz* Fabio Bolz, John Robert Warren, Eric Grodsky, Chandra Muller,

Education is a well-established determinant of cognitive functioning in later life. Prior research has, however, largely focused on the vertical dimension of education, i.e., the quantity of education received, and neglected horizontal stratification within levels of education. A key dimension of horizontal stratification in higher education is field of study. Many studies have found large differences in the economic returns to educational degrees by field of study. It is possible that the benefits that educational degrees have for later-life cognition may likewise vary by field of study. Using nationally representative data from the High School & Beyond (HS&B:80) cohort study we examine whether the associations between educational degrees and cognitive functioning at age ~60 vary by field of study. A key methodological challenge is to account for selection into fields of study. HS&B:80 has followed its sample members since they were in high school, which allows us to account for a wide range of prospectively-collected pre-college covariates. Our analyses show that the strength of the association between educational degrees and cognitive functioning in late midlife significantly differs by field of study. This holds when adjusting for a comprehensive set of covariates including indicators of the individuals' socioeconomic background, high school test scores, high school GPA, and aspirations in high school. The findings highlight that cognitive aging researchers should not only look at the vertical dimension of education but also consider stratification within levels of education. Moreover, the findings may have implications for disparities in later-life cognitive functioning given differences in fields of study by gender, race, and socioeconomic background.

Biomarkers or biological pathways

Veteran Status and Accelerated Epigenetic Aging: Evidence from a Nationally Representative Sample Julia Tucker* Julia Tucker, Mateo Farina,

Military personnel are typically healthier at enlistment than the general population, the “healthy soldier effect.” However, this advantage does not guarantee protection against accelerated biological aging over the life course. Military service exposes individuals to chronic stress, combat trauma, and environmental hazards, even as service members benefit from resources linked to slower biological aging, such as healthcare access, educational benefits, and social support. Whether these competing forces produce net accelerated or decelerated biological aging remains unanswered as previous research has only examined biological aging among veteran populations and has yet to compare veterans and non-veterans directly on a nationally representative level. Using data from the Health and Retirement Study (N=3,519), we examined veteran status and three epigenetic clocks, DNA methylation-based biomarkers of biological aging, each trained on specific biological measures of health: PCGrimAge (mortality-predictive plasma proteins), PCPhenoAge (clinical morbidity biomarkers), and Pace of Aging/mPoA45 (rate of decline across 18 organ systems). Because epigenetic clocks increase with chronological age, we computed acceleration scores as residuals from OLS regressions of each clock on chronological age to isolate non-age-dependent biological aging, then regressed each measure on veteran status, adjusting for sex, race/ethnicity, and education. Veterans showed significantly accelerated biological aging on two of three clocks: PCPhenoAge acceleration (β=0.73, SE=0.33, p=.027) and mPoA45 (β=0.02, SE=0.01, p=.032), but not PCGrimAge (β=0.28, SE=0.18, p=.133). Findings suggest the cumulative biological costs of military service produce net epigenetic age acceleration, with variation across clocks reflecting distinct aging dimensions. Results carry implications for future research aiming to better pinpoint the exact epigenetic impacts of military service on biological aging.

Biomarkers or biological pathways

The Salivary Microbiome and Cognitive Function Rob Warren* Rob Warren, Ryan Demmer,

BACKGROUND: We demonstrate the feasibility of oral microbiome assessments from saliva collections intended for human genetic studies and explore the relationship between oral microbiota and midlife cognitive function. METHODS: Data are from the High School and Beyond (HS&B:80) cohort study, which has followed a nationally representative sample of ~26,830 people from high school in 1980 through midlife in 2021. HS&B:80 data from the 1980s include information about educational contexts, opportunities, and outcomes; early life circumstances; and demographic backgrounds. Data from 5,878 participants in 2021 (when most were 56 to 58 years old) include salivary microbiome measures, blood biomarkers of ADRD risk, and multiple survey-based measures of cognitive functioning. Genomic DNA was extracted following the protocol and reagents provided in the FlexStar Saliva DNA Extraction Kit 4. Primer sequences targeting the V4 region of the 16S rRNA gene were acquired from IDT. Taxonomic assignments were made using the Human Oral Microbiome Database. The Shannon Index (SI) was calculated to represent alpha diversity. Regression models assessed the relationship between increases in SI and change in cognitive function. RESULTS: The mean(SD) cognitive score and SI were 0.1(0.9) and 2.9(0.5). Overall mean proportion of major phyla were Firmicutes (32.7%), Bacteroidetes (27.3%), and Proteobacteria (21.8%). A 1 SD increase in SI was associated with a 0.04 unit difference in standardized cognitive score (Beta-estimate 0.04 [0.02, 0.07]). CONCLUSION: Salivary microbiome assessments from human saliva collected for the primary purpose of human genetic studies is feasible. Adverse salivary microbiome diversity profiles were associated with decreased cognitive function.

Biomarkers or biological pathways

Cross-Sectional Associations between Essential and Non-Essential Metals and Kidney Function: A Population-Based Analysis in Midlife Adults Rob Warren* Rob Warren, Shannon Sullivan, Jesse Seegmiler, Weihua Guan, Amy Karger, Eric Grodsky, Chandra Muller, Bharat Thyagarajan,

Low-level metal exposure is a risk factor for renal decline, yet the roles of essential versus non-essential metals are poorly understood. Essential metals (cobalt [Co], copper [Cu], manganese [Mn], selenium [Se], zinc [Zn]) are physiological requirements but can be toxic at high concentrations or deficient at low; non-essential metals (arsenic [As], cadmium [Cd], lead [Pb]) lack biological utility and are toxic even at low concentrations. We investigated associations between these metals and kidney function (estimated glomerular filtration rate, eGFR) in the nationally representative High School & Beyond 1980 cohort. In 2021 (mean age~59), a subset (n~4,140) provided blood samples analyzed for eight metals using inductively coupled plasma mass spectrometry. eGFR (mL/min/1.73 m2) was calculated using the 2021 CKD-EPI Creatinine-cystatin-C equation. Survey-weighted linear regression, adjusted for age, sex, race/ethnicity, BMI, hypertension, diabetes, education, smoking, and red blood cell count, estimated cross-sectional differences in mean eGFR across tertiles of blood metal concentrations. Tertile analyses identified four metals associated with eGFR. Compared to the lowest tertile (T1), the highest tertile (T3) of Mn (β=−2.76, 95%CI=-4.81, -0.71) and Pb (β=−2.76, 95%CI=-4.87, -0.65) were associated with reduced eGFR. Conversely, T3 of Se (β=2.59, 95%CI=0.38, 4.49) and As (β=2.59, 95%CI=0.52, 4.65) were associated with higher eGFR. No associations were observed for Co, Cu, Zn, or Cd. Survey-weighted metal concentrations were comparable to U.S. adult levels in NHANES 2017-2018. Both essential (Mn) and non-essential (Pb) metals were associated with lower kidney function at higher exposure levels. Conversely, Se’s positive association suggests a potential nephroprotective role, whereas the As finding may reflect dietary sources rather than reduced toxicity. These findings highlight the need to balance essential nutrient status against environmental toxicant exposures.

Biomarkers or biological pathways

Intersectional Experiences of Gender and Race in CKM Health Prevalence Athena Owirodu* Athena Owirodu,

Cardiovascular-Kidney-Metabolic (CKM) syndrome is a biomarker measure that captures health risks across interconnected biological systems (Ndumele et al. 2023). National trends reveal growing comorbidity across these systems, with one-quarter of U.S. adults experiencing at least one CKM-related condition between 2015 and 2020 (Aggarwal et al. 2024). Population disparities in disease progression exist, as Black adults experience disproportionately higher rates of advanced CKM compared to other racial groups (Aggarwal et al. 2024).

This research project focuses on within-group heterogeneity of CKM syndrome outcomes among Black U.S. adults through a gender lens. Previous research reveals that Black women and men face large inequalities in cardiovascular, metabolic, and kidney health (Palaniappan et al. 2025; Singh et al. 2025). Exposure to stressors may play a role in explaining the existence of gendered disparities in these health outcomes. While perceived discrimination is a known mechanism in health disparity research, little work has examined this relationship with the complex biomarker outcome of CKM syndrome.

I use Waves I, IV, and V of Add Health to examine the relationships between gender, perceived discrimination and CKM syndrome among Black respondents (N=576). Preliminary results reveal some disparities by gender in CKM staging, as well as potential differential impacts of discrimination on health by gender. Further analysis will include ordinal logistic regressions to evaluate how these associations contribute to health inequalities among Black adults, and how personal and social resources may buffer the harmful impacts of discrimination as mediators in this relationship.

Chronic disease

The Influence of Gender Roles and Religiocultural Beliefs on Self-Care Behaviors among Mexican Women with Type 2 Diabetes. Dasy Resendiz* Dasy Resendiz,

Background: Type 2 diabetes is a major health concern in México, particularly among women. According to national survey data, the prevalence of diabetes in 2018 for females was 18.7% and 14.5% for males; these sex differences remained similar in 2020. Lack of proper self-care and disease management is a major underlying cause of death in diabetic patients. Existing research from cross-sectional studies suggests that gender roles and religiocultural beliefs impact self-care behaviors among Mexican women with type 2 diabetes, including self-exercise, self-monitoring of blood glucose, foot care, and dietary restrictions. **Purpose:** The purpose of this study is to explore how gender roles and religiocultural beliefs influence self-care behaviors among Mexican women with type 2 diabetes residing in two rural towns in San Luis Potosí, México. **Methods:** The proposed study will use a qualitative research approach to examine women's self-care behaviors within a predominantly religious and cultural context. Semi-structured interviews will be conducted with 14 Mexican women with type 2 diabetes using the platica methodology. The platica is a Chicana/Latina feminist methodology described as a relational practice, and it is considered a culturally appropriate approach for connecting with Latina women. **Proposed Findings:** The proposed findings of this study aim to highlight how religion and culture influence self-care behaviors, contributing to a deeper understanding of the factors that shape the health practices and supporting the development of a culturally informed framework for diabetes self-care in areas deficient in self-care resources. **Implications:** Given the high prevalence of type 2 diabetes among Mexican women and the critical role of self-care in its management, it is necessary to identify patterns linking gender roles and religiocultural beliefs, as well as barriers and facilitators, to diabetes self-care.

Chronic disease

Systematic Review on the Impact of Influenza Vaccination on Prevention and Mitigation of Chronic Diseases Melanie Rubalcava* Melanie Rubalcava, Jessica Amezcua, Adithi Kona, Patrick Williamson, Christopher Ruiz, Magdalena Suarez, Robert Rodriguez, Elisa Cortez, Holly Thompson,

Vaccines are developed to prevent acute infectious diseases, but emerging evidence suggests that some vaccines, like the influenza vaccine, may additionally help reduce the risk of chronic disease development and progression. As federal policies shift toward chronic disease prevention, understanding vaccines' broader impact is critical. We followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, conducting article searches using PubMed, Web of Science, and Embase databases. We included all peer-reviewed studies from 2000 to 2025 and excluded those that were non-human research and non-English-translated. Perplexity AI was used to supplement searches and Covidence for screening and review processes. Two reviewers independently conducted article screening and data extraction. Discrepancies were resolved by consensus. Of 703 unique articles produced by our searches, 88 articles met inclusion and exclusion criteria; 8 were randomized trials, 49 were observational studies, 14 were systematic reviews, and 15 were guidelines or reviews. The influenza vaccine has been shown to help prevent incidence, morbidity, and mortality of cardiovascular disease (e.g., strokes, myocardial infarction, heart failure, coronary artery disease, and hypertension). Additionally, the influenza vaccine is associated with decreased chronic obstructive pulmonary disease (COPD) exacerbations and a lower risk of chronic fatigue syndrome, chronic kidney disease, dementia, and potentially T1D, cancer, and Parkinson's disease. Beyond acute infectious disease prevention, the influenza vaccine has protective effects against chronic diseases and their progression. Strategies to improve vaccine uptake and address barriers are essential to maximize long-term public health benefits. This work will continue further with a series of systematic reviews, including other Centers for Disease Control and Prevention (CDC) adult-recommended vaccinations.

Chronic disease

Cardiovascular Health as a Precursor to Collective Well-Being: A Cross-Lagged, County-Level Analysis Brita Roy* Brita Roy, Jiangyuan Zhu, Jeph Herrin, Carley Riley, Megan Dacey-Koo, Erica Spatz, Dan Witters, Harlan Krumholz,

Background: Higher well-being at the population level (collective well-being, CWB) is associated with better cardiovascular (CV) health at the population level. This study investigates the directionality of related associations among CWB, cardiovascular disease incidence and mortality (CVD/CVM), healthy behaviors and societal factors.

Methods: Using county-level U.S. data (2010-2017) from the Gallup National Health and Well-Being Index and CDC Interactive Atlas of Heart Disease and Stroke, we employed cross-lagged time-series models to assess temporal relationships among CVD/CVM, exercise frequency, diet quality, civic engagement and CWB at the population level.

Results: Analysis of 3337 counties over 8 years revealed that lower CVD and CVM consistently predicted higher CWB in the following year, the lagged effect of cardiovascular health on well-being was approximately ten times larger than the lagged effect of well-being on cardiovascular health (overall P-values < 0.001). In addition, higher levels of civic engagement and better self-rated health preceded increased CWB. Lower CVD preceded increases in civic engagement, self-rated health, higher rates of exercise engagement and better diet.

Conclusion: This study found that population level CV health is a precursor to CWB, with factors such as self-rated health and civic engagement acting as potential mediators. Efforts to improve CV health – as well as overall health and social health – of whole populations could support improvements in CWB

Community engagement

Designing an evaluation framework to measure the impact of a national center promoting community–academic collaboration in diabetes research Aditi Luitel* Claire Cooper, David Lounsbury, Stephanie L Albert, Laura C Wyatt, Lorraine Kwok, Karina D Ramirez, Claire Cooper, Sarah Hussain, Emma Rodgers, Sandra S Albrecht, Nadia Islam, Shavon Artis Dickerson, April A Agne, Tabia Akintobi, Kristen Allen-Watts, Mona AuYoung, Felecia Barrow, Janet Brown-Friday, Yelba Castellon-Lopez, Adrienne Dillard, Estelle Everett, Theodore C Friedman, Dympna Gallagher, Tannaz Moin, Susanne B Nicholas, Robin Ortiz, Rakale Quarells, Anthony Salandy, Nita Vangeepuram, Earle Chambers,

Background: The National Center for Engagement in Diabetes Research (CEDER) seeks to strengthen community engagement to advance type 2 diabetes (T2D) research across diverse populations through research consultations and community engagement studios. Jointly led by community and academic partners, CEDER is supported by a partnership hub and steering committee representing diverse expertise from urban and rural communities across the U.S. P artners guide development and implementation of CEDER's service delivery model for research teams and community organizations. We describe CEDER's evaluation framework to assess service delivery and progress toward the Center's aims.

Methods: Guided by CEDER's logic model outlining inputs, activities, outputs, outcomes, and anticipated impact, an Evaluation Workgroup (EWG) identified and prioritized metrics for a practical evaluation framework. Development drew from community engagement models, program documents, and partnership hub discussions, with indicators iteratively generated and refined, using typologies such as *100 Metrics to Assess and Communicate the Value of Biomedical Research*.

Results: The framework incorporates quantitative and qualitative data across 5 domains: Reach, Service, Partnerships, Practice, and Products. Reach and Service align with logic model outputs (e.g., consultations and studios), while the remaining domains reflect service quality outcomes. For each domain, evaluation questions were developed, and data collected through service request forms, post-service and 6/12-month post-service surveys, and qualitative interviews.

Conclusion: Providing a structured approach, the framework supports evaluation of CEDER services, documents contributions to community-engaged diabetes research, identifies opportunities for improvement, and advances T2D research outcomes.

Environmental factors

Cold and hot temperatures are associated with increased mortality risk among incarcerated adults in California state prisons Lisa Frueh* Lisa Frueh, Jessica Simes, Henry Willis, Allan Just, Jaquelyn Jahn,

Background: Growing epidemiologic evidence has documented effects of ambient temperature on the health of incarcerated populations, who are particularly vulnerable due to aging prison infrastructure and poor climate control. Our goal was to identify associations between ambient temperature and mortality among people incarcerated in California.

Methods: We examined all deaths in California state prisons from 2005–24, excluding those occurring out of state, in community-based facilities, or hospitals. Daily ambient temperature at each facility was estimated using hybrid spatiotemporal models. Using a facility-level time series design with distributed lag nonlinear models (lags 0–6) with a population offset, adjusted for day of week and nonlinear time trends, we assessed associations between minimum daily temperature and deaths.

Results: Among 7,617 deaths across 34 facilities, both cold and hot minimum daily temperature were associated with increased mortality risk (though confidence intervals crossed the null). Compared to the minimum mortality temperature (MMT) of 19.7°C, the cumulative relative risk (RR) at 11°C (10th ptile) was 1.026 (0.956, 1.101) and RR at 39°C (90th ptile) was 1.123 (0.75, 1.682). When comparing temperature effects across facilities with different cooling regimes, the bulk of deaths (72%) occurred in facilities with evaporative or no cooling, but heat-related risks were concentrated in facilities with refrigeration cooling (RR for 90th percentile vs. MMT = 1.088 [0.612, 1.935]). Across cooling types, cold temperatures were associated with increased mortality risk. For extreme cold in facilities with refrigeration (<1st percentile), the cumulative RR was statistically significant: 1.698 (1.031, 2.799).

Significance: We identified elevated risk of mortality associated with hot but especially cold temperatures among incarcerated people in California state prisons, though confidence intervals crossed the null. These findings highlight thermal control as a modifiable factor to improve the health of incarcerated populations.

Environmental factors

Associations between oil and gas production, earthquakes, and environmental distress in Texas Elizabeth Blake* Elizabeth Blake, Daoming Liu, Sidra Goldman-Mellor, Holly Elser, Rachel Morello-Frosch, Nicole Deziel, Mary Willis, Heather McBrien, Joan Casey,

Unconventional oil and natural gas development in the United States has expanded rapidly. From 2010 to 2020, U.S. crude oil production doubled from 2 million to 4.1 million barrels, and natural gas production grew by 63%. In 2021, Texas accounted for 43% of national crude oil and 27% of marketed natural gas production. This rapid expansion has prompted questions about potential impacts on nearby residents. Understanding psychological health effects is crucial, especially in heavily drilled regions like the Permian Basin in West Texas. We quantified associations between residential proximity to this industry and perceived environmental risks. In April 2021, we conducted an online survey of Texas residents within and outside the Permian Basin, using the Environmental Distress Scale (EDS) to assess self-reported distress related to perceived threats from local hazards, the felt impact of environmental changes, and solastalgia (loss of solace). Using weighted linear regression, we examined relationships between short-term exposures (number of unconventional wells within 5 km and earthquakes within the past two weeks and 100 km) and long-term exposures (number of earthquakes in the past year within 100 km and residence in the Permian Basin) with EDS scores, including stratified analyses by gender and urbanicity and a secondary analysis restricted to Permian Basin residents. Among 962 respondents, experiencing a recent earthquake was associated with a 2.5% (95% CI: 0.1, 4.9) higher solastalgia score, and experiencing 20–89 earthquakes in the past year was associated with a 4.5% (95% CI: 1.1, 8.0) higher perceived threat score. Although overall associations between unconventional development and EDS scores were modest, in rural areas, higher well counts were associated with elevated felt impact and solastalgia scores, suggesting that distress surrounding oil and gas activity may be context-dependent and particularly salient in rural communities near intensive development.

Environmental factors

The Music Pandemic: From Lower Latent Inhibition To Addiction. Should Population Health Science Be Raising A Warning Flag? Warren Brodsky* Warren Brodsky, Evangelos Himonides,

Never before in the history of humanity has background music been so omnipresent; music is an inseparable part of human experience. Long ago research found that music exposure can enhance cognition, learning, memory, and performance; reduce stress and anxiety; manage pain and boost wellbeing; as well as increase motivation and enjoyment. Expectations have been placed on music's positive effects for population health. The expansion of this phenomenon has been unstoppable. Citizens of modern Western societies have adapted to constantly accompanying their daily activity with sound: sleeping or waking hours; working or leisure; physical activity, concentrated study, or mental imagery; industry, office, or creative work; driving, shopping, eating, exercising, romanticizing, and socializing. Whether in public or in private domains there is music exposure, relentlessly molding a habitual increasing connection between environment, neuroanatomical function, and ensuing responses including social behavior. Mobile music (e.g., car radios and transistors) inspired technologies like the Walkman, Discman, MP3 Player, and Smartphone Apps streaming online music and Podcasts to Bluetooth earphones. The current theoretical paper raises a provocative question: Is it possible, that too much sound input can cause harm? Should we begin to question if consistent daily music exposure with doses accumulating to over 6 hours per day, might place population health at risk? That is: Can persistent engagement with audio cause humans to develop unique neurofunctional and motor behavioral patterns or inimitable personological characteristics? Perhaps neural circuitry may become maladaptive in efficiently filtering irreverent stimuli. Headphones and EarPods which provide high quality listening experiences, also engender an impenetrable auditory bubble sanctioning the eclipse of social exchanges. Will the future see the establishment of sanitariums for silence as a form of detoxing sonic addiction?

Environmental factors

Paths Forward for Environmental Health: Preliminary Survey Results Jane Clougherty* Jane E. Clougherty, Seulkee Heo, Michelle Bell,

Introduction

Environmental health faces declining funding and public support for science. While this raises an array of challenges for scholars, it may also present an opportunity for new paths forward for environmental and public health.

Methods

We are conducting a one-question Qualtrics survey via email snowball sample to U.S. environmental health researchers inviting “brave, creative solutions… (towards) identifying those creative paths forward that may help us build a stronger, more resilient future for environmental health.” The survey is ongoing.

Results

We received over 100 responses to date. Senior scholars suggested means of diversifying funding streams, and junior scholars suggested broadening training to permit career flexibility. Responses reflect both institutional reforms and individual strategies.

Discussion

When the survey is completed, we will compile responses, identify key themes and novel suggestions, and distribute results in various forms. We aim for such work to inform innovative solutions to strengthen the field’s resilience and best protect public health.

Environmental factors

Who Bears the Heat? Shifting Mortality Burdens Through Time and Across Vulnerable Populations in Mexico, 1999- 2022 Lara Schwarz* Lara Schwarz, Pratiyush Singh, Iván Gutiérrez-Avila, Dalia Marcela Muñoz Pizza, David J.X. González,

The frequency and severity of extreme heat events are rising globally, posing increasing threats to human health. However, there is limited evidence on how the burden of heat changed through time and which populations are most vulnerable to these changes. Previous studies have evaluated the changing effects of extreme heat on health in Asia and Europe, but in Latin American countries, the evidence is scarce. We explored this question in Mexico, expanding on existing work by evaluating how heat-related exposure, risk, and burden change through time and which subpopulations are most impacted. We combined population-weighted municipality-level temperature estimates from Daymet and mortality data from the Mexican Secretary of Health to estimate exposure and applied a time-stratified case-crossover design to estimate heat-related mortality risk. We calculated attributable deaths to estimate burden across 5-year time periods from 1998 to 2022 by state and subpopulation. We considered the 95th percentile of the municipality's maximum temperature distribution as our main exposure and evaluated alternate metrics as sensitivity analyses. We find that extreme heat exposure has increased over time, from a municipality-level average of 88 days from 1998–2002 to 119 days from 2018–2022. While the odds of mortality from extreme heat decreased overall (from OR: 1.08, 95% CI: 1.07–1.08 in 1998–2002 to OR: 1.04, 95% CI: 1.04–1.05 in 2018–2022), the total number of deaths attributable to heat increased from 6,340 in 1998-2002 to 13,889 in 2018-2022. Northern and Southeastern states and sub-populations like outdoor workers, the unemployed, and those with no schooling had particularly high risk. Our findings highlight the importance of assessing not only risk but also the burden of extreme heat to understand temporal trends in heat-health impacts. Identifying regions and populations in Mexico at heightened risk through temporal and spatial dimensions can inform targeted adaptation and protective strategies that will be critical in the context of climate change.

Environmental factors

Heat Exposure and Risk of Violence During Pregnancy Jorden Jackson* Jorden Jackson, Ursula Gazeley,

Emerging evidence links extreme heat exposure to increased interpersonal violence, yet little is known about how climate-related stressors affect violence during pregnancy—a period with profound consequences for maternal and child health. This study examines whether exposure to high ambient temperatures increases the risk of experiencing physical violence during pregnancy across low- and middle-income countries. We leverage all Demographic and Health Surveys (DHS) Phase 8 that include the domestic violence module, pregnancy index, and geocoded cluster coordinates, resulting in a final sample from 28 countries. Our outcome is women's self-reported experience of physical abuse during pregnancy. To address a key limitation of the DHS measure—namely, that it does not identify which pregnancy the violence occurred in—we restrict the analytic sample to women with exactly one lifetime pregnancy. This restriction allows us to align reported violence with a single identifiable pregnancy episode. We merge DHS cluster-level geocodes with high-resolution gridded temperature data from CRU TS to construct measures of heat exposure relative to historical local temperatures during the estimated pregnancy window. We estimate logistic regression models with first-subnational spatial unit and conception year fixed effects, controlling for education, marital status, urban residence, age, and relationship to household head. We hypothesize that higher exposure to extreme heat during pregnancy increases the probability of experiencing physical violence, potentially through economic stress, reduced labor productivity, and heat-induced aggression. We further examine heterogeneity by socioeconomic disadvantage, anticipating disproportionate effects among more vulnerable women. As temperatures rise globally, climate-driven increases in violence during pregnancy may compound risks for both maternal and infant health.

Health behaviors

Determinants and Intended Uses of Telehealth among Women: The Role of Self-efficacy, Prior Experience, Acceptability, and Demographic Factors Promise Emmanuel* Promise Emmanuel,

Despite growing attention to telehealth for improving access to healthcare, willingness to use it remains underexplored in many population contexts that could benefit significantly from its use. Theoretical perspectives on intervention acceptability suggest that individuals' perceptions of an intervention (e.g., belief about effectiveness), play a key role in shaping behavioral intentions. For telehealth, additional factors such as self-efficacy and prior experience with digital technology further impact adoption. Moreover, demographic factors like age shape how perceptions of telehealth translate into willingness to it. This study examines determinants of willingness to use telehealth among women in Nigeria and explores health concerns respondents are willing to use telehealth for. Utilizing survey data collected from a sample of n = 288 women, the study aims to address three research questions: (1) Does acceptability of telehealth predict willingness to use telehealth services? (2) What role does self-efficacy play in shaping willingness to use telehealth and how does prior telehealth experience influence self-efficacy? (3) How do demographic factors moderate the relationship between telehealth acceptability and willingness to use it? In addition, descriptive analyses examine health concerns for which respondents report they would consider using telehealth. Preliminary analyses reveal high willingness to use telehealth (93.0%), with primary health care being the leading service respondents are willing to use telehealth for. Further analyses show self-efficacy significantly predicts willingness to use telehealth ($\beta = .35$, $p < .001$) and a significant association between prior telehealth experience and willingness to use telehealth $X2$ (1, $N = 271$) = 5, $p = .03$. Findings from this study will inform effective implementation and use of telehealth interventions and offer insights into potential care areas to begin leveraging telehealth use among women in Nigeria.

Health behaviors

Factors Associated with Vaccine Hesitancy Among Adults in Peshawar, Khyber Pakhtunkhwa, Pakistan: A Cross-Sectional Study MUHAMMAD IDREES* MUHAMMAD IDREES,

Objective: To assess socio-demographic attributes, healthcare workers' encouragement and income status as predictors of vaccine hesitancy among adults in Peshawar, Pakistan.

Methods: The study was a cross-sectional design employing an online survey to obtain data from participants from Peshawar, Pakistan. We used binary logistic regression to ascertain the extent of the association between vaccine hesitancy and independent predictors including age, gender, marital status, education, healthcare worker encouragement, and income level. We set the level of significance at $p \leq .05$.

Results: The study sample consisted of 398 participants with a mean age of approximately 48.05 years. The gender distribution was relatively balanced, with 205 males (51.5%) and 193 females (48.5%). Out of the total participants, 270 individuals (67.8%) accepted the vaccine, while 128 individuals (32.2%) declined it. Males were more likely to be vaccine hesitant than females (OR=2.42,95%CI:1.34-4.38). Healthcare worker encouragement reduced vaccine hesitancy (OR = 0.11, 95% CI: 0.06-0.20). Individuals aged 46-60 showed higher vaccine hesitancy compared to those aged 18-30 (OR = 3.55, 95% CI: 1.44-8.73). Low-income earners were more likely to be vaccine-hesitant than higher-income earners (OR = 5.34, 95% CI: 2.07-13.80). Marital status and education level were not significantly associated with vaccine hesitancy.

Conclusion: This study highlights the complex interplay of factors influencing vaccine hesitancy in Peshawar, Pakistan. Gender, age, income level, and healthcare worker encouragement significantly influence vaccine acceptance. These findings call for targeted interventions to tackle vaccine hesitancy pragmatically and promote vaccine uptake in the Peshawar region of Pakistan

Health behaviors

Understanding Multilevel Variation in Non-Medical Vaccine Exemptions to Kindergarten School Entry Requirements in the United States: A Systematic Review Kristin Goddard* Kacey Clayton-Stiglbauer, Emma Elias, Jennifer Heisler-MacKinnon, Lauren Gorstein, Natalicio Serrano, Melissa Gilkey,

The US recorded over 2200 measles cases in 2025, threatening the nation’s 25-year measles elimination status. Although all US states require measles and other vaccines before school entry, rising non-medical exemptions (NMEs) threaten to undermine their effectiveness. To inform future interventions that build trust in vaccination and related policies, we synthesized existing research to determine correlates of NMEs.

We conducted a systematic review of original, peer-reviewed, English-language studies reporting quantitative data on kindergarten NMEs (PROSPERO CRD420251036823). We searched Embase, PubMed, Scopus, CINAHL, and PsychINFO for studies published from 2010–present. Two reviewers independently screened 2660 unique titles and abstracts, followed by full text review and data abstraction.

Twenty-one studies met inclusion criteria and reported variation in kindergarten NMEs by school communities, geographic areas, and individuals. Charter (6 of 6 studies) and private schools (8 of 10 studies) had higher rates than traditional public schools. Schools or communities with higher proportions of white residents had higher NMEs (9 of 10 studies). Higher SES was associated with NMEs (11 of 13 studies) across measures including free-and-reduced-price lunch eligibility, median income, and educational attainment. NMEs clustered in rural areas (3 of 4 studies) and suburbs or small towns (3 of 4 studies) versus urban areas. Only 1 study assessed individuals, finding higher rates among parents with vaccine concerns or distrust of local doctors. Limitations include the concentration of studies in California (14 of 21 studies), a lack of recent publications (i.e., post 2021), and the use of aggregated versus individual-level data. Researchers, public health departments, and community partners should develop multilevel interventions to meet the needs of populations with higher NMEs, focusing on trust surrounding childhood vaccines and related policies.

Health care/services

Do Black/African American women who experience everyday colorism have higher risk of racial microaggressions in prenatal care settings? Habibah Ijaiya* Habibah Ijaiya, Dawn Misra, Jaime Slaughter-Acey,

Background: Colorism, a form of racism that allocates privilege and opportunity based on skin tone, significantly impacts Black/African American (AA) women. In healthcare settings, colorism and racial microaggressions have been linked to disparities in care. However, their role during interactions with obstetric healthcare providers remains poorly understood. This study examines the association between everyday experiences of colorism and perceived racial microaggressions from healthcare professionals (HCPs) among AA women seeking or receiving prenatal care (PNC).

Methods: We obtained data for a sample of 472 AA women from the ongoing Life Course Influences on Fetal Environments-2 Birth Cohort (LIFE-2) Study in Metropolitan Detroit, Michigan. We assessed everyday colorism using the Colorism Scale and racial microaggressions while seeking/receiving PNC using the Daily Life Experiences of Racial Discrimination – PNC scale. We used binomial regression with an identity link to model risk differences (RD) for the relationship between everyday colorism and perceived racial microaggressions. We adjusted for demographic and socioeconomic characteristics, and healthcare access and utilization.

Results: Nineteen percent of women reported any racial microaggressions in PNC. Women experiencing more everyday colorism (above the median for those reporting any) had a 14–percentage-point higher probability of reporting more racial microaggressions in PNC in the fully adjusted model (RD = 0.14, 95% CI: 0.05–0.22).

Conclusions: Our findings suggest that everyday colorism was associated with a higher probability of racial microaggressions in PNC settings. Future research should move beyond skin-tone proxies to developing and validating instruments that directly measure colorism experiences in healthcare.

Health care/services

Medicaid in Midlife: State-Level Medicaid Program Generosity and Enrollment Outcomes

Sarah Petry* Sarah Petry, Stefani Baca-Atlas,

The US Medicaid program provides health insurance to millions of low-income Americans, facilitating access to health care across the life course. However, recent federal actions that will impose additional restrictions on Medicaid access are expected to result in more than 8 million people losing coverage. At the same time, individual states have some discretion over Medicaid eligibility and enrollment criteria that can reduce the burden on individuals seeking to access this program. Thus, the purpose of this research is to investigate whether unique elements of state-level Medicaid implementation are associated with higher enrollment during a period of substantial policy change among a nationally representative sample of participants in the National Longitudinal Study of Adolescent to Adult Health (Add Health). We estimate multilevel logistic regression models to examine the impact of state-level policies on Medicaid participation during young- and middle-adulthood in Waves III-VI of Add Health (2000-2025). We further examine differential impacts across social categories. Our results indicate that overall state Medicaid program generosity was not associated with enrollment prior to the ACA (Waves III and IV). In Wave V, however, greater overall generosity is associated with 6.1% greater participation. Specifically, in states with policies that reduce burdensome application and enrollment procedures, such as automatic renewal policies, participation is 5.9% higher. These policies have the largest association with program participation for females (6.9% higher) and non-Hispanic Black individuals (7.3%). Further, more expansive eligibility criteria is associated with 11.0% higher participation among non-Hispanic Black adults. These results suggest that state-level actions to reduce burdensome Medicaid application and enrollment procedures may counteract expected increases in uninsurance for middle aged adults, especially for marginalized populations.

Health care/services

Commercial Sexual Exploitation in a Northeastern State. Initial findings Laura Porto* Laura Porto,

Commercial sexual exploitation (CSE) describes those who sell or exchange sex to meet survival needs or those whose vulnerabilities are exploited by a buyer, trafficker, or pimp. A person may be vulnerable to CSE for a variety of reasons, including growing up in an abusive, neglectful, or conflict-ridden home, having low socioeconomic status, being homeless, having substance abuse problems, and having mental health problems, just to name a few. Membership in certain sexual, racial, and ethnic communities, as well as immigration status, can also contribute to CSE vulnerability.

This study employs a single case study design to explore the resources and services available in the Lehigh Valley to address CSE, as well as the barriers and facilitators faced by those involved with CSE when accessing these services. This study will consult with a survivor advisory board to guide and ensure that the data collection process is both relevant and safe for survivor participants, as well as to review the interview guide that will be used to gather information. The survivor advisory board will help researchers to understand the perspective of people involved in CSE and reduce the likelihood of misinterpreting what participants say and do.

To analyze the data, an integrated analytical framework that combines the socio-ecological model, critical feminist theory (CFT), and intersectionality will be implemented. By combining these theoretical frameworks, it is possible to move beyond individual-level causes and consequences of CSE to explore interconnected structural and systemic forces shaping the experiences of this population.

In this research, CFT and intersectionality provide the critical lens to interpret power dynamics at each level of the socio-ecological model. They also guide the assessment of whether the connections between services (or lack thereof) enhance protective factors or create new sources of marginalization. Finally, CFT and intersectionality will help examine institutional practices to see how they create or reduce barriers to access.

Health care/services

Investigating the Quality of Perinatal Mental Health Screening and Referrals at a California Health System Rebecca Woofter* Rebecca Woofter, Rashmi Rao, Courtney Thomas Tobin, Misty Richards, May Sudhinaraset,

Depression and anxiety are common during pregnancy and postpartum (the perinatal period). The American College of Obstetricians and Gynecologists recommends all perinatal patients be screened for mental health and referred to treatment as needed. Several states also mandate perinatal mental health screening. However, emerging literature suggests that perinatal patients are not satisfied with their screening and referral experience, and often cannot access desired mental healthcare. In this study, we investigate the quality of perinatal mental health screening and referrals and identify opportunities for improvement.

We conducted expert interviews with 21 obstetricians, labor and delivery nurses, and social workers within one California health system in 2023. During interviews, healthcare providers discussed their process for perinatal mental health screening and referrals, including any challenges they face and recommendations to improve the process. We used thematic analysis and a dual inductive-deductive approach to iteratively code interview transcripts and identify themes.

Preliminary findings suggest that obstetricians and nurses screen all patients for mental health using the Edinburgh Postnatal Depression Scale (EPDS). Providers find the EPDS useful, though note it does not necessarily capture all of patients' symptoms. For those with high EPDS scores, obstetricians either give patients a list of mental health resources or refer patients to social workers who discuss treatment options and provide a standardized resource list. Obstetricians and social workers generally do not give patients tailored recommendations for mental healthcare nor assistance with making appointments. Obstetricians struggle with limited time to discuss mental health among other important topics during perinatal visits. Similarly, social workers have high caseloads of patients and limited time to speak with them. All providers emphasized the lack of available mental healthcare providers.

Health care/services

Faith, community, and trust: Leveraging faith-health collaborations to improve HIV prevention and care in rural western Kenya Nema Aluku* Nema Aluku, Mary Getui, William Story,

Background: Trust in health systems is an essential determinant of HIV prevention and treatment. In many parts of sub-Saharan Africa, faith-based organizations provide a significant number of health services, including HIV care. However, the ways in which collaboration between faith institutions, communities, and health facilities shape patient trust and HIV care engagement are poorly documented. This study elucidates the ways in which faith-based health facilities interact with communities in the context of HIV care in rural western Kenya.

Methods: This qualitative study used an embedded multiple case study design to examine HIV prevention and treatment in 7 faith-based health facilities in Kakamega county, western Kenya. Data was collected through 33 in depth interviews with people living with HIV, 14 key informant interviews with health providers, and 8 focus group discussions with community members (48 participants). Interview guides explored patient experiences, community solidary, and institutional collaboration in HIV service delivery. Data were transcribed, translated, and analyzed thematically across cases to identify patterns related to trust, service quality and collaborative health action.

Results: Faith-health collaboration strengthened trust and patient satisfaction through respectful patient-provider relationships, strong confidentiality practices, and supportive counselling environments. Collaborative outreach activities—including community education, mobile clinics, and church-based seminars—expanded HIV awareness and improved access to HIV testing and treatment.

Conclusion: Faith-health collaborations represent powerful strategies for strengthening trust, improving patient satisfaction, and enhancing HIV care engagement. Integrating faith institutions more proactively into population health strategies may strengthen community-based HIV responses by leveraging trusted social networks and expanding outreach capacity in culturally meaningful ways.

Health equity

Digital Health Access and Population Health Inequality Among Older Adults in the United States Srilakshmi Vedantam* Srilakshmi Vedantam,

Digital technologies have become central to how individuals access health information, communicate with healthcare providers, and manage their health. Patient portals, electronic messaging with providers, telehealth services, and online health information sources are increasingly embedded within healthcare systems. While these technologies may improve convenience and expand access to health information and care, their benefits may not be distributed equally across the population. Differences in digital access, digital skills, and engagement with digital health systems may contribute to emerging forms of inequality in population health, particularly among older adults who face greater health needs and varying levels of technological familiarity. This study examines how engagement with digital health systems is associated with population health–related indicators among adults aged 50 and older in the United States. Using nationally representative data from the Health Information National Trends Survey (HINTS-7), the analysis investigates three questions: (1) how digital health engagement behaviors—including accessing electronic health records, communicating with healthcare providers online, using telehealth services, and seeking health information on the internet—are distributed across socioeconomic and demographic groups; (2) whether digital health engagement is associated with indicators related to health perceptions and health management confidence; and (3) whether these associations vary across age groups in later life. Multivariate regression models assess relationships between digital engagement with healthcare systems and indicators such as self-rated health, confidence in managing health, and health-related communication with family or friends while accounting for education, income, age, race/ethnicity, and other demographic characteristics. By examining digital health engagement as a potential mechanism linking technological change and health inequality, this study contributes to population health research on how digital infrastructures may shape emerging patterns of health disparities in aging populations.

Health equity

Is “everyday discrimination” a distinct exposure compared to healthcare discrimination?

Andrea Thoumi* Michael Green, Heather Farmer, January Cornelius, Zaire Cullins, Tomi Akinyemiju, Michael Green,

Background

Patients face different types of unfair treatment in many places. Everyday discrimination encompasses routine experiences of unfair treatment in various contexts, and the Everyday Discrimination Scale (EDS) is a well-known instrument to assess perceptions of these experiences.

Objective

Evaluate if longitudinal response patterns for a single-item healthcare measure differs from multi-item patterns of EDS.

Methods

Data from 19,848 non-Hispanic Black, non-Hispanic White, and Hispanic adults (mean age 65; 59% female) in the Health and Retirement Study (2008-2022). Everyday discrimination was assessed with a 5-item EDS, healthcare discrimination was assessed by a single item asking how often participants faced “poorer treatment from doctors or hospitals,” with responses ranging from “never” to “every day.” Group-based trajectory models identified longitudinal patterns of discrimination for up to 14 years. Agreement statistics (Cohen’s Kappa) and cross-classification are used to determine how often participants fell into matching versus divergent response patterns across each measure.

Results

We identified 3 patterns of responses for both measures. For the EDS, trajectories were categorized as: Low (40.0%), Medium (54.2%), and High (5.8%). In contrast, the single healthcare item exhibited a floor effect, with trajectories categorized as: Low (71.3%), Medium (27.9%), and High (0.9%). Trajectory assignments between the two measures showed poor agreement (Kappa=0.292). Among trajectory groups, 60.2% were concordant and 37.4% diverged, exhibiting a higher EDS pattern than the healthcare discrimination pattern. Only 2.5% of the sample showed the reverse pattern.

Conclusions

Our findings indicate that adults report varying patterns of bias over time, attributed to different sources. This divergence in patterns indicates the importance of measuring discrimination in relevant contexts for older adults, such as healthcare, in addition to general everyday discrimination.

Health equity

“They make us feel inferior”: Black women’s experiences of racism and radical healing practices in maternal healthcare in Georgia Sheree Boulet* Ran Zhang, Jasmin Darville, Sierra Carter, Beverly Bruno, Alexis Kendall, Ifrah Sheikh, Myiera Seymour, Simone Sanders, Chrisma Manley, Gina Northington, Kaitlyn Stanhope,

Background Racism embedded in the healthcare system limits access to quality maternal care and adversely affects Black women’s health. Guided by the radical healing framework, this mixed-methods study examined Black women’s experiences of racism in maternal healthcare and identified coping and healing strategies.

Methods Between December 2023 and January 2024, we conducted a survey among Black women aged 18-45 years residing in Georgia. Measures assessed obstetric racism, race-related stress, perceived stress, physical and mental health, social support, Africultural coping strategies, critical consciousness, and Black community activism orientation. We summarized characteristics and scale scores using descriptive statistics. We conducted focus groups to explore experiences of racism in maternal healthcare and radical healing coping practices, using inductive thematic analysis.

Results Survey respondents (n=209) were primarily aged 25–34 years (62.7%), non-Hispanic (91.4%), and college-educated (64.1%). Nearly all had been pregnant (98.1%), with 70.1% reporting ≥2 pregnancies. Obstetric racism was reported infrequently; however, when experienced, respondents reported higher stress levels linked to ceremonies of degradation, racial reconnaissance, and disrespectful treatment. Race-related stress across cultural, individual, and institutional domains was moderate, as was perceived stress. Mental health showed moderate limitations in energy and fatigue, while physical health was generally good. Self-reported social support was high. Respondents frequently used cognitive/emotional, spiritual, and Africultural collective coping strategies. Critical consciousness was moderate, with stronger orientation toward low-risk and formal political activism than high-risk activism. Focus groups reinforced survey findings and highlighted four domains: enduring and resisting systemic racism, nurturing self-determination and empowerment, healing through cultural identity and community, and imagining radical hope and transformation.

Conclusion Racism and discrimination impose substantial physical and emotional burdens on Black women. Research that amplifies strategies utilized by Black women, like radical healing, to combat oppression are necessary to support holistic healing. Maternal health research and clinical practice should move beyond individual-level coping frameworks and support approaches that foster collectivism, community-based healing, and structural change to promote more equitable care.

Health equity

Shelter Type and the Impact on Health Outcomes and Healthcare Access in Northern Arizona Colleen Hackett* Colleen Hackett, Dixie Clinkenbeard,

The population of people experiencing homelessness (PEH) across the United States has significantly increased in the past few years, exacerbated by a lack of affordable housing inventory, persistent poverty, stagnant wages, cuts to social services, and limited housing assistance programs. The annual Point-In-Time count found that approximately 770,000 people were unhoused on a single night in 2024, an 18% increase from the year prior (de Sousa & Henry, 2025). This is the highest number of PEH recorded since data collection began in 2007, with notable increases among families with children, unaccompanied youth, and those experiencing chronic homelessness. The crisis of homelessness poses significant challenges to public health and the well-being of the most vulnerable people in our society.

In 2024, 64% of the population experiencing homelessness were in an emergency shelter, and the remaining 36% were unsheltered (de Sousa & Henry, 2025). Unsheltered homelessness is associated with extreme health and safety risks, including exposure to the elements, violence and assault, and limited access to hygiene necessities and healthcare (Richards & Kuhn, 2022). Emergency shelters provide temporary relief for individuals and families experiencing homelessness, often providing beds, meals and hygiene supplies, and connecting people to supportive services and healthcare. For this reason, emergency shelters have been a crucial tool in addressing the immediate needs of individuals and families experiencing homelessness.

The most common type of emergency shelters are congregate spaces meant to temporarily house large numbers of PEH. Though these spaces offer a reprieve from the health and safety risks of unsheltered homelessness, congregate shelters can also expose PEH to shelter- based violence, theft and robbery, impaired sleep, and infectious disease outbreaks (Kerman et al., 2023; Pope et al., 2020). In the wake of the COVID pandemic, many cities across the United States responded to the public health crises at crowded congregate shelters by quarantining and housing PEH in hotel rooms. This “unplanned innovation” led to noticeable quality of life and health improvements for PEH who utilized these non-congregate shelter options (Colburn et al., 2022; Padgett et al., 2022). The empirical support for non-congregate hotel-based shelters as a meaningful health intervention for PEH in the aftermath of COVID is small but growing.

This study used a mixed methods approach to investigate how shelter type (unsheltered, congregate shelter, and non-congregate hotel shelter) impacts healthcare access, healthcare use, and health outcomes for adults experiencing homelessness in Northern Arizona— with a focus on tribal, rural, and border communities. We collected primary data via surveys with people who are currently experiencing homelessness (n=100), interviews with community stakeholders (n=16), and people with lived homelessness experience (n=15).

The findings demonstrate promising health and social wellbeing benefits for residents. Non-congregate hotel shelter was associated with more favorable health outcomes and risk profiles compared to congregate and unsheltered settings. Individuals in non-congregate shelter had the highest healthcare coverage and substantially lower substance use. While delayed healthcare remained present across groups, the findings suggest non-congregate shelter may function as a stabilizing, harm reducing intervention that improves access to care and reduces behavioral health risks.

In interviews with people staying at a non-congregate hotel shelter, participants reported an increase in their overall quality of life. Participants noted that the hotel shelter provided a dignified, personal, safe, and stable space that countered the routine stigma and exclusion felt in many public spaces. In interviews with community experts who provide direct services to people experiencing homelessness, participants reported on five interrelated themes: systems-level barriers, community context, individual experiences, service delivery, health impacts and challenges specific to hotel/motel shelters. They highlighted structural challenges, particularly the lack of affordable housing, fragmented service systems, insufficient mental health resources and options for referrals, and unstable funding. There was consistent agreement across provider interviews that hotel/motel shelters have meaningful health benefits, including reduced violence, improved well-being, and stronger service engagement, particularly for individuals who struggle in traditional congregate settings.

Due to the lack of permanent supportive housing and affordable housing options, there are challenges in finding long-term housing placements for residents at non-congregate hotel shelters. The results also point to the need for culturally appropriate, Indigenous-led affordable housing initiatives that address the urgent and unmet housing needs for Indigenous people in Northern Arizona. This research has practical implications for housing policy, while also contributing to the literature on alternative shelters and permanent supportive housing solutions.

Health equity

The Social Distribution of Violence Victimization: Sexual and Gender Identity, Race and Ethnicity, and Household Poverty Katrina Kennedy* Katrina Kennedy, Harry Barbee, Cassandra Crifasi, Amrita Rao, Laura Samuel, Danielle German,

Interpersonal violence in the U.S. is unequally distributed in ways that reflect structural systems of inequality. Prior research documents disparities by socioeconomic position, race and ethnicity, and sexual and gender identity, but most quantitative studies treat these dimensions as independent or additive. Guided by intersectionality and structural vulnerability frameworks, this study examines how poverty level, race and ethnicity, and sexual and gender diverse (SGD) identity jointly structure violence vulnerability. We analyzed 2017-2023 U.S. National Crime Victimization Survey data. We calculated victimization rates and conducted an intersectional multi-level analysis of individual heterogeneity and discriminatory accuracy (I-MAIHDA), with individuals nested within 384 strata defined by Federal Poverty Level (FPL), SGD status, race and ethnicity, age, and education. Models estimated between-stratum variance and the proportion explained by additive vs. intersection-specific effects. Individuals living below the FPL experienced victimization rates 2.5x those of individuals living at or above 400% of the FPL. SGD individuals experienced nearly 5x the rate of non-SGD individuals. Disparities by race and ethnicity emerged for serious violent crime and within poverty strata. In I-MAIHDA models, additive effects explained 96% of between-stratum variance, while 4% reflected intersection-specific effects. Predicted stratum-level victimization prevalence ranged from 0.17-9.66%. The highest-vulnerability strata were younger SGD individuals living below the FPL. Violence vulnerability is structured by overlapping systems inequality. Intersection-specific effects identify populations at the highest risk that may be obscured in unidimensional analyses. Violence prevention efforts must address the ways that systems of inequality shape differential exposure to harm and access to protection, addressing economic inequality and other upstream determinants.

Health equity

Building Effective International Research Partnerships to Inform Policy: Collaborative Population Health Surveillance in Thailand Thomas Fuller-Rowell* Thomas Fuller-Rowell, Samia Sultana, Susan Osayande, Ichiro Kawachi, Pailin Chuayok, Duanpen Theerawanviwat, Dararatt Anantanasuwong,

Background

Building effective international research partnerships is critical for producing population health evidence that is both scientifically rigorous and policy relevant. This study emerged from a collaboration among researchers at Auburn University, Harvard University, and the National Institute of Development Administration in Thailand to strengthen national surveillance of social isolation and generate evidence relevant to Thailand's policy priorities related to population aging and social connection.

Methods

We analyzed repeated cross-sectional data from the Gallup World Poll for Thailand (2009-2024) to examine national trends in social isolation, defined as lacking relatives or friends to rely on in times of need. Early consultation with Thai collaborators helped refine the policy relevance of the research questions and analytic focus. Thai collaborators also contributed expertise on Thailand's demographic context and policy environment and helped interpret findings in relation to national public health and aging policies.

Results

Social isolation increased during the pandemic period, but changes were highly uneven across socioeconomic groups. Isolation rose substantially among economically disadvantaged adults while remaining relatively stable among higher-income groups. Consequently, the prevalence gap between low- and high-income adults widened from about 2 percentage points before the pandemic to nearly 9 percentage points afterward—an approximately five-fold increase in the disparity. Within the low-income population, the largest increases occurred among individuals living alone and those residing in urban areas.

Discussion

These findings highlight a growing socioeconomic divide in social connection in Thailand following the pandemic. Interpreting the results collaboratively helped situate the patterns within Thailand's policy landscape, including initiatives addressing aging, community participation, and mental health. The partnership illustrates how international collaborations can strengthen population health science by integrating cross-national data with country-specific expertise and policy insight, supporting translation of surveillance evidence into policy-relevant knowledge.

Health systems

Infusing Inequity: Structural Inequities in the Rising Commercial IV Infusion Market

Yamile Cruz-Sousa* Joi Way, Paige Way, Amanda Lussier,

Background: The growth of commercial intravenous (IV) micronutrient infusion clinics has resulted in an expansion of this highly unregulated industry designed to operate rather than through a conventional healthcare system. These clinics promote high doses of parenteral therapy for “health and wellness” without sufficient data establishing the need. Lack of accessibility to primary and specialty healthcare leaves marginalized groups susceptible to these unregulated “health and wellness” markets instead of evidence-based patient care. This case examines persistent leukopenia in a post-bariatric patient receiving IV micronutrient infusions.

Methods: A clinical exemplar was used to learn about fragmented healthcare delivery systems, attention gap regulation, and access inequities after post-bariatric surgical follow-up impacting patient use of commercial parenteral infusion services.

Case Context: A 56 year-old African American female with prior history of bariatric surgery in 2021 was being seen in hematology due to a persistently low white blood cell count (4.1×10^9/L) and an absolute neutrophil count of 2.0/L. The patient disclosed spending approximately $1,200 for commercial IV vitamin therapy from a commercial wellness center with no documentation or standardization to determine the clinical need for such therapy.

Population Health Significance: This case study highlights multiple systemic problems, including an uneven regulation of commercial infusion services, differing financial motivations for commercial health care services, a lack of health literacy resources that provide evidence-based use of supplements, and limited access to specialty care.

Implications: Due to the increase to the increasing number of commercial intravenous micronutrient businesses, there needs to be equity-focused policy reform; clarify what regulations will apply to these companies; and implement culturally appropriate, long-term care access solutions.

Health systems

Building Trust from Within: A Physician-Led Model to Improve Community Health Victor Carrillo* Natasha De La Rosa, Erin Glantz, Natasha De La Rosa,

Research Question: For interdisciplinary clinicians in a large health network, does a physician-led, agile collaborative framework, compared to a traditional top-down approach, lead to accelerated adoption of evidence-based standards, implementation of new patient safety initiatives, and increased physician engagement?

Significance: Fragmented clinical expertise hindered interdisciplinary collaboration on care standards, leading to marked variability in clinical practice[1]. This disconnection, a known barrier to complex processes such as advanced care planning[2], combined with a lengthy policy process, fostered a culture of physician mistrust and disengagement from system-wide quality improvement efforts.

Data/Methods: Seven Specialty Collaboratives of physician representatives were convened to co-design solutions within an agile framework. Program effectiveness was measured by tracking the adoption of new standards, quantifying physician engagement using a custom rating scale, and the time to policy approval.

Results: The physician-led framework yielded a 75% reduction in policy approval time, cutting the process from over 1.5 years to 1.75 months, and achieved an average physician effectiveness rating of 87%. Targeted interventions demonstrated measurable improvements in population health: Pediatrics: Launched a “Developmental Autism Sprint” to improve care access; Behavioral Health: Standardized a PRN order set for adult agitation to improve safety and equity; Pulmonology: Implemented a mandatory consult policy for high-flow oxygen use to ensure expert oversight.

Conclusions/Implications: This physician-led model, applying an agile framework, is a proven method for accelerating evidence-based standards and overcoming physician disengagement caused by traditional top-down approaches. The framework offers a scalable solution for leveraging clinical expertise to improve population health.

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Health systems

Reimagining Trust in Population Health AI: A Runtime Governance Framework for Patient-Level Reliability Coby Dulitzki* Coby Dulitzki,

Predictive clinical decision support (CDS) systems are increasingly used to guide care, yet patients underrepresented in training data face representational harms when these tools generate overconfident outputs despite insufficient evidence. Current mitigation efforts rely on pre-deployment validation metrics such as discrimination and calibration. While necessary, these static measures are limited by their inability to remediate persisting representational debt post-deployment. Individual clinical encounters present a critical mechanism to do so in real time – a missed opportunity among current approaches to improve data equity and enhance patient trust in the process.

I propose a governance framework that shifts from static bias mitigation toward dynamic, patient-centered intervention during clinical encounters. The framework integrates uncertainty quantification methods, including conformal prediction, to identify patients for whom model predictions are unreliable due to data sparsity. Rather than producing a potentially harmful overconfident output, uncertainty serves as a signal: the CDS flags the encounter, prompting the provider to initiate an informed consent protocol. This protocol communicates the limitation to the patient and empowers them to voluntarily contribute their data.

The framework addresses three interconnected challenges: detecting representational uncertainty in real time, establishing an ethical mechanism for data contribution that centers patient autonomy, and creating a self-improving system that progressively reduces bias through participatory engagement. By transforming algorithmic uncertainty into opportunities for transparency and shared decision-making, this approach reframes the relationship between patients, providers, and predictive systems – building trust in clinical AI not through opaque technical fixes, but through governance that makes patients active partners in improving the systems that serve them.

Infants/children/youth

Crucial Role of Practitioner Progress Monitoring Measures for Optimizing Early Communication Laura Saddi* Laura Saddi, Kathleen Baggett,

Background: Public health benefits of parent mediated interventions to optimize child communication are often unrealized because they fail to reach children in the first 2 years of life, due in part to practitioners' lack of feasible progress monitoring measures to assess whether interventions are working as intended. We present results of a unique study that employed validated practice progress monitoring measures, allowing us to address questions about the effects of intervention on parent facilitator behaviors (the mechanism of intervention change as measured by the Indicator of Parent Child Interaction), and whether varying levels of post-intervention parent positive facilitators differentially predicted child communication as measured by the Early Communication Indicator.

Methods: We analyzed data from an Australian population-based, cluster RCT in which 161 parent-toddler dyads were assigned to either a standard control (group-sessions on general parenting matters), a Smalltalk-only (playgroup program), or a Smalltalk Plus (playgroup program and 6 early childhood home visits on child communication promotion strategies for parents). Analytic approaches included ANCOVA to assess treatment by time effects on parent facilitator behavior and ANOVA to assess effects of low, moderate, and high tertiles of parent positive facilitators on child communication rates.

Results: Significant treatment by time differences with large effects on positive facilitators were found for parents in the Smalltalk Plus group as compared to parents in the Smalltalk-only and control groups. Post-intervention parent positive facilitator level differentially predicted child communication rate with large effect sizes.

Conclusion: Findings underscore the need for inclusion of progress monitoring measures in implementation research and practice for increasing public health reach and impact for optimizing child communication.

Infants/children/youth

Medicaid Generosity and State Variation in Developmental Screening and Surveillance

Torrey Robinson* Torrey Robinson, Kerri Ivey, Benjamin Walker,

Introduction

State-level variation in developmental monitoring, including screening and surveillance, is not fully explained by child or family characteristics. Nearly half of U.S. children are covered by Medicaid, yet state Medicaid policies vary in eligibility thresholds, provider reimbursement, and covered services beyond expansion status alone. Less is known about whether differences in overall Medicaid generosity are associated with early childhood developmental screening prevalence.

Methods

Using nationally representative data from the 2018–2019 National Survey of Children's Health, we estimated two-level multilevel logistic regression models with individuals nested within states. State Medicaid generosity was operationalized using the Medicaid Generosity Index and modeled per 10-point increase. Guided by Andersen's Behavioral Model, models were adjusted for child, family, and healthcare access characteristics.

Results

Among children aged 9–35 months, 38.0% received developmental screening. Screening was more common when providers asked about parental concerns (64.1% vs 23.4%, $p < 0.001$). Variance components models indicated that 3% of variance in developmental screening and 1% in surveillance were attributable to between-state differences. After adjusting for covariates, state-level Medicaid generosity was associated with increased odds of developmental screening (OR 1.11; 95% CI 1.01–1.23) but not surveillance (OR 1.04; 95% CI 0.96 – 1.12).

Conclusions

Greater state-level Medicaid generosity is associated with increased developmental screening, independent of child and family characteristics. These findings demonstrate that state policy environments may contribute to variation in developmental screening, while surveillance may operate through a different pathway.

Infants/children/youth

Racial and Ethnic Differences in HPV Vaccine Initiation and Completion and Receipt of Healthcare Provider Recommendations for Teen Girls in the United States, 2008-2019 Kim-Phuong Truong-Vu* Kim-Phuong Truong-Vu, Grace Nakajima,

Despite the Human Papillomavirus (HPV) vaccine's efficacy in preventing malignancy, teen girls' uptake remains sharply stratified by race/ethnicity. Using National Immunization Survey-Teen (NIS-Teen) data, we examine racial/ethnic differences in (1) HPV vaccine initiation and completion among teen girls from 2008 to 2019 and (2) the receipt of a healthcare provider recommendation across two distinct time periods: the "innovation" phase (2008–2011) and the "standardized practice" phase (2016–2019). Logistic regression and complementary log-log regression models found large race/ethnic-based differences in initiating and completing the HPV vaccine series. The proportion of teen girls who initiated and completed the vaccine series was highest among white teen girls and lowest among Black teen girls. Additionally, after accounting for SES and language barriers, we found that Black teens and their parents have the lowest odds of receiving a recommendation from their providers across both major time periods of study. Findings suggest that informational inequities and gaps in healthcare provider recommendations continue to persist for teen girls of color, which influences future HPV-attributable cancer disparities. Mitigating HPV-attributable health disparities requires moving beyond individual-level interventions to address the systemic inequities in how clinical resources and health information are distributed within marginalized communities.

Infants/children/youth

Newborn Screening Timeliness in the Central Coast of California Gianna D'Apolito* Gianna D'Apolito, Breonna Preston,

Newborn screening (NBS) saves infants' lives and improves their quality of life through early detection and timely intervention. In California, over 400,000 infants are screened annually through the Genetic Disease Screening Program. In a geographically large state, specimen transport from birthing facilities to state laboratories is one of the most critical and high-risk components of the NBS system. The courier serves as the sole link between specimen collection and laboratory testing, making accountability, chain of custody, and transit efficiency essential to preventing lost or unaccounted-for specimens and ensuring timely reporting of results. This quality improvement study evaluated whether a multi-pronged, system-level intervention across hospitals, state programs, laboratories, and courier services could improve NBS timeliness. Two groups of hospitals were analyzed over a two-year period: six intervention facilities and six comparison facilities. Statistical analysis was conducted using one-way ANOVA with Bonferroni post hoc tests in SPSS. A statistically significant improvement in timeliness ($p < 0.05$) was observed between intervention and comparison hospitals, as well as within the intervention group between the pre- and post-intervention periods. No statistically significant improvement was observed in the comparison group from pre- to post-intervention. These findings demonstrate that strengthening courier accountability and specimen transport processes can meaningfully improve timeliness in NBS. Improved courier reliability has reduced the risk of specimen loss and enabled faster delivery to laboratories, supporting processing times of less than three days and allowing more rapid reporting of results for time-sensitive conditions, aligning with current literature. Greater transit efficiency improves quality, reduces risk, and promotes equitable outcomes for newborns regardless of geographic location, reinforcing trust in the NBS system.

Infectious or Microbial

High resolution climate data associated characterization of medically relevant mosquito populations from urban to rural settings in Puerto Rico Heriberto Martir Vargas* Heriberto Martir Vargas,

Mosquito borne diseases remain a public health threat in the tropical islands like Puerto Rico, an island consistently facing growing numbers of diseases carrying mosquito activity. Disease carrying mosquito species found in the Island include various genus such as Aedes (vectors for Dengue, Zika, Chikungunya and Yellow fever), Culex (vectors for West Nile Virus) and Anopheles (vectors for Malaria). Mosquito activity and population dynamics are known to be influenced by environmental conditions which vary throughout the diversity of microclimates across various rural and urban settings in the island. Therefore, this work aims to gather and link fine scale data on mosquito population dynamics to microclimate conditions. This will be achieved by using trusted mosquito collection techniques and sourcing these collections at higher temporal resolution while continuously tracking microclimate conditions at collection sites. Mosquito collection techniques include the use of human landing catches (**HLCs**) and BG Sentinel Pro automated mosquito traps (**AMTs**) assisted by lures and CO2. Environmental data such as relative humidity and temperature at capture sites will be recorded using continuous data loggers; additional data for location, elevation, atmospheric pressure, wind speed, cloud coverage and precipitation will be obtained from weather data sources. The batches collected from AMTs will be collected at least twice daily and HLCs at least three times a day. These would account for diurnal and crepuscular activity. Batches will be sorted and counted to obtain proportions of each species per collection period. This approach allows for higher data granularity when trying to understand species specific activity dependent on local climate conditions. The resulting data will significantly inform predictive outbreak modeling strategies which, in turn, impact preparedness efforts from both a vector control lens and an outbreak response lens.

Interventions/Programs

Implementation of Permanent Supportive Housing for People of Color Marisa Westbrook*
Marisa Westbrook, Kathleen Conte, Marisa Zapata,

Permanent supportive housing (PSH) is a proven intervention combining housing assistance with supportive services to help people experiencing homelessness and those with disabilities move towards housing stability and wellbeing. Culturally-specific (CS) organizations have been recognized as best positioned to address the needs of Black Indigenous People of Color (BIPOC) experiencing homelessness by providing PSH services to their specific cultural community; yet, few studies have explored the implementation and impact of CS PSH. The aim of this project was to examine how CS PSH is conceptualized, implemented, innovated on, and experienced through 53 interviews conducted with local government staff involved in PSH implementation, CS providers serving the Black or Hispanic/Latinx community, and Black and/or Hispanic/Latinx clients receiving CS PSH in the Portland Oregon Metro Area. In our findings, we summarize the relational strengths of CS PSH, the current challenges facing providers, and the opportunities for non-CS PSH providers to draw from these experiences providing services to BIPOC communities for furthering housing stability and wellbeing. Highlighting the recommendations from interview participants (governmental, community organizations, and from those with lived experience), we close by discussing how CS PSH providers are advancing equitable housing and health outcomes.

Interventions/Programs

From Response to Prevention: Evaluating and Co-Designing Leave-Behind Naloxone Programs for County-Wide Emergency Medical Services (EMS) Uptake Theresa Hwee*
Theresa Hwee, Cece Wettemann, Ohshue S. Gatanaga, Hannah Collins, Amy Poel, Samara Jamison-Heydon, Jenna van Draanen,

Opioid overdose is a leading cause of death in Washington State, and Leave-Behind Naloxone (LBN) is an evidence-based intervention that reduces overdose death. LBN kits are given to patients or close contacts immediately after an overdose. Firefighter/EMTs are often the first to respond to overdose, yet adoption of LBN programs varies widely across EMS agencies. We ask: what organizational and contextual factors shape LBN implementation, and how can evaluation paired with co-design strengthen implementation of overdose prevention programs at a population level?

We are conducting an ongoing sequential mixed-methods evaluation of 2024-2026 LBN implementation across Seattle/King County EMS agencies in partnership with Public Health–Seattle & King County. Using RE-AIM to assess implementation and CFIR to identify contextual determinants, we will integrate administrative data (naloxone inventory, overdose call volume, LBN distribution/documentation) with semi-structured interviews with n≈20 EMS department leaders. Interviews findings will directly inform recommendations and decision-making by EMS agencies and public health partners.

Preliminary analyses of administrative data describing program uptake suggest substantial variation in LBN distribution and documentation practices across EMS agencies, highlighting the need to understand organizational context and co-design future program iterations. Finalized analyses will include descriptive and change-over-time trends, thematic summaries of implementation determinants, and mixed-method joint displays. Results will be translated into action through co-design workshops with firefighters/EMTs, EMS leadership, public health partners, and people with lived experience to refine the LBN program for increased population impact.

This project advances population health by uniquely linking implementation science with participatory co-design in emergency response systems to improve naloxone distribution and reduce overdose deaths.

Interventions/Programs

How Supportive of Leave are Supervisors? Employee Perceptions in a Public Academic Institution Julia Goodman* Julia Goodman, Mari Peñarrubia Sanchez,

Access to paid leave is a structural determinant of health, linked to improved mental and physical health for workers and their families. Leave policies are often underutilized due to limited awareness and unsupportive organizational cultures, and supervisor support plays a critical role in shaping employees' willingness and ability to take leave.

We conducted an online survey of employees at a large, public university in the Pacific Northwest to examine perceptions of supervisor support for family and sick leave. Working with the university's human resources department, we emailed employees and invited them to participate. Baseline surveys were collected from February 9 to March 4, 2026. We assessed experiences with leave-qualifying situations and perceptions of family supportive supervisors' behaviors around leave policies, including emotional support, role-modeling, instrumental and dual agenda support, psychological safety, and respect for time off during leave.

Of 453 participants, 320 (70.6%) reported at least one situation that could qualify them for leave (e.g., new child, medical condition for themself or a loved one, bereavement) during the prior 3 months, while 115 (25.4%) reported none (n = 18 missing). Among those experiencing a potential leave-qualifying situation, 179 (55.9%) took leave. Employees who faced such situations but did not take leave reported the lowest levels of supervisor support across multiple dimensions. Participants with no leave-qualifying situations reported the most positive perceptions of supervisor support. Employees with a leave-qualifying situation who did not take leave reported a negative impact score of 2.26 (SD = 1.01), indicating that, on average, they experienced between 'a little' and 'a moderate amount' of negative impact.

Overall, patterns of perceived supervisor support differed by employees' recent leave-qualifying experiences. Enhancing supervisor training and organizational norms around leave may be an important step toward promoting equitable access to the health-protective benefits of paid leave.

Interventions/Programs

Outcomes of an Asthma/COPD Community Health Worker program at a large urban safety-net hospital system Rachel Massar* Rachel Massar, Lorraine Kwok, Joan Reibman, Alessandra Calvo-Friedman, Dawn Walter, Renata Howland, Kayla Fennelly, Yuan Jin Tan, Kasha Caesar, David Conley, John Billings, Carolyn Berry,

Asthma and COPD are chronic diseases with substantial avoidable morbidity and mortality that disproportionately affect lower socioeconomic groups and communities of color, especially in urban settings. New York City Health + Hospitals, the nation's largest safety-net hospital system, established an Asthma/COPD Community Health Worker (CHW) program to improve care for pediatric and adult patients with uncontrolled asthma and/or COPD or those at high risk for inpatient and Emergency Department (ED) visits. CHWs help connect patients to primary and specialty care, provide education and coaching on disease self-management and medications, conduct environmental screenings via home visits, and address social needs. Program goals are to 1) prevent or reduce avoidable asthma/COPD-related inpatient or ED admissions; and 2) improve patients' ability to manage their conditions. We are conducting a mixed-methods evaluation to assess outcomes of participation in the program. Qualitative interviews with CHWs and patients explore implementation facilitators and barriers, patient experiences, and perceived benefits. Interviews are analyzed using rapid qualitative methods. In preliminary findings, patients report high satisfaction with the program and many commented that they are better able to manage their asthma symptoms, particularly through correct use of inhalers. CHWs feel well prepared with ongoing trainings and reported some challenges including dedicated work space, availability of resources for undocumented patients and cultural/linguistic barriers. Medicaid claims and electronic health record data compare healthcare utilization and clinical outcomes among program participants (n=953) and a matched comparison group from a pool of 41,682 patients with asthma. Evaluation findings elucidate the effectiveness of CHW programs for patients struggling with asthma/COPD in an urban safety-net healthcare setting and help inform future program development and expansion.

Interventions/Programs

Mixed-methods evaluation of a Maternal Home program in a safety-net healthcare system in New York City Rachel Massar* Rachel Massar, Lorraine Kwok, Renata Howland, Lorna Johnson, Sarah Sisco, Wendy Wilcox, Kayla Fennelly, John Billings, Carolyn Berry,

NYC Health + Hospitals, the largest safety-net healthcare system in the U.S., launched the Maternal Home program in 2019 to provide pregnant and postpartum patients with support, education, and linkages to services to reduce maternal morbidity and mortality. We are conducting a mixed-methods implementation and outcome evaluation using interviews with program leadership, staff, providers, and patients; pre-post patient surveys; and New York State Medicaid claims data. Interviews are analyzed using rapid qualitative methods. Telephone surveys at baseline and ~6-weeks postpartum assess self-reported health, pre/postnatal depression, healthcare self-efficacy and engagement, parental stress and confidence, social support, social needs, connection to services, and clinic/program satisfaction. Medicaid claims (280 days pre-delivery to 1 year postpartum) compare demographic, clinical, and utilization patterns between participants and non-participants delivering at the same hospitals (non-risk-adjusted), with regression models testing group differences. Preliminary interview findings elucidate implementation barriers and facilitators, perceived benefits, and areas for improvement. Survey results are forthcoming. Consistent with enrollment goals, claims analysis showed participants were more likely to be older/younger, multiparous, have multiple chronic conditions, documented social needs (14% vs. 11%), and higher rates of gestational diabetes, pre-existing hypertension/diabetes, and mental health conditions, more prenatal visits (12.8 vs. 10.9), higher continuity of care (77% vs. 70%), and more emergency department visits (2.3 vs. 1.7) during pregnancy. Participants were more likely to attend a postpartum visit by 84 days (77% vs. 69%) and obtain outpatient mental health treatment (12.4% vs. 8.3%). Findings provide early evidence on how a maternal program can engage high-risk patients and enhance use of services, informing design and implementation of similar programs.

LGBTQ+

Family Use of Adolescents' Gender Pronouns and Subsequent Mental Health Among LGBTQ+ Youth Evan Krueger* Evan Krueger,

Background: Lesbian, gay, bisexual, transgender, and queer (LGBTQ+) youth experience mental health disparities. While personal identity and pronoun use may shape exposure to risk, disparities are often driven by others' recognition and treatment of LGBTQ+ youth (e.g., stigma, bullying, rejection). Affirmation from others (e.g., though use of adolescents' preferred pronouns) is a modifiable social and relational determinant of LGBTQ+ youth mental health.

Methods: Data were drawn from LGBTQ+ youth in a longitudinal school-based survey of diverse adolescents in Southern California (N = 879). Two waves of data (Spring 2023 and Spring 2024) were analyzed when students were in grades 10–11 and 11–12, respectively. Correct pronoun use by "most" or "all" (vs. "some" or "none") family members was estimated, and associations with adolescents' perceived safety in discussing mental health with parents or guardians were assessed. Logistic regressions tested associations between family members' correct use of adolescents' gender pronouns at baseline and subsequent generalized anxiety disorder (GAD) and major depressive disorder (MDD) one year later (Revised Child Anxiety and Depression Scale), controlling for baseline mental health.

Results: At baseline, most adolescents (84.7%) reported that "most" or "all" family members used their correct pronouns. Adolescents who reported correct pronoun use (vs. those who did not) were more likely to feel safe discussing mental health with parents or guardians (29.5% vs. 14.6%; p = 0.001). Correct pronoun use at baseline was associated with lower odds of GAD (OR = 0.52; 95% CI = 0.28, 0.99; p = 0.048) and MDD (OR = 0.45; 95% CI = 0.27, 0.77; p = 0.003) one year later.

Conclusion: Correct use of adolescents' pronouns by family members is associated with improved mental health among LGBTQ+ youth. Supporting families in affirming youths' gender identities, including through correct pronoun use, may represent an important intervention target.

LGBTQ+

Partner Proxy Reporting Congruency for Self-Rated Health: Variation by Couple Gender Composition Christopher Julian* Christopher Julian, Wendy Manning,

Health management within couples is rarely shared equally. In cis-different-gender couples, this labor falls largely on cis-women, likely shaping how well partners know one another's health. Same-gender couples tend to share this labor more equally, yet whether this translates into greater accuracy in proxy health reporting remains unknown. Drawing on a Gender as Relational framework, which posits that gendered health behaviors emerge from relational contexts rather than from gender alone, we examine proxy reporting congruence across four groups: men and women in cis-different-gender couples and men and women in cis-same-gender couples. Using dyadic data from the National Couples' Health and Time Study (NCHAT), a probability-based sample of coresidential adults aged 20–60 and their partners, we restrict our sample to cisgender couples. We examine whether a partner's proxy report matches, is near, or does not match their partner's self-rated health, and the direction of discordance, whether partners overestimated, underestimated, or matched their partner's self-report. Differences are estimated using multivariable multinomial logistic regression. Men in different-gender couples were more likely than all other groups to not match their partner's self-rated health and, when discordant, to overestimate it. These patterns suggest a relational rather than individual gender effect: unequal health labor in different-gender couples may leave men less attuned to their partners' health, whereas more equal sharing in same-gender couples may foster greater mutual awareness. These findings have implications for contexts where proxy reporting is common, including medical intake, insurance documentation, and health surveys. Systematic overestimation by men in different-gender couples could introduce a directional bias that obscures partners' health needs. Considering the couple's gender composition may therefore improve the interpretation of proxy-reported health data.

LGBTQ+

Cardiovascular Health by the Intersection of Race, Ethnicity, and Sexual Orientation
Christie Caruana* Christie Caruana,

Using National Health Interview Survey data, this study examines patterns of poor heart health along the intersection of sexual orientation and race/ethnicity. Poor heart health consists of any reported angina pectorals, coronary heart disease, high cholesterol, heart attack, or hypertension. Due to increased exposure to discrimination, we hypothesize that heart health outcomes will vary by the intersections of sexual orientation and race/ethnicity. Results find that heart health varies by the intersection of sexual orientation and race/ethnicity. First, we find that LGB respondents report higher odds of poor heart health than their straight counterparts. Second, we find a racial and ethnic variation in heart health, as supported by previous research. Specifically, Black respondents report higher odds of poor heart health compared to white respondents, with no statistical difference between white and Hispanic respondents. Third, we find that heart health varies by the intersection of sexual orientation and race/ethnicity, with white and Hispanic LGB groups report higher odds of poor heart health than their straight counterparts. However, poor heart health does not vary between Black straight and LGB respondents.

LGBTQ+

Impacts of systematic exclusions based on respondent gender, Washington State BRFSS, 2023-2025 Graham Crawbuck* Graham Crawbuck, Rachelle Martin, Brynn Stopczynski, Jessica Marcinkevage, Maayan Simckes,

BACKGROUND:

The Behavioral Risk Factor Surveillance System (BRFSS) is a health survey coordinated by the Centers for Disease Control and Prevention (CDC) and administered by the Washington State Department of Health (DOH). Individuals 18 or older who live in a private residence are eligible to participate. Prior to 2021, the survey excluded all individuals who do not self-describe as either male or female; CDC required states to return to this practice in 2025. During the 2023 and 2024 surveys, the BRFSS ascertained both gender identity (GI) and sex assigned at birth (SAAB) on the screener and included some respondents who did not identify with a binary gender.

METHODS:

To evaluate the impact of gender-based exclusions on survey representativeness over time, DOH analyzed data from two sources. First, we looked at the Washington BRFSS from 2023 through 2025. We identified individuals excluded during the screener and estimated the proportion of included survey respondents who reported a nonbinary GI. Second, we analyzed US Census Bureau Pulse Survey data to identify the proportion of US residents who identify with nonbinary genders.

RESULTS:

Of the 33,386 participants who began the 2023 BRFSS screener, 162 (0.5%) were excluded because of their GI and SAAB. A similar proportion was excluded in 2024, and in 2025, 208 out of 25,571 (0.8%) were excluded. Ninety-seven participants identified with a nonbinary GI in 2023 (weighted prevalence = 0.6%), and 119 did in 2024 (weighted prevalence = 0.8%). Findings from the Census Pulse Survey estimate that 1.7% of the nation self-identifies with a nonbinary GI.

CONCLUSION:

Findings indicate that many Washingtonians were excluded from participating in BRFSS based on their GI and SAAB and that Washington’s survey sample is less diverse than the nation. By changing the survey to allow nonbinary responses to the GI and SAAB screener question, Washington would mitigate selection bias and increase the survey’s representativeness.

LGBTQ+

Access to mental healthcare among transgender, non-binary, and gender-expansive adults by racially minoritized status and rurality Tai Simpson* Tai Simpson, Kaylee Wilson, Gabe Miller, Stephanie Hernandez,

Background: Mental health disparities among transgender, non-binary, and gender-expansive (TNBGE) adults are underexplored, particularly at the intersection of racially minoritized status and rurality. Examining access to mental healthcare related to gender identity (GI) and/or transitioning is crucial to understanding disparities.

Objective: To assess desire for and access to GI/transition-related mental healthcare among TNBGE adults by racially minoritized status and rurality.

Method: We used data from the 2022 United States Transgender Survey (n = 78,659). Using an intersectional framework, we created a composite variable combining racially minoritized status and rurality to examine how overlapping forms of marginalization shape health outcomes. Modified Poisson regression with robust error variance estimated associations between racially minoritized status-rurality and desiring and receiving counseling for GI and transitioning.

Results: The sample included 1.4% racially minoritized rural residents, 7.7% non-racially minoritized rural residents, 20.6% racially minoritized non-rural residents, and 70.3% non-racially minoritized non-rural residents. Desire for counseling did not differ significantly across groups. After adjusting for sociodemographic and socioeconomic factors, compared to non–racially minoritized non-rural residents all other groups were less likely to have received counseling (racially minoritized rural PR = 0.87, 95% CI: 0.81–0.92; non-racially minoritized rural PR = 0.88, 95% CI: 0.86–0.91; racially minoritized non-rural PR = 0.94, 95% CI: 0.93–0.96).

Conclusion: Despite similar desire for care, racially minoritized rural TNBGE adults had less access to GI/transition-related mental healthcare. These findings underscore the necessity of policies and interventions aimed at increasing access to care for TNBGE adults. Future research should examine specific barriers driving these inequities in GI/transition-related mental healthcare access.

Life-course/developmental

Modifiable risk factors for physical disability: A multidisciplinary view of themes Derek Hanson* Derek Hanson, Edwin McCulley, Makayla Smith, Tyanna Henry,

Question: What are established modifiable risk factors for physical disability across the multidisciplinary primary preventive health literature? **Introduction:** Health professionals across a spectrum of disciplines aim to practice primary prevention towards decreasing physical disability (PD.) Particularly due to the threat that PD poses towards overall health, lifespan and quality of life within the aging population. With new evidence constantly emerging and the wealth of literature that already exists highlighting potential modifiable risk factors for physical disability (MrF-PD), potential challenges may exist in synthesizing the breadth of knowledge into actionable interventions due to a variety of discipline-specific nuances. Additional inquiry into the complexities of these relationships may enhance the awareness of these challenges and the interdependent nature of many MrF-PD, as well as synthesize how MrF-PD may be integrated in each professional's role in care. **Methods:** This work is guided by the JBI scoping review framework, with anticipated results to be presented in accordance with the 2020 guidelines for reporting described in Preferred Reporting Items for Systematic Review and Meta-Analysis Extension for Scoping Reviews (PRISMA-ScR.) Our database search was carried out by two independent reviewers consisting of a three-step strategy of relevant databases (MEDLINE, CINAHL, Health Source, PEDro, and REHABDATA) utilizing the pre-designated search terms, with the terms and boolean operators refined during the process. Eligibility criteria includes sources that have established a relationship between a person-level measurable characteristic that is modifiable by changes in lifestyle behaviors and any of the International Classification of Functioning (ICF) or related terms used to categorize or describe PD. Studies to be excluded include participants who have a diagnosis or disease state that is not related to or is not altered by lifestyle modifications. Although we will report on both objective and subjective measures, we will not restrict the search by screening for any specific or category of outcome measure. **Results:** To date, we have found over 400 studies that meet the inclusion criteria to move to the final stage for data extraction to categorize, summarize, and bring forth with ~150-200 more under review. Strong themes have already emerged during our screening that align with our purpose, including muscle mass, physical activity levels, psychological profiles, social components, and secondary prevention efforts. **Discussion:** Based on the emerging themes of our search, we believe that this interdisciplinary work will provide a map and synthesis of evidence for modifiable risk factors for physical disability. Additionally, we believe that presenting and clarifying divergent terms used in classifying and measuring these factors will aid in identifying individuals at risk of PD and demonstrate utility for professionals in creating interventions to mitigate through primary prevention efforts. Finally, we also aim to present a framework for conceptualizing this body of knowledge that intends to introduce and discuss the concept of pre-disability, the idea that there is a period-of-time of subclinical changes associated with physical disability that are detectable, so that researchers and health-practitioners can continue to work towards the improvement of health for people who are at risk for these potentially negative outcomes.

Life-course/developmental

Life Course Trajectories of Depressive Symptomatology in the United States: Longitudinal Integrative Data Analysis of Large-Scale Population-Based Cohort Studies Man Zhang* Man Zhang,

Objectives: To provide one of the first comprehensive life course analysis of age-related changes in depressive symptomatology and social disparities therein in the general U.S. population.

Methods: I integrate and harmonize data across five large-scale, population-based cohort studies: the National Longitudinal Study of Adolescent to Adult Health (Waves I–VI), the National Longitudinal Survey of Youth 1979 Child and Young Adult (1994–2020), the Americans' Changing Lives Study (Waves I–VI), the National Survey of Midlife Development in the United States (Waves 2–3), and the Health and Retirement Study (1996–2022). These studies collectively cover most of the human life span from adolescence to late adulthood from age 11 through 90 years and older, offering far more extended coverage of developmental periods than any single study can allow. The analytic sample consists of 73,979 respondents and 371,241 person-year observations. Using moderated nonlinear factor analysis, I develop a commensurate measure of depressive symptomatology across contributing studies and individual characteristics. I estimate growth curve models to examine depressive symptom trajectories from adolescence to late adulthood and document variations in these trajectories by gender, race/ethnicity, and birth cohort.

Results: I expect to find significant age-related changes in both levels and rate of change in depressive symptomatology across the life course. I anticipate disparities in depressive symptom trajectories by gender, race/ethnicity, and birth cohort.

Discussion: This study demonstrates the utility of integrative data analysis as a novel data linkage approach to address fundamental data limitation in previous aging research and for studying mental health disparities across the life course. Findings will inform better timing of interventions to prevent depression progression and address detrimental social environments to mental health across diverse populations.

Mental health/function

Bridging Generations: Exploring Intergenerations Ideas of Racism, Trauma, and Mental Health in Asian American Families Audreana Truong* Audreana Truong, Jeanelle Daus, Megan Armstrong, Supriya Misra,

Introduction:

Asian American (AA) mental health is largely affected by experiences of racism and trauma, which only increased during the COVID-19 pandemic. While family can be a place of healing for some, the stigmatization of mental health within many AA communities can contribute to challenges.

Methods:

To explore cross-generational understandings of racism, trauma, and mental health we conducted 13 dyadic interviews (N=26) with AA young adults (18-35 years) and older adult family members. Participants shared baseline definitions of racism, trauma, and mental health, discussed connections, and reflected on generational perspectives. Pre/post-surveys were collected to assess changes in knowledge and comfort about racism, trauma, and mental health.

Results:

Thematic analysis finds that most participants have a basic understanding of racism, trauma, and mental health, but details vary. Racism was openly acknowledged as part of the AA experience, but personal accounts of trauma and mental health struggles were often downplayed in comparison to others. Family roles and cultural expectations influenced generational differences in strategies for coping with and discussing these issues. Although participants emphasized the importance of community connection for healing, they found it difficult to practice. Engaging in intergenerational dialogue in the interviews helped participants feel more comfortable within their families discussing these complex topics. Participants generally had a positive change in their post-survey responses.

Discussion:

Findings reveal a strong capacity for intergenerational care and understanding in willingness to engage in conversation. These findings can inform community-based interventions in diverse AA communities to build trust and increase communication to support cross-generational understanding about racism, trauma, and mental health to increase knowledge and comfort, reduce stigma, and bridge generational gaps within AA families.

Mental health/function

Prevalence of prenatal PTSD and co-occurring depressive symptoms among Black women: The role of adverse childhood experiences, sexual harassment and unwanted sexual contact across the lifecourse Sarah Haight* Sarah Haight, Dawn Misra, Reema Chande, Rosemary Adaji, Jaime Slaughter-Acey,

OBJECTIVE: Post-traumatic stress disorder (PTSD) during pregnancy may stem from traumatic experiences during childhood or adolescence. In a sample of post-delivery Black women, we investigate the prevalence of prenatal PTSD and co-occurring depressive symptoms and examine associations with adverse childhood experiences (ACEs), sexual harassment, and unwanted sexual contact.

METHODS: Data were from the LIFE-2 cohort of Black women delivering in Detroit (2023-2025). All measures were self-report: PTSD was considered 17 on the 6-item PTSD screener from DSM-5, elevated depressive symptoms were considered 10 on the 10-item Center for Epidemiologic Studies Depression Scale, and elevated ACEs were considered 4 on the ACE-10. Experiences of sexual harassment and unwanted sexual contact was assessed for past year, ever, and age at first occurrence; childhood was defined as <18. Modified Poisson regression produced prevalence ratios (PR) and 95% CIs for prenatal PTSD adjusting for age and education.

RESULTS: Among 519 Black women, 28% experienced prenatal PTSD and 68% of those had co-occurring elevated depressive symptoms. Women with prenatal PTSD were more likely to be younger and unmarried/not living with a partner. In adjusted models, 4 ACEs (PR: 2.7; 95% CI=2.0-3.7), sexual harassment in the past year (PR=1.8, 95% CI=1.2-2.9) and ever (PR=1.7, 95% CI=1.3-2.4), and unwanted sexual contact in the past year (PR=2.8, 95% CI=1.7-4.6), ever (PR=2.3, 95% CI: 1.7-3.1), and during childhood (PR=2.2, 95% CI=1.6-3.0) were all related to an increased likelihood of prenatal PTSD.

CONCLUSION: Among this sample of Black women at delivery hospitalization, 1 in 4 experienced prenatal PTSD and of those, nearly three quarters had co-occurring depressive symptoms. ACEs and experiences of sexual harassment or unwanted sexual contact were significantly related to prenatal PTSD. Findings support the use of trauma-informed care and performing validated PTSD screening in perinatal care settings.

Mental health/function

Does Religiosity Moderate the Association between Criminal Justice System Contact and Suicidality? Andrew London* Andrew London, Jong Hyun Jung, Alex Bierman,

This study focuses on encounters with the criminal justice system and suicidality (thought about, planned, attempted) among emerging adults (18-29 years old) using pooled data from the 2021-2023 National Survey of Drug Use and Health (NSDUH) (N=50,203). The NSDUH survey includes the following questions: “The next questions are about encounters with the police or the court system. Not counting minor traffic violations, have you ever been arrested and booked for breaking the law? Being “booked” means that you were taken into custody and processed by the police or by someone connected with the courts, even if you were then released.” This question is then repeated substituting “during the past 12 months” for “ever.” Our focal independent variable measures no, past, and recent (past 12 months) arrest/booking. Drawing on the stress process model, we specifically examine the extent to which religiosity (attendance, personal religiosity, friend religiosity) moderates associations between criminal justice contact and suicidality among emerging adults. Specifically, we test a stress-buffering hypothesis, which predicts that higher religiosity will weaken the consequences of being arrested/booked for suicidality, and a violation of moral worlds hypothesis, which predicts that higher religiosity will exacerbate the consequences of being arrested/booked for suicidality. To test these hypotheses, we estimate multivariable logistic regression models and examine average marginal effects (AMEs) and second differences in them. Preliminary analyses indicate some support for both hypotheses, conditional on which measures of religiosity and suicidality are used in the analysis. We are in the process of expanding the analysis to examine a three-way interaction with race. With a focus on young adulthood, results from this study will provide novel, population-representative evidence at the nexus of criminal justice system contact, religiosity, and suicidality.

Mental health/function

Associations of Violence Exposure and Psychological Traumatization with Healthcare and Police Trust Nisha Sen-Gupta* Nisha Sen-Gupta, Hannah Hamilton, Elizabeth Tung, Joyce Yang,

Objective: To examine associations between violence exposures, psychological traumatization, and institutional trust, focusing on healthcare and police systems.

Study Setting and Design: Cross-sectional survey data were collected from 504 adult primary care patients between June and December 2018. Clinics were located in two epicenters of violent crime in Chicago, Illinois.

Data Sources and Analytic Sample: We measured violence exposure using the Brief Trauma Questionnaire (BTQ), which distinguishes between having any exposure to violence versus traumatizing exposure to violence; we additionally analyzed traumatizing exposure in combination with a positive screen for Post-Traumatic Stress Disorder using the Primary Care PTSD screener. We modeled three exposure types (community violence, police violence, police stops) as independent functions of healthcare and police trust, adjusting for sociodemographic characteristics. Healthcare trust was measured via the Healthcare Relationship Trust Scale (11-55 points) and police trust was binary (no confidence vs. some or more confidence).

Principal Findings: In a sample of predominantly middle-aged and older Black adults, we found that exposures to traumatizing community violence or a traumatizing police stop (with or without PTSD) were associated with lower healthcare trust within the respectful communication domain. By contrast, non-traumatizing exposures were not associated with lower healthcare trust. Our study also demonstrated that all traumatizing police-related exposure types (both with or without PTSD), as well as police stops in general, were associated with lower police trust.

Conclusions: Our findings raise concern that psychological traumatization could be a key contributor to lower healthcare and police trust among patients in lower-income and racially minoritized urban communities with exposure to violence.

Keywords: community violence, traumatization, post-traumatic stress disorder, healthcare trust, police

Mental health/function

Title: Association between American Bar Association's Resolution 102 (2015) and mental health help-seeking among law students in the US. Jacob Extine* Jacob Extine, Parvati Singh,

Historically, admission to the practice of law in the US requires applicants to pass a "character and fitness" evaluation administered by state bar licensing authorities. These evaluations often include questionnaires assessing an applicant's mental health diagnoses or treatment history (as well as other fiscal and legal factors). Prior research indicates such questions discourage treatment-seeking among law students and early-career lawyers who may fear disclosure could jeopardize bar admission or employment. In response, the American Bar Association adopted Resolution 102 in August 2015, urging elimination of questions about mental health diagnoses or treatment in favor of focusing on conduct relevant to professional competence.

Despite the normative importance of this reform, little empirical work has examined whether the policy corresponded with increased mental health treatment utilization among law students. We examined whether Resolution 102 preceded increases in treatment seeking (therapy use) among law students relative to other students from 2007-2019. We utilized the Healthy Minds Network dataset, a nationally representative repeat cross-sectional bi-annual (Spring/Fall semesters per year) survey of US university/college students, that includes self-reported mental health indicators. We specified as our exposure, the timing of Resolution 102, i.e. Fall semester 2015 onward as a binary exposure (1 for post policy period, 0 otherwise). We specified the treated groups as law students (coded as 1) relative to controls (all other students, coded as 0) and conducted a difference-in-difference logistic regression analysis (controlling for age, gender, race, and socioeconomic status).Results show that resolution 102 corresponds with 19% increased odds (p: 0.036) for therapy service utilization in law students relative to others. This increase concentrates in year 2019 (OR: 1.35; p: 0.008), potentially indicating adoption lags.

Mental health/function

Associations between bullying, mental health, sexual risk behaviors, and weight control among adolescents in the United States: An analysis of 2023 Youth Risk Behavior Survey Data Frankie Greene* Frankie Greene, Mary Willis,

Background: Bullying is a pervasive stressor in U.S. schools, disproportionately affecting sexual and gender minority (SGM) youth. Less is known about how bullying shapes downstream health behaviors and how mental health impacts these pathways. This study examines whether bullying victimization (BV) is associated with control-seeking behaviors—specifically, sexual risk behaviors and attempted weight control—among adolescents, and whether poor mental health mediates these relationships.

Methods: We analyzed 2023 Centers for Disease Control and Prevention Youth Risk Behavior Survey data from 5,420 U.S. high school students who reported ever having sex. BV (binary, past 12 months) was modeled as the primary exposure. Outcomes were a summed sexual risk behavior score (condom non-use, birth control non-use, and substance use at last intercourse) and current attempts to lose weight (binary). Poor mental health was evaluated as a mediator (binary, most/all or none/a few of past 30 days). We used linear regression models to estimate beta coefficients (β) and 95% confidence intervals (CI), adjusted for age and sex and stratified by SGM status. We used causal mediation to calculate the natural indirect effects (NIE) of poor mental health on bullying-sexual risk behavior and bullying-weight control associations.

Results: BV was positively associated with greater sexual risk-taking (β: 0.17, 95% CI: 0.11, 0.22) and attempting weight loss (β: 0.09, 95% CI: 0.06, 0.12). Both associations were stronger among SGM youth. Poor mental health mediated 30.9% of the BV-sexual risk behavior association (NIE odds ratio (OR): 1.09, 95% CI: 1.03, 1.15) and 15.1% of the BV-weight control association (NIE OR: 1.05, 95% CI: 1.00, 1.10).

Discussion: These findings highlight bullying victimization as a structural driver of adolescent health risk behaviors and identify mental health as a key mechanism, particularly for SGM adolescents.

Mental health/function

The Explanatory Role of Individual- and State-Level Employment-Related Factors in Later Life Cognitive Function Megan Reynolds* Megan Reynolds, Max Coleman, Siwei Li,

This study investigates how micro- and macro-level employment-related factors experiences shape later-life cognitive health and contribute to educational disparities in dementia risk. Using nationally representative data from the Panel Study of Income Dynamics (1997–2023), we construct detailed occupational histories to measure individual-level work characteristics both observed (i.e., occupational complexity) and suspected (e.g., work-related stress) to influence dementia risk. We then link these to validated indicators of cognitive function among older adults. We further examine how state-level labor market institutions—minimum wage, unionization, and unemployment insurance—moderate the relationship between individual-level work characteristics and cognition. By linking comprehensive individual work histories with broader state labor market contexts, this project shows how employment-related factors can act both as a stressor and a protective resource. Anticipated results can be used to identify modifiable risk factors and interventions to enrich work environment, improve cognitive health, and reduce the burden of Alzheimer’s disease and related dementias.

Mental health/function

Association between Social Networks Property and Suicide Ideation in Late Adulthood: A Panel Study Kwanghyun Kim* Kwanghyun Kim, Doo Woong Lee,

Introduction: This study aims to investigate how quantitative and qualitative aspects of social networks and social participation are associated with suicide ideation in late adulthood.

Methods: Health and Retirement Survey (HRS) data products from 2008 to 2022 were used for the analysis. Social networks with spouses/partners, children, other family members, and friends were assessed through questionnaires. Subjective loneliness was measured by the 11-item UCLA Loneliness Scale. Suicide ideation was evaluated by the Composite International Diagnostic Interview (CIDI) Major Depression Module. Social participation was assessed by questions focusing on the frequency of participation. Generalized estimating equations (GEE) modeling was used to investigate the longitudinal association between social networks and suicide ideation.

Results: Subjective loneliness was positively associated with suicide ideation (OR per 1pt = 1.07, 95% UI 1.03 – 1.10). Subjective sense of control over health was negatively associated with suicide ideation (OR per 1pt = 0.90, 95% UI 0.86 – 0.95). Social networks with family and friends did not show significant association between suicide ideations. Social participation was negatively associated with suicide risk (OR per 1pt = 0.74, 95% UI 0.59 – 0.92). Charity/volunteer was significantly associated with suicide risk (OR per 1pt = 0.85, 95% CI 0.72 – 0.99) while education/training and club/organization activity were not.

Discussion: Subjective loneliness was associated with suicide ideation in late adulthood. Social networks with family and friends did not show significant association between suicide ideation. Elderly engaging with charity or volunteering had lower odds of having suicidal ideation.

Methodological approaches to studying public health

Measuring the quality of mortality data in high-income settings Amy Mann* Amy Mann, Mathew Kiang, Monica Alexander,

Objectives: Cause-of-death data underpin public health surveillance, yet few tools quantify mortality data quality in high-income countries at a subnational level. We develop two metrics to measure mortality data quality and apply them to U.S. county mortality from 1999-2022.

Methods: We construct a Re-assignability Index (RI) that quantifies how confidently multiple-cause information can reclassify garbage-coded deaths into meaningful cause groups. We then define a standardized level-of-detail metric using entropy methods to measure coding diversity after accounting for differences in the underlying cause-of-death mix. We also estimate the proportion of deaths with garbage-coded underlying causes and combine these measures into an aggregate data quality index.

Results: Garbage coding declined nationally through 2019 but rose during the COVID-19 pandemic. Coding detail increased steadily, while RI declined modestly, consistent with growing cause-of-death diversity. All dimensions show persistent geographic inequalities, with lower-income counties exhibiting poorer data quality.

Conclusions: U.S. mortality data quality is multidimensional, geographically uneven, and systematically worse in socioeconomically disadvantaged areas. This framework enables scalable monitoring of subnational reporting quality and supports targeted investments to strengthen death certification and public health surveillance.

Methodological approaches to studying public health

Human Mobility and COVID-19: a Link Prediction-based approach and a Case Study for New York State Jie He* Jie He,

Human mobility plays a vital role in spreading infectious diseases. Researchers used human mobility data to investigate disease transmission patterns. Lessani showed that there was a strong association between human mobility and spread [1]. Although researchers have already tried integrating network analysis and machine learning in this research area, utilizing link prediction methods on human mobility data for spread prediction has not been fully explored. In this study, I focused on county-to-county interactions and migration flows in the human mobility network (SafeGraph Neighborhood Patterns dataset). I used link prediction scores from modified Weighted Preferential Attachment as indicators to predict county-level COVID-19 cases for New York State (statewide testing data from the government of the state of New York for overall cases) with statistics and machine learning. This has not been done by previous research. I performed two different prediction tasks: 1) using one 62×1 vector involving scores of 62 counties from a single month to predict another 62×1 vector involving COVID-19 cases from the next month; 2) using fifteen 62×62 matrices involving scores representing county-to-county connections from fifteen months (from March 2020 to May 2021) to predict fifteen 62×1 vectors involving COVID-19 cases from the corresponding next months. In the first task, I ran models like XGBoost, Random Forest, Support Vector Regression, and Ordinary Least Squares with three different types of inputs: Personalized PageRank scores (PPR), link prediction scores (aggregated), and the exact numbers of people moving between counties (aggregated). Though all three inputs were strongly positively correlated with the overall cases based on Spearman’s rank correlation, the results showed that link prediction scores and the exact numbers performed similarly and both outperformed PPR according to the best outputs of each. Results were compared based on R-squared and Mean Absolute Percentage Error with 5-fold Cross-Validation. In the second task (spatiotemporal), I applied models like Graph Convolutional Network, hybrid model with CNN and LSTM, Random Forest, Gaussian Process, and Vector Autoregression with two different types of inputs: link prediction scores and the exact numbers of people. The results showed that the former performed better than the latter across different models. Results were compared based on R-squared and Mean Absolute Percentage Error with Walk-Forward Cross-Validation. The other part of this study is to assess Machine Learning-based variant prediction models for New York State (NYS). This has not been fully tested by previous research. I used the testing data from GISAID database for variant-specific cases and a modified network which combined 5 counties into New York City. I employed various types of Zero-Inflated models (Logistic Regression + XGB; Logistic Regression + Random Forest; Logistic Regression + SVR; Logistic Regression + Linear Regression; Zero-Inflated Negative Binomial Regression) for prediction tasks and compared results based on Mean Absolute Error with 5-fold Cross-Validation. In general, my work showed that link prediction scores can be used as indicators for COVID-19 prediction and performed both overall and variant-specific predictions with NYS data. My work used network science and machine learning methods to solve real-world problems in public health.

[1] M Naser Lessani, Zhenlong Li, Fengrui Jing, Shan Qiao, Jiajia Zhang, Bankole Olatosi, and Xiaoming Li. Human mobility and the infectious disease transmission: a systematic review. Geo-Spatial Information Science, 27(6):1824–1851, 2024.

Methodological approaches to studying public health

Risk and Resilience: Measuring Acculturation and Cardiometabolic Disease Risk in South Asian Americans Preethi Saravanan* Preethi Saravanan, Khushi Chopra, Rohan Patel,

South Asian (SA) immigrants experience a 2-3-fold higher risk and earlier onset of cardiometabolic disease (CMD) compared to U.S. whites, and have a higher prevalence of CMD risk factors than other racial/ethnic minorities in the U.S. Acculturation strategy, or the negotiation of beliefs, behaviors, and norms from host and heritage cultures, impacts health through dimensions such as diet, stress, and social support. However, little is known about these dimensions and pre-disease pathways among second-generation South Asians who inherit multiple cultures, risk exposures, and health discourses. This study uses an acculturation framework and biocultural approach to understand how South Asians navigate food, friends, and other dimensions of acculturation and how this impacts their cardiometabolic disease risk. We developed and validated an acculturation scale Asians using semi-structured interviews and cognitive anthropology methods to identify dimensions of acculturation (social networks, food, identity, stress, cultural competence, and language preference) that are relevant for health and identity among second-generation South. External validity was measured against cardiometabolic health, using physiological markers including BMI, waist circumference, blood pressure, lipids, and HbA1c. We used a latent class analysis to create two cardiometabolic risk profiles, and regression analysis to examine the relationship between acculturation strategy and cardiometabolic risk. This mixed methods research offers new insights into both the risk profiles and acculturation experiences of U.S.-born South Asians, providing points of intervention such as diet and social support to improve prevention and treatment of cardiometabolic disease in this high-risk population.

Methodological approaches to studying public health

Reimagining workforce research through community engagement: Insights from New York State's first CHW landscape study Meghan Armocida* Meghan Armocida, Karina Liberata, Kayla Fennelly, Azul Savid, Amy Freeman,

Community Health Workers (CHWs) play an increasingly important role in addressing social drivers of health for diverse populations by helping to navigate healthcare and social services. Despite their documented effectiveness on a range of health-related outcomes, a full picture of the New York State (NYS) CHW workforce remains unclear, restricting efforts to inform workforce policy and best practices. This presentation will discuss community-engaged methods used to develop and implement NYS's first CHW workforce landscape study, with the goal of strengthening academic-community collaboration, improving measurement, and optimizing CHW workforce advocacy efforts. Methods include integrating a CHW into the research team and establishing both a Project Advisory Board (PAB) and Community Advisory Board (CAB). The CHW-researcher contributes their first-hand experience of patient-facing work to co-develop study materials, support facilitation of advisory boards, conduct bilingual interviews with CHW participants, and disseminate findings. The PAB, a smaller group of five CHWs and five employers, meets regularly to provide in-depth insight on study materials and ensure appropriateness for CHW and CHW employer populations, including refining instruments and informing recruitment strategies. The CAB, a 25-member group of NYS CHWs, employers, and workforce leaders, guides research priorities, leads dissemination of findings, and fosters connection with one another to break down organizational silos and strengthen communication across regions and settings. Taken together, this community-engaged approach improves the rigor of study findings and ensures data can accurately drive policy and practice. In the context of historical mistrust toward academic institutions, this approach demonstrates how community-engaged methods reinforce lived experience as an integral part of actionable research and can be applied across contexts.

Methodological approaches to studying public health

Building a Data Science Community of Practice to Strengthen Social Determinants of Health Data in Sub-Saharan Africa Jessica Gjonaj* Jessica Gjonaj, Felix Emeka Anyiam, Ngeresa Antony Osango, Richard Mugo, Peace Aber, Jasmit Shah, Rajesh Vedanthan, Joseph Hogan, Ann Mwang, Rumi Chunara,

Background: Social determinants of health (SDOH) function across economic, social, and economic domains, accounting for up to 50% of variation in health outcomes.1 Despite their influence, integrating SDOH in health analytic models remains a challenge particularly in Sub-Sahran Africa (SSA) where it can be difficult to robustly collect context-specific data due to variations in data types, fragmentation, or inconsistent reporting. Increasing efforts to identify and integrate SDOH data, particularly in this region, is crucial in advancing public health research.2

Methods: Leveraging the NYU-Moi Data Science for Social Determinants Training Program and NIH DS-I Africa Network, a Data Science for Social Determinants Community of Practice (DSSD CoP) was formed to systematically address gaps in the identification and measurement of SDOH data in SSA. The CoP has identified two initial activities. The first is a scoping review to systematically map the types of data used to operationalize SDOH in SSA research and identify trends and gaps in measurement and reporting. The second is a data indexing group working towards creating a structured, searchable repository of SSA SDOH data sources derived from existing studies and surveys.

Results: The recent publication of the scoping review protocol highlight the novelty of this effort which is currently in the first phase of abstract screening.3 In parallel, the SDOH index has already identified 26 datasets that capture key SDOH data across Kenya (18), Uganda (2), Rwanda (1), Ghana (1), Sierra Leone (1), South Africa (1), Ethiopia (1), and Nigeria (1). The group aims to expand dissemination of this index form to gather more information on the current state of SDOH data in the region.

Conclusion: The CoP is a scalable initiative for advancing collaborative infrastructure and data science capacity to enhance the impact of SDOH research in public health. We already have early indication from CoP efforts that the focus on SSA allows for unique exploration of how social determinants interact with health outcomes in a specific context, which is crucial for accounting for SDOH data alongside health burdens across the region.

Methodological approaches to studying public health

Protective for Some, Risky for Others: How Gender and Ethnicity Shape Mental Health Outcomes for International Migrants Aryaa Rajouria* Aryaa Rajouria,

International migration has complex and uneven consequences for migrant mental health. These consequences remain poorly understood, particularly in the Global South. This paper examines how migration experience, ethno-caste identity, and gender intersect to shape mental health outcomes among international migrants. Drawing on longitudinal data from the Chitwan Valley Family Study (2009-2016) in Nepal and using gender-stratified event history models and logistic regression with interaction terms, the study reveals that international migrant's mental health impacts vary dramatically across intersectional positions.

Results show that international migration is particularly protective for Brahmin/Chhetri males (traditionally high-caste), Dalit males and females (historically marginalized), and Newari females (upper caste), while serving as a risk factor for Terai Janajati males and females (lowland indigenous groups).These patterns show three key dynamics: (1) pre-existing social advantages translate into protective migration pathways; (2) international migration enables some marginalized groups to escape place-based discrimination; and (3) gender shapes outcomes differently within ethno-caste groups, creating extreme vulnerability at certain intersections.

This study demonstrates that aggregate analyses of migration and mental health obscures critical variation, requiring intersectional approaches. For policy, findings reveal the need for targeted interventions recognizing differential vulnerabilities rather than treating migrants as homogeneous. Nepal's rapid growth in circular labor migration makes it a critical case for understanding these dynamics in Global South contexts.

Mortality

A New Approach to Explaining the Growing Disparities in Mortality Between U.S. Counties
Iliya Gutin* Iliya Gutin, Emily Wiemers, Jennifer Karas Montez, Shannon Monnat, Douglas Wolf,

Working-age mortality in the United States is high, rising, and increasingly differ across counties. Recent efforts to explain the growing disparities in mortality between counties tend to investigate contexts such as state policies and county economic conditions but (a) tend to examine either states or counties, (b) implicitly assume that the contexts that affect mortality rates also affect growing disparities in the rates, and (c) exclude years 2020 and beyond. This study advances understanding of the growing disparities by using data from 1990 to 2024 and kernel reweighting method (DiNardo, Fortin, & Lemieux, 1996, Lemieux 2006) to identify which county and state contexts explain the growing disparities in wages. Our descriptive analyses show that low-mortality counties have diverged from average-mortality counties and that high-mortality counties have diverged from average-mortality counties. This indicates that the explanations for the growing disparities are not simply a deterioration of social safety nets, as sometimes hypothesized in the literature. Descriptive analyses also show that the COVID-19 pandemic greatly exacerbated the divergence of high-mortality counties from average-mortality counties, and that divergence shows no signs of slowing. To explain the growing divergence, including these intriguing patterns, we will use the decomposition approach to identify which state and county contexts are primarily responsible. We will include 20 state and county contexts, such as minimum wage level and share of college graduates, respectively, to the growing disparities.

Mortality

Why is the US health decline not discussed in the United States? Stephen Bezruchka*
Stephen Bezruchka,

In the 1950s the United States of America ranked among the top ten nations in terms of mortality measrues of health incluidng leading the world in some. Since then many other countries have seen greater declines in morality and consequent improvements in health. Today the U.S. ranks behind all the other rich nations and an increasing number of poorer ones in health outcomes despite spending a vast sum on healthcare. While there are no contradictions to these health measures, it remains unknown to most Americans, nor taught in schools, and not discussed by politicians. Possible reasons why are explored.

Non-health institutions (business, political, education systems)

Examining the Gendered Relationship Between Adverse Childhood Experiences (ACES), Upward Mobility and Mental Health Kimberly Narain* Kimberly Narain, Rebecca Dudovitz, Nicholas Jackson, Mitchell Wong,

Research Objective: To examine the relationship of upward mobility to mental health, across ACES and gender

Study Design: We analyzed data from a natural experiment of low-income students in Los Angeles who were offered entrance to high-performing charter high schools via a random lottery in 2013. We compared lottery winners to wait-listed students, reducing selection bias. Self-reported mental health (self-efficacy, hopelessness, depression, and stress across life domains (home, school, romantic, peers, money, balancing and future)) were collected using validated measures annually (9th-12th grade) and at age 20 years except for the stress measures which were not captured in the 12th grade. ACES were assessed at age 18-19 via a 10-item scale. ACE counts were dichotomized as high (>=4) vs. low-to-moderate (<4)). We conducted gender-stratified mixed effects models with person random intercept and clustered robust standard errors for school ID, with time, ACEs, high-performing school status, and their three-way interaction specified as fixed effects. Models controlled for individual and parental-level demographics. The p-value was <.05. We present our results comparing the change from baseline to 20 years old.

Population Studied: 944 (522 female and 422 male) primarily Hispanic students

Principle Findings: There was a significant three-way interaction such that males in low performing schools had higher stress (at home, romantic, and at school) when exposed to high vs. low ACEs and the effect of high ACEs on these outcomes increased over time, relative to those in high-performing schools. For females, the significant interaction indicated that high vs. low ACEs exposure worsened self-efficacy, which was amplified over time, for those in high-performing compared to low-performing schools.

Implications for Practice or Policy: High-performing schools lessened the impact of high ACEs on mental health among boys but not girls and we need to investigate why.

Place/Communities

Affective Political Polarization and Physical and Mental Health among U.S. Adults Spencer Allen* Spencer Allen,

Past research has found that certain types of political polarization are linked to worse health outcomes. Among different types of political polarization, less attention has been paid to the role that affective polarization — the strong hatred or dislike that partisans in one party have towards the other — plays in shaping population health outcomes. In this project, I plan to use over 50 years of the General Social Survey to answer three questions. First, how does community political orientation (the partisan lean of a neighborhood) shape individual health? Second, does community political mismatch (living in a community whose political orientation differs from your own) shape individual health separately from the political orientation of one's neighborhood? Third, have these trends changed over time as political polarization has increased in the U.S.? To answer these questions, I will use GSS' restricted state and county geocodes to link GSS respondents to election return data from Dave Leip's Atlas of U.S. Presidential Elections and sociodemographic data from the U.S. Census and the American Community Survey. With these data, I will use longitudinal modeling to analyze and report findings.

Place/Communities

From Hood to Woods: BIPOC Youth Co-Led Participatory Dissemination to Rebuild Trust in Population Health Research R. David Rebanal* Shaina Sta. Cruz, Alaina Moguel, Evelyn Garcia, Jessi Jeronimo Ruiz, Shaina Sta. Cruz,

How can population health researchers rebuild trust with communities most harmed by scientific neglect? The Hood 2 Woods study addresses this by centering Black, Indigenous, and People of Color (BIPOC) transitional-aged youth (18–26) as co-leaders in how research is produced, analyzed, and shared.

The purpose of the study is to examine the benefits of nature walks and the reduction of stress experienced by BIPOC youth in the San Francisco Bay Area. Aim 1, which is described in a separate abstract, tests this through a 9-month intervention involving guided nature walks, wearable health monitoring, and telomere length measurement. This presentation focuses on Aim 2: a photovoice project grounded in Public Health Critical Race Praxis that engaged the same youth cohorts to document, analyze, and disseminate their experiences of healing in nature — informing community- and policy-level action. Participants worked with a Curandera, a practitioner of ancestral natural medicine, to deepen their connection to indigenous and healing-based practices in nature, grounding the research process itself in cultural reclamation.

Across five cohorts, participants used photography and the SHOWeD method, co-developed the analytic codebook, and participated in thematic analysis. Preliminary results highlight five themes: nature as community space, nature as accessible and proximate, physical environments as gatekeepers, economic barriers and exclusionary fees, and disparate investment reflecting environmental racism.

Dissemination was itself a decolonial act: youth co-decided how findings were shared through a community exhibit featuring audio QR codes, photo credits, and a youth-led panel. One participant reflected: “The process of photovoice has been healing in and of itself.”

This presentation offers a replicable model and key lessons for population health researchers committed to epistemic justice and community trust.

Place/Communities

Highway displacement and mortality: impacts of the “Tucson Limited Access Highway” Rae Anne Martinez* Rae Anne Martinez, Andrew Fenelon, David Van Riper,

In the post WWII era, the US increasingly invested in highways as an essential piece of infrastructure. Often, these highways were built through cities, leading to displacement of residents whose homes were demolished and potentially disrupting social and material resources needed for health. Here, we examine the construction of the “Tucson Limited Access Highway” in AZ to conduct an individual-level investigation of the relationship between displacement and mortality (age at death), as well as to investigate the change in neighborhood quality following displacement. Using full count 1940 census and other historical sources, we identified individuals displaced by highway construction and created a propensity score-matched comparison population. For PS-matching, logistic regression was used to estimate the odds of displacement based on Hispanic surname, race, education, age, nativity, individual income/wages, and home ownership. Matches were made using the nearest neighbor method without replacement until a sample of 3:1 (unexposed:exposed) was generated (N=1960). We then used extant linkage files from the IPUMS Multigenerational Longitudinal Panel to link individuals from the full-count 1940 census to the Social Security Administration Numident file. However, individuals who are Hispanic, immigrant, and women (key characteristics of our study population) are less likely to have been linked between data sources. Thus, we developed a standardized, two-step process for collecting mortality data for those not linked, leveraging publicly available death certificates and gravesite/cemetery data. At present, we have completed 95% of the mortality data collection. Once done, we will conduct descriptive analysis to assess differences in demographic characteristics between groups and use linear regression to estimate age at death by displacement status. For displaced individuals, we will also descriptively examine change in neighborhood characteristics and distance of move.

Place/Communities

The Role of Community Gardens in Promoting Food Security, Health, Well-being, and Connectedness Sooyoun Park* Sooyoun Park,

Food injustice is a profound issue impacting the health and well-being of people and the environment. Communities all over the world have long advocated for food sovereignty and food justice frameworks, which emphasize relationality, sustainability, and self-determination. Community gardens may be one space that represents a unique intersection of these values. Research demonstrates that community gardens not only increase access to fresh produce and improve dietary outcomes, but also foster social cohesion and strengthen community connectedness. To further understand these interconnected outcomes, this study examines how three community gardens in the region practice food justice and sovereignty principles, while also contributing to health, well-being, and connectedness to land and place. Using qualitative research methods of focus groups and interviews, I explore how community garden staff conceptualize food sovereignty and justice principles in the current context, and how participants in community gardens understand and experience health, wellbeing, and connectedness to land and place through growing food. By uplifting community knowledge and expertise, this work may illuminate how community gardens can help us reimagine more relational, healing, and sustainable food systems, and build resilience during times of crisis.

Place/Communities

Reimagining Population Health Science through Engaging Web Apps and Community Perspectives Babu Gounder* Babu Gounder, Christine Da Rosa, Seongha Cho, Argentina Coy,

Background: Community workers understand the health of populations they serve but lack accessible structural determinants of health data for local action. This study aims to reimagine health science through an engagement project that pilots a Community Environmental Health Data Access and Research web app (CEHDAR) and explores research questions by asking community workers their perspectives on the usability and trustworthiness of 1) public health data, 2) the CEHDAR app, and 3) the app's relevance to their work. **Methods**: Using a SDOH & Place toolkit with human-centered design principles, we developed our CEHDAR app with user transparency, legibility, and agency in mind. The app features publicly available Illinois census-tract data on health outcomes, demographics, healthcare, and environmental exposures. We obtained IRB approval for small focus groups to explore our questions with community workers recruited by convenience sampling. **Results**: Our app visually mapped data, explained sources, and converted measures into legible numbers (e.g., polluted days above WHO limits instead of PM2.5 concentrations). It incorporated user-interactivity, such as location search, data variable selection, and area comparisons. Thematic analysis of initial focus groups (N=8) of social workers, educators and activists revealed challenges in finding data to use and trust (e.g., data ownership and motives). Enthusiasm was expressed for the CEHDAR app's transparent, comprehendible, and interactive display of multiple data points. They noted that the app informs relevant health vulnerability dimensions for their work (e.g., help in areas with low private health insurance coverage or potential lead exposure). **Conclusion**: This study provides initial evidence for disseminating data in engaging and influential ways that can be translated into meaningful local efforts. Human-centered health data apps offer a path to (re)build community trust as disparities widen for underserved populations.

Place/Communities

Health Profiles of Children in Immigrant Families: Insights from a U.S. Nationally Representative Survey Oksana Kutsa* Oksana Kutsa, Hannah Piscalko, Sarah E. Anderson,

Background: In the U.S, one in four children lives with a foreign-born caregiver. Nationally representative studies of their health are limited and largely pre-COVID, but existing studies suggest that children in immigrant families (CIF) may have lower rates of chronic conditions despite socioeconomic and healthcare disparities.

Methods: Using 2021–2022 National Survey of Children's Health (NSCH) data, we examined sociodemographics, health conditions, insurance, and preventive care among CIF. Households with children (<18 y) were contacted by mail and randomly selected for the survey (completed by web or mail). NSCH oversampled ages 0–5 and children with special health care needs, and survey weights yield nationally representative estimates. CIF were defined as children born outside the U.S. or living with ≥1 foreign-born caregiver and compared to children in non-immigrant families.

Results: CIF account for 29.7% of U.S. children (95% CI: 29.0–30.4), including 3.0% who live with a non-parent caregiver such as a grandparent, foster parent, or other relative. Compared to children in non-immigrant families, CIF were more likely to live with two married caregivers (69.5% vs 67.2%) but less likely to have a caregiver with a college degree (46.1% vs 57.4%) or employed full-time (86.2% vs 89.4%). CIF were more likely to live below the federal poverty level (24.0% vs 15.4%), and less likely to have chronic health conditions (69.4% vs 58.0%). Prevalence of allergies (14.2% vs 22.5%), asthma (4.4% vs 7.2%), depression (2.5% vs 5.0%), and behavioral problems (4.4% vs 8.1%) was also lower among CIF. CIF were more likely to be told they were overweight (10.1% vs 6.8%), lack health insurance (9.6% vs 5.2%), and have had no preventive medical visit in the past year (28.9% vs 19.7%).

Conclusions: CIF show strong overall health, but socioeconomic, insurance, and preventive healthcare gaps remain. Further analyses will examine disparities and health outcomes in this key population.

Place/Communities

Latino/a Early Childhood Health across Destinations Elizabeth Ackert* Elizabeth Ackert, Gabrielle Husted, Matthew Snidal, Robert Crosnoe,

The Latino/a population in the U.S. stands out for its advantaged health outcomes amidst extensive disadvantages. However, this “Hispanic health paradox” does not extend to the critical developmental period of early childhood beyond infant birthweight and mortality, and Latino/a children face several health access barriers. This research addresses potential geographic variability in Latino/a early childhood health by focusing on Latino/a “destinations”—communities with different histories of Latino/a immigration and population growth. Our study uses restricted-use National Health Interview Survey (NHIS) data from 2010 to 2018 to investigate differences in 22 early childhood health outcomes among Latino/a children ages 0-5 across three types of U.S. counties: New destinations, established destinations, and other destinations. Descriptive results show few significant differences in the 22 focal health outcomes among Latino/a children across new versus established destinations, with mixed results for preventive care differences. Compared to Latino/a children in established destinations, those in new destinations are more likely to receive flu vaccinations in the past year, but less likely to have ever seen a dentist. There are several significant differences in health outcomes among Latino/a children living in other versus established destinations, but these results are also mixed. In other destinations versus established destinations, Latino/a children are more disadvantaged for ever visiting a dentist and ever having asthma, but advantaged in health insurance coverage, visiting the doctor for a checkup in the last year, receiving a flu vaccination in the last year, and for rates of low birthweight. Our future work will adjust these results for observable background factors and examine disparities with Whites in these outcomes within and across destinations.

Place/Communities

Neighborhood Context and Physical Disability: Preliminary Results from a Systematic Review Laura Stoff* Laura Stoff, Lauren Love Pieczykolan, Nicole Theis-Mahon, Carrie Henning-Smith, Theresa Osypuk,

An estimated 16% of the global population and 29% of people in the United States live with a physical disability, commonly conceptualized as limitations in activities of daily living (ADLs) and instrumental ADLs (IADLs). While neighborhood disadvantage is a well-established risk factor for chronic disease, less research focuses on its relationship with disability. Neighborhood may play a role in the development or progression of disability through mechanisms that are different from those that explain its relationship with other health outcomes. This study aims to examine how neighborhood contexts are associated with ADL/IADL disability among community-dwelling adults.

We conducted a systematic review to identify and synthesize evidence on area-level neighborhood characteristics—including socioeconomic context, social context (e.g., cohesion, safety), and built/physical environment (e.g., walkability, transit access)—associated with ADL/IADL disability outcomes. Eligible studies included peer-reviewed observational and quasi-experimental designs of adults (≥18 years) in community settings worldwide, with individual-level ADL/IADL outcomes. Two reviewers independently screened articles, extracted information, and assessed risk of bias.

Preliminary findings indicate that most studies report neighborhood disadvantage is associated with increased risk or burden of disability. However, there is heterogeneity across studies in how both neighborhood context and disability are operationalized, including variation in geographic scale, use of subjective vs. objective measures, and measures included in ADL/IADL instruments. This presentation will synthesize these findings by summarizing patterns across studies, highlighting key measurement differences, and discussing implications for future research on neighborhood context and disability, in order to reimagine challenges for population health science.

Place/Communities

Legacies of Exclusion: A Case Study of Historical Sundown Practices, Demographic Change, and Health Equity in Elkhart County, Indiana Anna Shetler* Anna Shetler,

This mixed-methods project examines how the historical sundown practices of Goshen—a city in Elkhart County, Indiana—have shaped county health outcomes and racial-ethnic settlement patterns, particularly recent Latine immigration. Within Elkhart County, there are two core cities: Goshen and Elkhart. These two adjacent cities provide a rare paired case study as they are similar in size and economic history yet shaped by dramatically different racial inclusion practices. This project offers insight into how historical racist exclusionary practices influence present-day demographic composition, segregation, and health disparities.

We ask: (1) how have Goshen's historical sundown practices shaped its current racial-ethnic composition, and how does this compare to nearby Elkhart? (2) How do these historical practices and demographic patterns relate to present-day population health indicators? (3) How do residents and community leaders understand and interpret the connections between Goshen's history, demographic change, and community well-being?

We have funding to conduct both the qualitative and quantitative components during the summer of 2026. We will conduct archival research on Goshen's sundown history and interview local residents, historians, and leaders in Elkhart County. We will analyze demographic and health data from Census and CDC PLACES. We will map racial-ethnic composition and segregation over time and link these patterns to health indicators.

This project will illustrate how legacies of exclusion shape contemporary community well-being, an essential step toward addressing structural determinants of health inequities. The findings may contribute to conversations in Elkhart County about inclusion and housing as well as how American cities remember – and move beyond – their past. Our presentation at IAPHS will include quantitative maps and analyses as well as qualitative summaries of archival and interview findings.

Policy

The Buffering Effects of Generous Unemployment Benefits on the Association between Job Loss and Mental Health Megan Reynolds* Megan Reynolds, Ashley Fox,

A substantial body of research demonstrates that job loss is strongly associated with declines in mental health. Several systematic reviews and meta-analyses of the literature have been written on this association (McKee-Ryan et al, 2005; Paul & Moser, 2009; Milner, Page, & LaMontagne, 2014; Virgolino et al, 2022; Gedikli, 2023; Picchio & Ubaldi, 2024; Sterud et al 2025). Overall, studies show higher levels of depressive symptoms, anxiety, and psychosomatic complaints among unemployed individuals compared to the employed (Paul & Moser, 2009). Two central debates concern whether the relationship reflects a causal effect of job loss on mental health or whether this relationship reflects reverse causality (people with mental illness being more likely to lose jobs) and what mechanisms and contexts moderate this association (Agerbo et al, 2010). Quasi-experimental studies using plant closures, mass layoffs, and administrative records have largely resolved that there is a causal effect of job loss on mental health. For example, Sullivan and von Wachter (2009) showed that U.S. workers displaced by plant closings faced increased mortality risks, especially from suicide and stress-related conditions, persisting for decades. Similarly, research links job loss to greater use of psychotropic medication, higher rates of hospital admissions, and persistent depressive symptoms (Brand, 2015). These studies underscore that job loss is not merely an economic event but a profound health shock. Several mechanisms explain this relationship. The most direct is financial strain: unemployment reduces income, increases debt risk, and limits access to health care (Price, Choi, Vinokur, 2002). Work also provides social integration, daily structure, and personal identity; its loss can lead to isolation, reduced self-esteem, and chronic stress (McKee-Ryan et al, 2005). Repeated failed job searches amplify uncertainty and can foster hopelessness (Price et al, 2002).

With regard to the question of mechanisms and contexts that moderate the job loss-mental health association, significantly fewer studies examine potential buffers against the negative impacts of unemployment on mental health. Many of the studies that do exist investigate country-level difference in **unemployment insurance (UI)** and how modifies the effects of job loss on mental health. These cross-national comparisons show that generous UI, active labor market policies, and universal health care reduce the mental-health burden of job loss (Paul & Moser, 2009; Brand, 2015). Conversely, austerity measures and weak safety nets exacerbate the effects (Stuckler et al, 2009; **Karanikolos et al, 2013**).

There is smaller body of domestic research in the United States examining how UI receipt may moderate the effects of unemployment on substance use risk. Fox & Jeong (2023) find that receiving unemployment benefits reduced stress with no impact on substance use. Martins et al (2024) find that receipt of more generous unemployment benefits was associated with fewer fatal drug, opioid and stimulant overdoses in the pre-COVID-19 period and on fatal any drug and stimulant overdoses in the COVID-19 period. Two studies that did focus specifically on unemployment benefits as a moderator of mental health in the United States provide support for the notion that UI buffers against the adverse effects of job loss. One study found that receiving unemployment benefits does not bring recipients back up to the level of mental health full-time employment, but does buffer the negative impacts of job loss (Rodriguez et al, 1997). Another study found that receiving unemployment benefits does significantly alleviate the adverse health effects of unemployment among men (Cylus, Glymour, & Avendano, 2015).

Our study significantly advances the existing literature on the buffering impacts of UI by examining unemployment benefits along its intensive margin.

Policy

Political and policy context and trends in public reactions to the COVID-19 pandemic in 21 European nations in 2020 RIchard Carpiano* Richard Carpiano, Shaun Bowler,

Given the significant chance of another COVID-19-level pandemic in the next 10 years, it is valuable to examine public reactions to the COVID-19 pandemic in its earliest period when we were learning about the nature and epidemiology of the novel SARS-CoV-2 virus and before vaccines and other medical interventions were available. At that time, the common initial governmental response to reduce transmission and infection risk was to limit movement and public gatherings. However, within just a few months, such measures generated popular push back and unrest. In some European Union (EU) nations, right wing groups were rather vocal about lockdowns as damaging to the economy and constraining individual liberty. Yet, other EU nations saw more tolerance to public health measures and greater communitarian sentiment. How might a nation's political and COVID-19 policy context contribute to such reactions?

Examining 21 EU countries during three time periods of 2020, our study tests hypotheses regarding how trends in citizen-level responses to COVID-19 measures are associated with three elements of national-level political context: support for populist political parties, government trustworthiness, and COVID-19-related policy stringency.

We merge political context data from several sources (e.g., European Parliament, Transparency International, Oxford Coronavirus Government Response Tracker) with respondent-level data from the European Parliament COVID-19 Survey, a repeated cross-sectional survey collected during 2020 (the first year of the pandemic) at three time points (April-May, July, and September-October). Our multivariable analyses focus on three respondent-level outcomes—satisfaction with government pandemic measures, health benefits vs. economic damage of restriction measures, and extent to which limits to individual freedom is justified vs. opposed—while controlling for national- (e.g., COVID-19 burden) and respondent- (e.g., demographic) level confounders.

Policy

Germs and Sovereign Sheriffs: How Local Rebellion Against Public Health Policy Shapes Population Health Brayden Dawson* Brayden Dawson, Jack Wippell, Morgan McPartland,

Recent literature links sub-national democratic backsliding to higher U.S. mortality, yet whether similar dynamics operate at the local level remains underexplored. This study asks: do sheriff refusals to enforce COVID-19 public health mandates worsen county-level COVID-19 mortality outcomes?

Using a novel dataset of 65 county sheriffs (out of 1,905 in lockdown states) who publicly refused to enforce COVID-19 mandates, we merge these with weekly CDC county-level COVID-19 death counts across all pandemic waves (January 2020–May 2023). We estimate state fixed-effects Gamma regression models with three-way clustered standard errors (county, state, wave), controlling for age, income, poverty, race, education, population size, and vaccine hesitancy. Interaction terms between sheriff refusal and COVID-19 wave (both ordinal and nominal) test whether rebellion moderates mortality trajectories over time.

Descriptively, rebellious and adherent counties show broadly similar death profiles in early waves; however, rebellious counties trend higher in later waves, particularly during Omicron and the late pandemic stage—a pattern consistent with the hypothesis that institutional legitimacy erodes over time in counties where sheriffs openly undermined public health mandates. Regression results confirm no significant direct association between sheriff refusal and death rate, but reveal a significant positive interaction between refusal and later pandemic waves. Pairwise models identify Omicron and the late stage as the primary drivers. County fixed-effects robustness checks confirm the interaction’s stability.

These findings suggest sheriff rebellion amplifies mortality divergence over time—operating through weakened institutional legitimacy and behavioral deterrence rather than immediate effects—extending the democratic backsliding–mortality literature to the local level.

Public Health Communication and Trust

Health Equity Ain’t Equal You Know Cecily Gray* Cecily Gray, Sirry Alang, Tenaesha Washington, Mary Ann Bodine Al-Shariff,

The current research sought to understand how policies and practices contribute to institutional distrust and medical mistrust in the context of a recent emergency public health emergency–COVID-19. THis study explores perceptions of COVID-19 vaccination efforts through the lens of African American community health workers (CHWs) in HHS Region 4 of the southeast. In exploring health interventions, CHWs are an important group to learn from. They are trusted among communities frontline public health professionals serving as intermediaries between the healthcare system and marginalized communities. Due to their unique positionality as members of communities they serve, CHWs have the power provide meaningful, context-specific insight around intervention efforts in their communities. Purpose: The purpose of this study is to understand CHWs discuss COVID-19 vaccination at the Systemic/Societal-Level 4 of Harper-Browne’s model of ecology, through the lens of Critical Discourse Analysis (CDA). Results: Study findings revealed CHWs provided compelling insight into issues that lie beneath distrust through their discussion of COVID-19 and vaccination efforts. Main study findings revealed the following three major themes: 1) Government Response; 2) Political Agendas; and 3) The Healthcare System.

Public Health Communication and Trust

Exploring public attitudes towards religiously affiliated health care in the U.S. Marian Ali*
Marian Ali, Gabrielle Sylvester, Margaret Tait,

Background: A considerable percentage of U.S. healthcare institutions are religiously affiliated, yet we know relatively little about how these affiliations shape public attitudes regarding trust and fairness in healthcare or if individuals are aware of a healthcare institution's religious affiliations. The present research examines whether people recognize the religious affiliation of a health system, and how they perceive the quality of care, bias, and institutional trust based on the religious identity of a hospital.

Methods: This analysis of national survey data from NORC AmeriSpeak (n=1251) focuses on perceptions of fairness, discrimination, and bias in religiously affiliated healthcare settings, presenting results among religious and non-religious respondents. Additionally, we conducted qualitative analysis on an open-ended question to assess whether respondents recognize the religious affiliation of a hospital, providing deeper insight into how institutional identity shapes perceptions of healthcare access and equity.

Results: Among respondents who identified religious affiliation among hospitals, 16% disagreed that physicians and staff at Catholic hospitals "really care about them as a person". The most frequent qualitative response was "Don't Know", suggesting low public awareness of religious affiliation in hospital identification.

Conclusion: This research has significant implications for healthcare access, policy-making, and religious diversity in medical institutions. Informing patients of possible limitations of services, recognizing that certain forms of care are restricted at Catholic hospitals, and their rights as healthcare consumers is necessary to ensure trust and fairness in treatment.

Public Health Communication and Trust

Are we Teaching What We’re Oreaching? Antiracism in Public Health Education Frankie Greene* Kaisa Holt,

Background:
Many students matriculate into Master of Public Health (MPH) programs expecting sustained engagement with antiracism and decolonizing approaches in public health education. However, students encounter uneven integration of these frameworks in coursework, raising questions of trust in institutional commitments to antiracism. This study examines how the 2020 antiracism initiative at the OHSU–PSU School of Public Health is reflected in required core curricula through 2026.

Methods:
Students from multiple disciplines conducted a systematic analysis of syllabi and required readings from required courses in the MPH curriculum. Using an iterative word bank of antiracism concepts, we assessed (1) the presence of antiracism related language in course learning objectives and assigned readings and (2) representation of scholars of color, scholars from the global south in assigned readings.

Results:
Preliminary findings reveal uneven integration of antiracism across courses. Some syllabi reference antiracism in learning objectives without corresponding readings that support these concepts. Conversely, some courses include readings aligned with antiracism that are not reflected in stated learning objectives. These inconsistencies suggest gaps between institutional commitments and curricular implementation.

Conclusions:
Findings highlight opportunities to strengthen alignment between institutional antiracism commitments and educational practice. Learning objectives often mirror CEPH competencies, revealing leverage points for antiracist reform. Greater transparency and curricular coherence may help rebuild trust between students and public health institutions while supporting more meaningful integration of antiracism into training. This interdisciplinary, student-led analysis demonstrates how student scholarship can contribute to equity-centered curricular evaluation and reform in schools of public health.

Public Health Communication and Trust

Reimagining Health Communication: Supporting Alternative Family Structures Through a Queer Lens Amy DiCaprio* Amy DiCaprio,

Modern households are diverse, yet multi-generational households, co-parenting networks, chosen families, and LGBTQ+ households are often overlooked in public health messaging. When communications fail to reflect these realities, communities become disengaged, trust erodes, and health outcomes suffer.

This session explores how a queer-informed, family-centered approach can create inclusive communications that strengthen engagement and support across diverse households, even within a political climate that restricts explicit DEI language and limits discussion of identity, inequity, and social determinants of health.

Attendees will gain practical tools to:

- Identify assumptions about family structures and queer experiences in public health messaging.
- Adapt communications for multi-generational, co-parenting, chosen, and LGBTQ+ households.
- Engage communities as active partners in health initiatives through queer-informed, participatory approaches.
- Strategically frame inclusive messaging to advance equity without triggering political or funding backlash.
- Evaluate and refine strategies to ensure effectiveness in reaching non-traditional families.
- Communicate structural influences on health—housing, economic stability, and social connection—without using restricted terminology.

Participants will leave with actionable strategies to design engaging, community-driven communications that center diverse families, build trust through lived experience and narrative framing, and navigate current political constraints. This session equips public health professionals to reimagine communication practices that are inclusive, effective, and politically mindful—helping all families feel seen, supported, and empowered.

Race/Ethnicity

Racial, Regional, and Rural Variation in the Health Returns to Education Kayli Morrison*
Kayli Morrison, Gabe Miller, Verna Keith,

Background: Education is generally health-protective; however, the associated benefits are not equally distributed across race, rurality, and region. While few studies have examined race and place as moderators of the association between education and health, no studies have explored how the education-health association varies by race, place, and Southern region. Prior research often views rural and Southern areas as homogenous, which obscures meaningful rural and Southern differences. Drawing on fundamental cause theory and the theory of diminished returns, we aim to address this theoretical and empirical gap by examining how the protective effect of education on self-rated health varies by race, rurality, and Southern region.

Methods: Using National Health Interview Survey data from 2019-2024, we estimate logistic regression models to examine how the association between education and self-rated health varies by race (White/Black), rurality (urban/rural), and region (non-South/South).

Results: While education is health-protective, the benefits are significantly diminished for Black, rural, and Southern adults relative to their respective counterparts, and this diminishment is context-specific.

Conclusion: Race, rurality, and Southern region shape the ability to translate educational resources into better self-rated health outcomes. For rural residents, diminishment occurs at higher education levels, as rural respondents see fewer gains from more than a high school education relative to those residing in urban counties. For Southerners, diminishment occurs at lower education levels, as there are fewer health benefits from a high school degree. Black adults see diminished returns as education increases to high school and higher education. These findings suggest that social and structural disadvantage differently affects self-rated health outcomes, and highlight how rurality and Southern region independently and differentially moderate education’s returns on health.

Race/Ethnicity

Distinguishing Temporal Exposures to Structural Racism that Manifest in Single Indicators: The Case of Maternal Hypertension and Diabetes and Preterm Birth Disparities

Jessica Polos* Jessica Polos,

Preterm birth (PTB) is a leading cause of neonatal mortality and long-term morbidity. In the U.S., racial disparities in PTB are persistent and substantial with non-Hispanic Black mothers experiencing higher rates of PTB (14.65%), compared to non-Hispanic white mothers (9.44%). Maternal, population-level manifestations of structural racism (SR) that shape PTB – such as differential risk of hypertension and diabetes – can result from exposure to SR across the life course. Even a single maternal manifestation of SR can embed past and present exposures to SR. Determining whether a maternal manifestation of SR influences PTB due to SR experienced earlier in a mother's life course or SR experienced in pregnancy has important implications for generating solutions to preterm birth and other health disparities, but this timing has not been well studied.

Using NVSS Birth Data from 2022-2023 and a Kitagawa-Oaxaca-Blinder approach, we decompose the Black-white gap in preterm birth into the part attributable to differences in the composition of maternal hypertension and diabetes and the part attributable to differences in the effects of maternal hypertension and diabetes. Composition differences in hypertension and diabetes reflect chronic, distal maternal exposures to structural racism (e.g. via weathering) that lead to greater prevalence of hypertension and diabetes among Black mothers. Effect differences of maternal hypertension and diabetes reflect differences in the acute exposure to structural racism in pregnancy (e.g. via treatment differences). Results suggest that composition differences explain a smaller portion of the prematurity gap (2-2.5%) compared to effect differences (approximately 5-15%). This implies that interventions aimed at equitable treatment of maternal diabetes and hypertension in pregnancy may reduce PTB disparities to a greater extent than interventions aimed at upstream structural racism in social determinants of health.

Reproductive health

The Baraka Study: An Assessment of the Knowledge and Attitudes Regarding Sexual/Reproductive Health and Ideals among Muslim-Americans Fota M. Sall* Fota Sall, Stephanie M. Carpenter,

Knowledge about sexual and reproductive health improves sexual decision-making, health, and well-being. However, several populations in the US have inadequate sexual health literacy due to cultural norms or stigma, leading to notable group disparities. This research aims to identify how best to engage Muslim-Americans in sexual and reproductive health education. The secondary aim is to explore gender ideals and expectations.

A cross-sectional survey adapted from multiple sexual, reproductive and religiosity surveys was electronically distributed via Prolific. 159 participants were recruited from December 2025 to February 2026. The survey included 58 questions, utilized 3 validated surveys, team-created questionnaires, and multiple short answer questions.

Preliminary analyses included 153 participants. All self-identified as Muslim-American, 54% identified as women, 44% as men, and 1.3% as transgender/another term (TGNB). Participants were ethnically diverse and 84% were 18-44 years old. Median scores by age group ranged from 15 to 20; a score of 20 is considered a “strong strength of faith”. 81% agreed that “teaching sex education in school does not lead to young people having sex earlier”. Over 80% stated they knew all of the different methods of contraception and types of STDs; 55% preferred to search for doubts on sexual education online rather than ask in person; 40% agreed that parents and teachers are the only ones responsible for teaching kids about sex education. Lastly, a large proportion stated that they would be open to receiving more sexual health information about family planning, consent, and biological information, particularly from medical professionals or non-profit groups. These findings offer key insights into sexual and reproductive health that will benefit clinicians, public health practitioners, and the larger Muslim-American community.

Reproductive health

Why is Midwifery Utilization so Low in the United States? A patient perspective. Shannon Maloney* Shannon Maloney, Ciera Kirkpatrick, Kelli Boling, Harlan Sayles,

Midwifery is a low-cost high quality pregnancy care option. Despite this, midwifery utilization in the United States remains low. It is estimated that midwives attend 10.5 percent of births in the U.S., with Indigenous pregnancies accounting for a greater proportion of these deliveries. Low midwifery utilization is not well understood. This study explored pregnancy risk perception, demographic factors and attitudes toward midwifery as potential explanations for midwifery utilization. We administered a national cross-sectional survey to individuals who were currently or recently pregnant. The sample included 507 participants from 46 U.S. states, comprising 109 Indigenous, 107 Asian, 136 Black or African American, 115 Hispanic or Latina, and 139 White respondents. Among respondents, 19.1% had used or planned to use a midwife and 21.2% of respondents wanted to use a midwife. Preferring a home or birth center birth (OR = 2.0, $p<0.001$), midwife awareness (OR = 2.1, $p<0.01$), and having positive perceptions of midwifery (OR = 2.53, $p<0.05$) were significantly associated with midwifery utilization. Personal pregnancy risk perception, racial identity, marital status, age, educational attainment, insurance type, number of previous pregnancies, and live births were not significantly associated with midwifery utilization or preference. These findings suggest that awareness, pre-formed attitudes toward midwifery, and birthing location are the main factors that predict midwifery utilization. Greater understanding of how midwifery attitudes are formed can help illuminate possible pathways for improving midwifery utilization in the United States.

Reproductive health

Stigmatized in Emotional Distress: The Cost of Procuring a Clandestine Abortion. Charles Katulamu* Charles Katulamu,

There is a significant public health crisis in countries that criminalize and restrict abortion, where stigma against those who seek abortions prevents women from accessing care, making them turn to unsafe abortion practices. Unsafe abortions pose several health risks, like life-threatening complications and preventable deaths. As restrictive legal frameworks persist and force women into clandestine abortions, there is an urgent need to understand the social and structural factors shaping their experiences. This study addresses this need by examining how stigma interacts with Uganda's criminalized and restrictive legal environment and fragile health system to shape women's abortion experiences.

Through semi-structured in-depth interviews, I conducted a retrospective investigation of the experiences of 50 women who terminated their pregnancies in Uganda. Findings demonstrate how stigma is a multi-layered force that interacts with abortion criminalization and restriction and health-system fragility to shape every stage of women's abortion trajectories. I show that perceived stigma, including fear of arrest, moral judgment, parental backlash, and partner resentment, delays care-seeking and drives women into clandestine abortions. Once they seek care, women encounter experienced stigma where verbal and physical abuse, painful procedures, absent counselling, and denial of follow-up exacerbate both emotional and physical complications. Over time, these experiences deepen internalized stigma, manifesting as guilt, shame, and self-blame, and in some cases, attributing infertility or lasting health problems to the abortion itself.

I therefore argue that abortion stigma is a by-product of an interconnected web of the abortion process, legality, access, and the health system. To avoid negative health outcomes, countries should not only prioritize access to quality, comprehensive, and woman-centered abortion care but also invest in dismantling the systemic structures of stigma.

Reproductive health

Early Detection of Health-Related Social Needs During Pregnancy Using Routinely Collected Data Jessica Gjonaj* Runhan Chen, Alexander Azan, Radhika Gore, Min Wu, Brita Roy, Rumi Chunara,

Background: Health-related social needs (HRSNs) during pregnancy are associated with adverse maternal and infant outcomes, yet they are often identified only after needs escalate. Routine screening can help identify HRSNs, but implementing universal screening requires substantial resources and responses may be incomplete. Early detection using existing clinical data may enable efficient targeting of screening and referral in clinical settings.

Methods: We conducted a retrospective cohort study using electronic health record data from 3,829 deliveries (Jan 2022–Dec 2024) among a predominantly Hispanic/Latino-serving obstetric population receiving care at the Family Health Centers at NYU Langone, a Federally Qualified Health Center. HRSNs included financial, food, and housing insecurity, as reported through the Accountable Health Communities HRSN screener administered at each patient's first prenatal visit. Descriptive analyses characterized the distribution of HRSNs. Predicted risk was derived from demographic and clinical characteristics; individual predictors are not emphasized given the model's screening-oriented design and limited specificity. Data were split randomly 70/30 into training and test sets and logistic regression (with class weighting due to imbalance) was used to estimate the probability of HRSNs.

Results: Overall prevalence of HRSNs was 17.7%, and 80.3% of those patients reported multiple needs. Observed HRSN incidence increased from 6.1% in the lowest predicted-risk decile to 30.2–37.4% in the top two risk deciles. Patients in these highest risk groups were approximately 1.6–2.0 times more likely than average to experience HRSNs.

Implications: Findings suggest routinely collected data can support early detection of maternal social risk. Such approaches require clinical oversight for reliability. Next steps will focus on improving model performance and clinician-partnered implementation to support equitable, trusted use in practice.

Reproductive health

Identifying Opportunities to Promote the Reproductive Health and Goals of Formerly Incarcerated Young Men in the United States Dylan B. Jackson* Dylan B. Jackson, Ingie Osman, Krista P. Woodward, Rebecca J. Shlafer, Alexander Testa, Arik V. Marcell, Alison Gemmill,

Mass incarceration in the United States (US) is a mechanism of social stratification and a driver of health disparities, including among young men (e.g., ages 15-29) who are disproportionately impacted. Despite robust evidence of the mental and physical health impacts of incarceration on young men, we know very little about formerly incarcerated young men's reproductive health. Furthermore, the policy and programmatic levers that might optimize their reproductive health and facilitate their family planning and fatherhood goals remain unclear. The present study addresses this research gap via 23 key informant interviews with public health, medical, and criminal legal experts, representing 9 US states and the District of Columbia (DC). Guided by Braun and Clarke's process of thematic analysis and utilizing an abductive approach, we employed Dedoose software to analyze the interview data. Overall, preliminary findings suggest formerly incarcerated young men's reproductive health is often overlooked and under-addressed, with other social and reintegration needs being perceived as more pressing and, as a result, prioritized. When reproductive health needs are addressed, more immediate reproductive health concerns (e.g., STI screening, treatment) and risk mitigation are emphasized over strengths-based family planning services among formerly incarcerated young men. Most service providers remain unaware of young men's current and future family formation priorities. Many interviewees discussed trauma-informed counseling, financial stability, and healthy relationship education as integral to supporting young men's reproductive decision-making and overall family well-being. Results can help inform the development of tailored interventions to support the reproductive goals, education, and care of formerly incarcerated young men, and provide critical, first-of-its-kind data that can inform a national agenda for further research centering this neglected and understudied group.

Reproductive health

Sexual Assault and Women's Sexual Autonomy: Evidence of Diverging Recovery Pathways in West and Central Afric Margot Clough* Nigel James, Dahyshana Williams, Brianna Ontaneda, Maggie Slusar, Jorden Jackson,

Sexual autonomy is a critical determinant of reproductive health, HIV prevention, and women's agency in health decision-making, and unequal power within relationships remains an important driver of gender-based health inequities. Yet little is known about how experiences of sexual violence shape women's ability to exercise autonomy in intimate relationships in low- and middle-income countries. This study examines how sexual assault is associated with sexual autonomy among women in West and Central Africa and explores whether survivors follow distinct recovery trajectories depending on the characteristics of the assault.

We use Demographic and Health Survey (DHS) data from five countries—Angola, Chad, Nigeria, Rwanda, and Togo—focusing on women aged 15–45 with information on lifetime experience of sexual violence and current relationship dynamics. Sexual autonomy is measured along two dimensions: the ability to refuse sex and the ability to negotiate condom use with a partner. Logistic regression models compare autonomy outcomes between women who have and have not experienced sexual assault. Among survivors, latent class analysis identifies profiles based on perpetrator relationship and timing of the assault.

This study advances population health research by examining sexual autonomy as a dimension of post-assault recovery and identifying heterogeneous survivor trajectories.

Preliminary results show that survivors report higher autonomy in refusing sex compared with women who have not experienced assault, while survivor status is not significantly associated with condom negotiation. Among survivors, two distinct profiles emerge: recent assault by a current partner and past assault by non-partners. Women in the past-assault group exhibit higher autonomy in both refusing sex and negotiating condom use, whereas those experiencing recent partner violence show lower condom negotiation.

These findings suggest that recovery trajectories following sexual assault are not uniform and highlight the importance of tailored support strategies that address ongoing partner violence while strengthening sexual autonomy to improve reproductive health and HIV prevention outcomes.

Reproductive health

Post-Dobbs Abortion Bans and Substance Use Treatment Admissions Among Reproductive-Aged Women in the United States, 2017 to 2023 Alaxandria Crawford* Alaxandria Crawford, Parvati Singh,

Abortion bans may increase reproductive uncertainty and heighten the perceived consequences of substance use among reproductive-aged women, which may correspond with greater treatment-seeking through risk management behaviors. We examined whether the U.S. Supreme Court's Dobbs v. Jackson Women's Health Organization decision influenced substance use treatment admissions among reproductive-aged women in the United States.

We defined our exposure as the state-year timing of a total or six-week abortion ban from 2017 to 2023. Treated states comprised 14 states that implemented a ban during the study period; all other states served as controls (ban indicator coded 1 if treated, 0 otherwise). The outcome was state-year rates of substance use treatment admissions among women and men aged 15-49 years, per 100,000 population, from the Treatment Episode Data Set- Admissions (TEDS-A), a census of admissions to state-funded treatment facilities. We conducted difference-in-differences analyses with two-way fixed effects and state-specific linear time trends. The interaction between abortion ban status (referent = pre-ban period) and sex (referent = male) served as the coefficient of interest. Analyses were conducted overall and stratified by race and age group.

Results (post confirmation of pretreatment parallel trends) fail to reject the null in the overall analysis. However, race-stratified models indicated a pronounced increase in treatment admissions among Black women following abortion bans (coef= 369.30; $p< 0.001$; relative to Black men), followed by White women (coef= 167.07; $p< 0.01$), with null findings for other racial groups. Age-stratified analyses showed a modest increase among younger individuals (15-20 years; coef= 131.56; $p= 0.06$), and no changes among older age groups.

These findings suggest that post-Dobbs abortion bans may have increased substance use treatment utilization among reproductive-aged women, with heterogeneous effects across racial and age groups.

Reproductive health

The Association between Adolescent Sexual and Reproductive Health Stigma and Psychological Distress among Adolescents and Young Adults in Western Kenya Abigail Lee*
Abigail Lee, Nema Aluku, Carolyne Mabeya, William Story,

Background: Kenyan youth are sexually active and experience challenging outcomes like young pregnancy and HIV. They also experience high rates of psychological distress (distress), which is influenced by stigma related to adolescent sexual and reproductive health (ASRH). This study describes the association between ASRH stigma and distress among youth in western Kenya.

Methods: In 2022, 1,598 unmarried youth ages 15-24 completed a survey in Kakamega and Uasin Gishu counties. Factor analyses of stigma items identified lay stigmatizing attitudes (girls and boys) and enacted stigma (girls and boys) as four stigma factors. Multivariable logistic regression analyses were conducted, regressing all stigma factors on distress. The moderating effects of gender and previous sexual behavior were additionally assessed using stratification and interaction.

Results: Among all youth, after controlling for covariates, an increase of lay stigmatizing attitudes towards girls was associated with reduced odds of distress (AOR=0.62, $p<0.001$), while increased lay stigmatizing attitudes towards boys was associated with increased odds of distress (AOR=1.26, $p<0.05$). Gender stratified analyses demonstrated that increased lay stigmatizing attitudes towards girls was associated with reduced odds of distress for girls (AOR=0.70, $p<0.05$). Interactions between girls' stigma factors and previous sexual behavior demonstrated that for girls who have not had sex, holding more stigmatizing attitudes was associated with a lower probability of distress, while the probability of distress increased (or did not change) with more stigmatizing attitudes for girls who had previously had sex.

Conclusions: Our data show associations between ASRH stigma and distress, with differences by gender and previous sexual behavior. These findings suggest the importance of deconstructing stigma to improve health, while recognizing that holding stigmatizing attitudes is a powerful position that may benefit some people.

Reproductive health

Contraceptive Access and Reproductive Justice: Evaluating Pennsylvania's Policy Landscape in a Post-Roe Era Rejoice Obiora* Rejoice Obiora, Gideon Nwankwo, Joanna Mishtal,

Aim: This policy analysis examines contraceptive coverage in Pennsylvania within the context of the Affordable Care Act and the shifting reproductive policy environment following Dobbs v. Jackson Women's Health Organization. The study evaluates how federal and state policies shape contraceptive access in Pennsylvania, identifies legal and structural gaps that limit equitable access, and assesses the extent to which the state's current policy framework protects reproductive autonomy.
Method: This study employs a qualitative policy analysis of federal and state legislation, court decisions, administrative rules, and policy reports related to contraceptive coverage. The analysis focuses on implementation of the ACA contraceptive mandate and key legal decisions including Burwell v. Hobby Lobby Stores, Inc. and Little Sisters of the Poor Saints Peter and Paul Home v. Pennsylvania. A comparative policy review was also conducted to examine Vermont's state-level contraceptive protections as a model for policy strengthening.
Findings: The ACA significantly expanded contraceptive access by eliminating cost-sharing and expanding Medicaid coverage. However, important gaps persist in Pennsylvania. The state lacks statutory protections guaranteeing no-cost contraceptive coverage, leaving access vulnerable to federal policy changes and employer-based religious exemptions. Additional barriers include insurance administrative requirements, uneven hospital implementation of postpartum contraceptive services, and pharmacy shortages in rural areas. These barriers disproportionately affect low-income populations, rural residents, and marginalized communities.
Conclusion: Despite gains under the ACA, Pennsylvania's reliance on federal protections creates policy fragility in the post-Dobbs era. Strengthening state-level statutory protections and expanding access pathways are critical to ensuring stable and equitable contraceptive access.

Reproductive health

Social egg freezing: An expression of reproductive autonomy or a response to structural inequities Rejoice Obiora* Rejoice Obiora, Gideon Nwankwo,

The growing trend of social egg freezing has sparked extensive debate about whether it represents an expansion of women's reproductive autonomy or a reaction to persistent structural inequities that constrain reproductive agency. While marketed as a technology that empowers women to "pause" their biological clock and harmonize career and family aspirations, social egg freezing exists within a broader context of gendered, social, and economic systems that shape reproductive decision-making. This paper critically examines social egg freezing through the lens of Black feminist theory, which foregrounds the interplay between structure, power, and agency in women's lived experiences. Drawing on ethical frameworks and empirical literature, the paper investigates how institutional arrangements such as limited maternity and parental leave, lack of affordable childcare, and workplace cultures that penalize motherhood produce conditions that make egg freezing appear as an individual solution to systemic problems. Furthermore, it explores how structural inequities, including class, race, and gender disparities, restrict equitable access to this technology and obscure deeper social justice questions. By situating social egg freezing within these intersecting systems of inequality, this paper argues that rather than being a pure expression of reproductive autonomy, the practice often reflects women's adaptive response to inequitable structures that commodify fertility and reproduce social hierarchies. Ultimately, this analysis calls for a reimagining of reproductive autonomy beyond technological solutions toward policies and social arrangements that genuinely support reproductive justice and equitable choice.

Reproductive health

Present-day and Future Wildfire Threats to United States Neonatal Intensive Care Units
Joan Casey* Joan Casey, Mathida Ngamsiripol, Amanda Gassett, Kristin Darwin, Alexander Northrop, Joel Kaufman, Tim Bruckner, Alison Gemmill, Alison Stolte, Nicole Errett, Ralph Catalano,

Objective: Characterize historical and future wildfire risks at present-day U.S. NICUs and estimate transport distances between NICUs in the event of a wildfire-induced NICU evacuation.

Methods: All U.S. NICU locations were geocoded from the 2023 Neonatology Solutions Directory. Wildfire risk was quantified at each NICU as the number of historical (2006–2024) wildfires within 25km, the 2017 and 2050 (projected) Keetch–Byram Drought Index (KBDI), and 2015–2024 and 2046–2055 (projected) wildfire fine particulate matter (PM2.5) concentrations. Transport distances from the sending NICU to NICUs of the same level or higher were calculated under multiple occupancy scenarios. Social Vulnerability Index (SVI) scores in 2022 were linked to NICUs.

Results: 559 (40.2%) level II, 697 (49.8%) level III, and 140 (10.0%) level IV NICUs were included, with 32% located in census tracts in the highest SVI quartile. Between 2006–2024, 485 (34.7%) NICUs had a wildfire within 25km in 1+ years, median KBDI was 222 (in 2017), and 350 (25.0%) NICUs experienced average wildfire PM2.5 exceeding 1 µg/m3. Under climate mid-century scenarios, wildfire PM2.5 concentrations will increase the most at NICUs in Washington (6.9 µg/m3) and Montana and Oregon (6.7 µg/m3). In the event of a wildfire-initiated evacuation, median transport distances to same- or higher-level care varied by NICU level: 23 km for level II, 21 km for level III, and 171 km for level IV, under 100% sending and 75% receiving occupancy. Level IV NICUs with the greatest historical wildfire exposure had the longest evacuation transport distances, exceeding 300 km.

Conclusion: Wildfire risk for U.S. NICUs is a present and growing threat, with geographic expansion projected beyond the West by mid-century. Social vulnerability and level IV NICU scarcity compound evacuation burden, underscoring the need for a tiered, equity-informed approach to wildfire preparedness.

Social/relational factors

Examining the Influence of Domains of Trust in Decision-Making Points for HIV Prevention and Care Among Racial and Sexual Minoritized Individuals Ananya Bhaktaram* Ananya Bhaktaram, Zoe Hendrickson, Lauren Dayton, Carl Latkin,

Background: Previous studies have shown that social (e.g., social networks, interpersonal relationships), structural (e.g., stigma, discrimination, transportation access), and contextual factors (e.g., neighborhood environments) influence care-seeking decision-making for multiply marginalized individuals. Many studies have examined the role of medical or institutional distrust as a contributor to underutilization of services by marginalized populations. Trust is a multi-dimensional construct, but few studies have examined how different domains of trust (e.g., interpersonal, institutional, generalized trust, and calculative trust) may interact to contribute to disparities in HIV prevention and care.

Methods: Between March 2024 and March 2025, 20 integrated mapping interviews (IMIs) were conducted with racially and sexually minoritized men in Baltimore, MD. IMIs produced participant-drawn visual maps connected to rich qualitative descriptions, yielding geospatial data on where participants sought care and qualitative descriptions of their experiences and attitudes toward different health care organizations. Emergent themes were analyzed using a thematic approach.

Results: Many participants discussed that privacy concerns (institutional and social or community mistrust) meant that while access to services remained important, people did not necessarily want services to be located within their neighborhoods. Participants who reported previous negative experiences with primary care providers (interpersonal distrust) were more likely to prioritize patient-physician concordance even if it meant traveling greater distances. Additionally, participants discussed how intersectional forms of stigma impacted different domains of trust and influenced decisions to engage in HIV prevention.

Conclusion: Future research should examine the decision-making cascade of how multiply marginalized individuals engage in HIV prevention and care.

Social/relational factors

The Effects of a Sexual and Reproductive Health Intervention on Adolescent-Parent Communication in Western Kenya William T. Story* William Story, Nema C.M. Aluku, Abigail A. Lee, Sylvia Ayieko,

Background: Youth in western Kenya face high rates of unintended pregnancy and HIV, yet adolescent-parent communication about sexual and reproductive health (SRH) remains difficult for many families. This study assesses changes in SRH communication across multiple topics following implementation of Stepping Up!, an evidence-based intervention designed to strengthen parents' and adolescents' SRH knowledge and communication skills.

Methods: The Stepping Up! intervention was implemented from November 2022 to March 2023 in 20 villages in western Kenya, with 10 randomized to the intervention group and 10 to the comparison group. A total of 1,598 youth and 790 parents completed baseline surveys, and 1,425 youth and 711 parents completed follow-up surveys one month post-intervention. Surveys assessed adolescent-parent communication across 14 SRH topics. Intervention effects were estimated by comparing changes over time between intervention and comparison groups, including stratification by sex.

Results: Youth and parents in the intervention group showed significantly greater gains in SRH communication than those in the comparison group, with youth mean scores increasing by 8.28 versus 1.60 ($p<0.01$), respectively, and parents increasing by 9.01 versus 0.06 ($p<0.01$), respectively. The intervention most improved communication on family planning, sexual debut, and condom use, while discussions about peer pressure and HIV/STIs showed minimal change. Effects were generally stronger among males, with male youth and male parents showing greater statistically significant improvements across several SRH topics compared with females.

Conclusions: This study demonstrated that a structured intervention can meaningfully strengthen adolescent-parent communication across multiple SRH topics, aligning with prior evidence showing that adolescents view parents as trusted SRH information sources. Future research should employ cohort designs to evaluate how improved communication influences SRH behaviors.

Social/relational factors

Associations of Problematic Internet and Social Media Use on Unhealthy Weight Control Behaviors in Washington State Adolescents Eileen Rillamas-Sun* Eileen Rillamas-Sun, Megan Suter, Chelsea Olson, Megan Moreno, Maayan Simckes,

Background: Youth are exposed to internet and social media content that promote idealized body standards, which may influence weight control motivation. We examined whether risk of problematic internet use (PIU) and frequency of screen time and social media use were associated with unhealthy weight control behaviors (UWCBs) in Washington State adolescents.

Methods: Data were from the 2023 Washington Healthy Youth Survey, a school-based survey for adolescents. Students in grade 8, 10, and 12 reported their participation in 1 exercise-related and 5 eating-related behaviors to lose or maintain their weight in the past year. Risk of PIU was from the 3-item Problematic and Risky Internet Use Screening Scale (PRIUSS-3); frequency of screen time (hours/school day) and social media use (times per week, day, or hour) was self-reported. Weighted prevalence and 95% confidence intervals (CI) of PIU, screen time, and social media use on UWCBs were examined using modified Poisson regression, adjusting for sex, grade, and race/ethnicity.

Results: A total 8,288 youth (50% female, 46% non-Hispanic White) had weight control behavior data. Of these, 3,484 had PRIUSS-3 data and 3,946 had screen time and social media data. Youth at risk for PIU were 1.2 (95% CI: 1.1-1.2) times likely to report any UWCBs than those not at risk. Youth who used screens ≥3 hours/school day compared to no screen use were 1.2 (95% CI: 1.0-1.5) times likely to report any UWCBs. Prevalence of any weight control behavior increased as frequency of social media use increased. Compared to non-users, prevalence was 1.1 (95% CI: 1.0-1.2) and1.3 (95% CI: 1.2-1.4) higher for youth using social media ≥1 time/day and ≥1 time/hour, respectively.

Conclusions: UWCBs in youth may be exacerbated by problematic internet and social media use. Health and policy interventions aimed at addressing adolescent internet use and reducing exposure to harmful social media messaging may help lower the burden of UWCBs in adolescents.

Social/relational factors

Associations between Religious Community Stressors with Depressive Symptoms and Social Networks in the Study on Stress, Spirituality, and Health Naheed Ahmed* Naheed Ahmed, Ashlin Rakhra, Hayley Belli, Erica Warner, Shelley Cole, A. Heather Eliassen, Namratha Kandula, Alka Kanaya, Nadia Islam, Alexandra Sheilds,

Introduction

While religion is associated with positive physical and mental health, facets of religious engagement are potentially detrimental to overall well-being, which have been less studied. This study examined associations between religious community stressors and psychosocial measures using baseline data from three cohort studies that participated in the Study on Stress, Spirituality, and Health.

Methods

Cross-sectional self-reported data from the 1) Mediators of Atherosclerosis in South Asians Living in America (MASALA) (N=990), 2) Nurses' Health Study II (NHSII) (N=4,268), and 3) Strong Heart Study (SHS) (N=752) were analyzed to identify associations between religious stressors (neglected by religious community or criticism from religious community) and depressive symptoms, with social network size as a potential mediator. Data were analyzed using structural equation modeling in Mplus 8 and significance set at $p<.05$.

Results

The MASALA study only included South Asians, NHSII participants were 97% White, and SHS participants were 97% American Indians. Religious neglect and criticism had positive direct associations with depressive symptoms in the MASALA (β.08, β.04) and NHSII (β .08, β .04) cohorts. Religious neglect had negative direct associations with social network size [MASALA: β -0.15; NHSII: β -0.10; SHS: β -0.69] and indirect negative associations with depressive symptoms via social network size [NHSII: β -0.05; SHS: β -0.01]. Religious criticism had negative indirect associations with depressive symptoms via social network size [MASALA: β -0.02; NHSII β -0.05; SHS: β -0.01).

Discussion/Conclusion

These findings expand our understanding of religious group-based stressors and links with psychosocial health, thereby providing potential intervention points to bolster the health and well-being. Religious groups can be significant sources of support, which in turn can contribute to improved health outcomes, but only if members feel welcomed and accepted. Positive religious group relationships can be facilitated by research on what factors contribute to belonging and acceptance, and support for individuals seeking religious or spiritual communities.

Socioeconomic status

The relationship between individual indicators of socioeconomic status and community-level social determinants of health as predictors of obstetric interventions: a multi-level intersectional latent class analysis Regan Moss* Regan Moss, Dovile Vilda, Elizabeth Sutton, Kelli Hall,

Background: Obstetric interventions (including induction of labor (IOL) and cesarean delivery) are increasingly common in the United States, even among low-risk pregnancies. While clinical factors explain some of this variation, non-clinical determinants such as individual socioeconomic characteristics and community-level conditions, are underexamined. We apply a multi-level intersectional framework to identify how combined social and structural exposures predict obstetric intervention use in Louisiana.

Methods: We will conduct a cross-sectional analysis of hospital records data on singleton live births in Louisiana from 2015-2022. Using latent class analysis, we will identify latent classes of combined individual- (e.g., education level, employment status, primary insurance, insurance type) and community-level (e.g., distance to care, percent of population that is uninsured, median gross rent, population density, percentage of housing units vacant, social vulnerability index, minority social vulnerability index, segregation index) social determinants of health and estimate their association with induction of labor and cesarean delivery, controlling for clinical indications and obstetric history.

Results: Preliminary analyses indicate that among 59,191deliveries, 37.10% of the full sample was Black and 50.10% were White. 27.92% was college-educated; 21.97 were high school-educated. 29.88% was employed full time and 41.88% were not employed. 47.05% were insured through Medicaid and 52.22 through private insurers.

Discussion: Using an intersectional multilevel approach, this study examines how overlapping social and structural exposures contribute to obstetric intervention use beyond what clinical factors alone explain. Findings are expected to illuminate structural and institutional drivers of medicalized birth, with implications for maternity care policy and future research on non-clinical contributors to rising intervention rates in the US.

Socioeconomic status

Alternative financial services and self-rated mental health in U.S. adults: A propensity score analysis Sicong “Summer” Sun* Sicong “Summer” Sun, Yuanyuan Yang, Nishi Khodaria, Sebastian Polackal, Naomi Zewde,

Background: Debt is a social determinant of health, but less is known about how use of alternative financial services (AFS), including payday loans, auto title loans, and pawnshops, relates to mental health. We examined whether AFS use is associated with poorer self-rated mental health among U.S. adults.
Methods: We analyzed data from the 2025 Financial Health Pulse Survey (N=10,844). AFS use was defined as any use of payday, auto title, or pawnshop lending in the past 12 months. The outcome was self-rated mental health. To reduce confounding, we used propensity score matching to balance sociodemographic and financial characteristics between AFS users and non-users. We then estimated adjusted associations using ordered logistic regression in the matched sample.
Results: Nearest neighbor matching improved covariate balance (N AFS users = 493; N non-users = 493). In the matched sample, AFS use was associated with poorer self-rated mental health (OR = 1.60, $p < .001$), with lower predicted probabilities of excellent (-0.043) and very good (-0.059) mental health and higher predicted probabilities of good (0.018), fair (0.005), and poor (0.029) mental health. Findings were consistent across sociodemographic subgroups.
Conclusions: AFS is strongly associated with poorer self-rated mental health, even after balancing observed confounders. AFS reliance may act as a population-level mental health risk factor. Integrating financial capability screening, referrals, and assistance into clinical and community settings, including medical-financial partnerships, may help reduce mental health risks linked to high-cost debt.

Socioeconomic status

Subsidized Housing and Adolescent Outcomes: Decision-Making Pathways Linking Residential Stability to Risk Behaviors and Academic Performance Nicole Hair* Nicole Hair, Barbara Wolfe, Seth Pollak,

Housing policy is a structural determinant of population health, yet little is known about the developmental pathways through which residential stability may shape youth outcomes. We examine whether U.S. Department of Housing and Urban Development (HUD) subsidized housing programs, including public housing and vouchers, are associated with adolescent risk behaviors and academic performance, and whether decision-making represents a potential pathway linking residential stability to these domains.

We analyze data from 166 adolescents (ages 12-15) in Dane County, WI, recruited through local housing authorities and schools. A quasi-experimental design compares youth whose families received housing assistance through a lottery process to income-eligible peers without subsidized housing and to higher-income adolescents in the same communities. Participants completed cognitive tasks tied to decision-making, including measures of reward processing, risk-taking, and impulsivity, and a questionnaire assessing health-risk behaviors adapted from CDC's YRBSS. Data were linked to administrative records of school attendance and standardized test scores.

Preliminary analyses show that low-income adolescents report more risk behaviors, have higher absenteeism and lower test scores, and demonstrate poorer decision-making than higher-income peers. Comparisons between youth in subsidized housing and income-eligible peers are mixed but indicate potential behavioral and cognitive differences; ongoing analyses will further clarify these contrasts.

Findings highlight socioeconomic gradients in adolescent outcomes and suggest that decision-making may represent one pathway contributing to these disparities during adolescence. If confirmed, differences between youth in subsidized housing and income-eligible peers would suggest that residential stability may attenuate observed socioeconomic disparities, with decision-making as one potential pathway.

Structural factors

Fostering Belonging & Civic Muscle as a Vital Condition: A Community-Led Black Health Equity Initiative in Allentown, PA Aika Aluc* Aika Aluc, Hasshan Batts, Fathima Wakeel, Nyambura Mbugua-Daisley, Carmen Bell, Katarah Jordan,

The Allentown Community Black Health Equity Project is a place-based, community-led initiative designed to advance health equity by strengthening the vital conditions for thriving within Allentown's Black community. Grounded in the Vital Conditions for Health and Equity framework, the project centers Belonging and Civic Muscle as both a foundational condition for health and a practical capacity that enables progress across other domains, including humane housing, meaningful work, lifelong learning, basic needs, and environmental safety.

Led by Promise Neighborhoods of the Lehigh Valley in partnership with faith and academic institutions and community organizations, the initiative integrates participatory research, community governance, storytelling, and policy advocacy. A key project milestone is community convenings designed to surface community-defined priorities, strengthen cross-sector relationships, and engage allies in shared accountability and systems change.

This presentation describes the project's design, implementation strategy, and early lessons, with particular attention to how belonging and civic participation are operationalized through community engagement, narrative practices, and collaborative infrastructure. Drawing on qualitative insights, the case study highlights challenges, adaptations, and opportunities for sustaining community power in mid-sized cities. Findings offer practical guidance for practitioners, policymakers, and researchers seeking to translate the Vital Conditions framework and related community-centered approaches into community-driven action.

Structural factors

‘Distrust Just Trickles All the Way Down’: Narratives of Police Contact and Trust in Government among Black and White Adults Caitlin McMurtry* Caitlin McMurtry, Michael Esposito, Han Koehle, Sierra Clark, Cinthia Romo Alba, Jé Judson,

Black Americans are stopped and killed by police at far higher rates than their white counterparts, but little is known about the consequences of this disparity, especially as it relates to trust in government. We present results from 22 focus groups in Milwaukee and St. Louis among Black and white adults. Participants in both cities identify remarkably similar mechanisms linking police contact to institutional trust. For example, vicarious contact with police – particularly through one’s children or parents – appears as influential to trust as direct personal contact. Additionally, participants identify detainment and incarceration as equally influential to trust as police conduct such as traffic stops. While the spatial resolution of trust erosion varies, results indicate it extends far beyond personal-level contact, with some participants emphasizing neighborhood-level policing while others referencing city-wide patterns of racialized enforcement and incarceration. Finally, participants’ narratives reveal nuanced connections between their experiences with aggressive policing, their broader views of government legitimacy, and their willingness to participate in state-administered programs. These qualitative insights, and others, help to inform our understanding of the far-reaching consequences of state violence, especially as they relate to trust and influence.

Structural factors

Parental employment precarity and its associations to adolescent mental health and behaviors Emma Leary* Emma Leary, Anita Minh, Shabir Sarwary, Vanessa Oddo, Anjum Hajat, Sarah B. Andrea,

Precarious employment (PE)—characterized by uncertainty, instability, low wages, limited benefits and statutory protections, and limited bargaining power—has become increasingly common amidst growing labor market flexibility. Increases in PE are occurring alongside a rising global burden of depression and anxiety among adolescents. PE is known to produce economic insecurity, poor mental health, and disease morbidity in workers, yet less is known about its intergenerational impacts. Adolescent health is shaped by household experiences and access to necessities. Parental PE directly influences a child's access to health insurance, material goods, necessities, and quality time with family, and indirectly influences adolescent health through parents' emotional and physical wellbeing. Exposure to such stressors both at critical periods in childhood and cumulatively over time may have consequences for adolescent health. Using data from 4,898 children and their parents participating in the nationally representative longitudinal Future of Families and Child Wellbeing Study, we will explore the role of parental PE as a modifiable driver of adolescent mental health and health behaviors. We will construct multidimensional summative parental PE scores using time-varying parent-reported measures of employment stability, interpersonal relations, material rewards, workers' rights, working time arrangements, and employee representation collected at child age 0-9. We will characterize exposure to parental PE during critical periods and cumulatively according to key sociodemographic factors. Associations between parental PE and adolescent mental health (depression, anxiety) & behavior outcomes (self-reported cigarette, alcohol, marijuana use) at age 15 will be assessed with multivariable regression. By shifting attention to the intergenerational consequences of PE, this study identifies actionable insights into mechanisms for early health interventions.

Structural factors

Historical Blockbusting and Contemporary Perinatal Health Disparities in California
Samantha Gailey* Samantha Gailey, Richard Sadler,

Racial and ethnic disparities in perinatal outcomes persist despite efforts to address individual-level risk factors, suggesting broader structural forces shape maternal and infant health. Scholarship on structural racism has focused predominantly on 1930s redlining, yet this represents only one component of discriminatory housing policies that shaped urban inequality. Blockbusting—real estate practices that induced rapid racial turnover in White neighborhoods during the postwar period (1950s–1980s)—profoundly restructured American cities but remains understudied in population health research. Blockbusting destabilized neighborhoods, resulting in persistent disinvestment and reduced access to resources, with potentially enduring impacts on perinatal inequities.

We examined whether residence in historically blockbusted neighborhoods corresponds with elevated risk of adverse perinatal outcomes among California births from 2007–2022 (N=6,420,047). We linked birth records to census tract-level measures of rapid mid-century racial transition and estimated odds ratios using logistic regression with robust standard errors, adjusting for individual sociodemographic characteristics and contemporary neighborhood distress.

Approximately 7% of California mothers resided in historically blockbusted tracts, with exposure highest among Black mothers (18%). After adjustment, residence in blockbusted neighborhoods corresponded with elevated odds of low birthweight (OR=1.04, 95% CI: 1.01–1.06) and preterm birth (OR=1.05, 95% CI: 1.03–1.07). Interaction models showed stronger associations between blockbusting and adverse birth outcomes among racially minoritized mothers.

These findings extend understanding of how mid-20th century discriminatory housing practices continue to shape population health inequities, suggesting that interventions addressing contemporary neighborhood conditions in historically marginalized communities may reduce perinatal disparities and inform equitable policy.

Structural factors

Examining temporal trends in hospital-level obstetric intervention rates in Louisiana by funding and teaching status (2012-2024) Regan Moss* Regan Moss, Dovile Vilda, Kelli Hall,

Background: Obstetric interventions such as induction of labor (IOL) and cesarean delivery are utilized with patients that are not clinically indicated for needing interventions. As such, while rates of IOL and cesarean delivery continue to rise across the entire birthing population, maternal and infant health outcomes have not drastically improved across the birthing population in the US writ large. While patient-level factors have been examined with regard to IOL and cesarean delivery rates, less is known as to how hospital-level factors may contribute to trends. Hospital-level factors, including funding source and teaching status, may affect intervention rates and their trajectories over time, yet remain underexamined relative to patient-level predictors. Understanding how institutional context drives variation in intervention use is critical for identifying targets for system-level change.

Methods: We will conduct a cross-sectional analysis of hospital records data on singleton live births in Louisiana from 2012-2024 using statewide vital records data. Jointpoint regression analysis will be used to assess temporal trends in cesarean delivery and IOL rates by year, with hospitals grouped by funding status (public vs. private) and teaching status. Trend analyses will be conducted at the hospital level among facilities with complete data across the study period.

Results: Preliminary analyses indicate that among the 36 birthing hospitals covering 774,682 births, cesarean delivery rates declined modestly from 2012 to 2024 (40.5% to 37.6%), while IOL trends increased over the same period. Specifically, IOL increased from 28.1% (2012) to 31.4% (2024).

Conclusions: This study will characterize how hospital funding and teaching status shape both the level and trajectory of obstetric intervention rates over more than a decade in Louisiana. Analyses will contribute to evidence on institutional drivers of medicalized birth with implications for hospital accountability and quality improvement policy.

Structural factors

Measuring Structural Classism and Its Health Consequences Emily Dore* Emily Dore, Patricia Homan, Megan Reynolds,

Fundamental Cause Theory posits that health disparities by socioeconomic status (SES) persist because the higher SES group has access to flexible resources that they use to maintain their health. While this explains why higher-SES groups always have better health relative to lower-SES groups, it does not address why the health advantage may be larger in some places and at some time points than others. Meanwhile, recent literature on social determinants of health has turned to state-level structural determinants to explain downstream health outcomes and differences in the size of health disparities across states. Social class is one axis that has not yet been measured this way, despite its strong relationship to health. In this paper, we develop the concept of structural classism and construct a quantitative index that captures the domains of policies, labor force, economic inequality, and politics. We then link this index to individual self-rated health to understand how state-level structural classism shapes population health. We argue that structural classism affects health by first stratifying the population into social classes and then modifying individuals' ability to use health-promoting resources to achieve good health based on their social class. In multilevel logistic regression models with data from the Behavioral Risk Factor Surveillance System in 2023 (N=392,581), we find that structural classism was associated with poor health for individuals with less than a college education (OR=0.97, 95%CI 0.94, 0.99) as well as individuals who graduated college (OR=0.94, 95%CI 0.90, 0.98). These results support the universal harm hypothesis, suggesting that structural classism harms overall population health.