2025 Public Health Research Day

Celebrating Innovative Public Health Research

May 7, 2025
1:00 p.m. - 3:00 p.m.
Price Center Ballroom East

UC San Diego
HERBERT WERTHEIM SCHOOL OF PUBLIC HEALTH AND HUMAN LONGEVITY SCIENCE

Message from Dean Anderson

We are delighted to welcome you to this annual celebration of innovation, inquiry, and impact in public health.

Today's event highlights the bold ideas and innovative work of our students, trainees, and research staff—often in partnership with community organizations—whose commitment to advancing public health thrives even in the face of complex challenges.

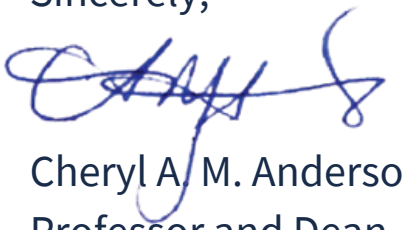
This year, we're especially excited to introduce a new trainee-focused networking session designed to foster mentorship, spark collaboration, and build community among emerging public health leaders.

We hope today inspires meaningful dialogue, cultivates new connections, and fosters collaborations that translate research into action—locally and globally.

Special thanks to our networking mentors, planning committee, volunteers, and everyone who contributed to making this event a success.

Enjoy the afternoon!

Sincerely,



Cheryl A. M. Anderson, PhD, MPH, MS
Professor and Dean
Hood Family Endowed Dean's Chair in Public Health

Organizing Committee Members and Roles

Karemi Alvarez, MPH – Communications
Kimberly Brouwer, PhD – Education Liaison
Jennifer Cloney – Event Planning
Carrie Goldsmith Mercer, MAEd – Networking
Mandi Graham, MA – Guest Relations & Networking
Seiko Hatta, MA – Event Planning
Jordan Kohn, PhD – Abstract Review
Donna Kritz-Silverstein, PhD – Abstract Review
Eric Leas, PhD, MPH – Abstract Review
Lindsay Miller, PhD, MPH – Abstract Review
Meredith A. Pung, PhD – Chair and Communications

Networking Mentors

Imani Beckett – Undergraduate Student
Richard Garfein, PhD, MPH – Faculty
Nadia Hemmat, MS – Doctoral Student
Ariana Khayamian – Research Staff
Kirstin Kielhold, MS– Doctoral Student
Valerie Langarica – Masters Student
Henry Lee, MD, MS – Faculty
Elle Mari, MSc – Director, Urban Food Equity
Alexia Marmolejo Juarez – Undergraduate Student
Julia McMillan, MA, MS – Research Staff
Andile Mkhonta, MPH – Doctoral Student
Annie Nguyen, PhD, MPH – Faculty
Ellymia Nguyen – Undergraduate Student
Jolee Nieberding-Swanberg – Masters Student
Bill Oswald, PhD – Community Partner, The Global ARC
Claire Pinson – Doctoral Student
Borsika Rabin, PhD, PharmD, MPH – Faculty
Mariana Schveitzer, PhD – Visiting Professor
Lilia Lorena Vazquez Badillo – Masters Student

Event Volunteers

Martha Anderson, JD – Office of the Dean
Mike Davison – Business Office
Tyler DeLong – Communications
Jenny Espiritu, MA – Education Programs
Alan Larson – Faculty Administrative Support Team
Jane Moon, MPH – Education Programs
Eric Peng, MEd – Education Programs
Vicky Segall Byrne, MA – Office of the Dean
Rosemarie Subala, MPH – Education Programs
Erin Warren – Education Programs

Agenda

12:30 p.m. Doors Open

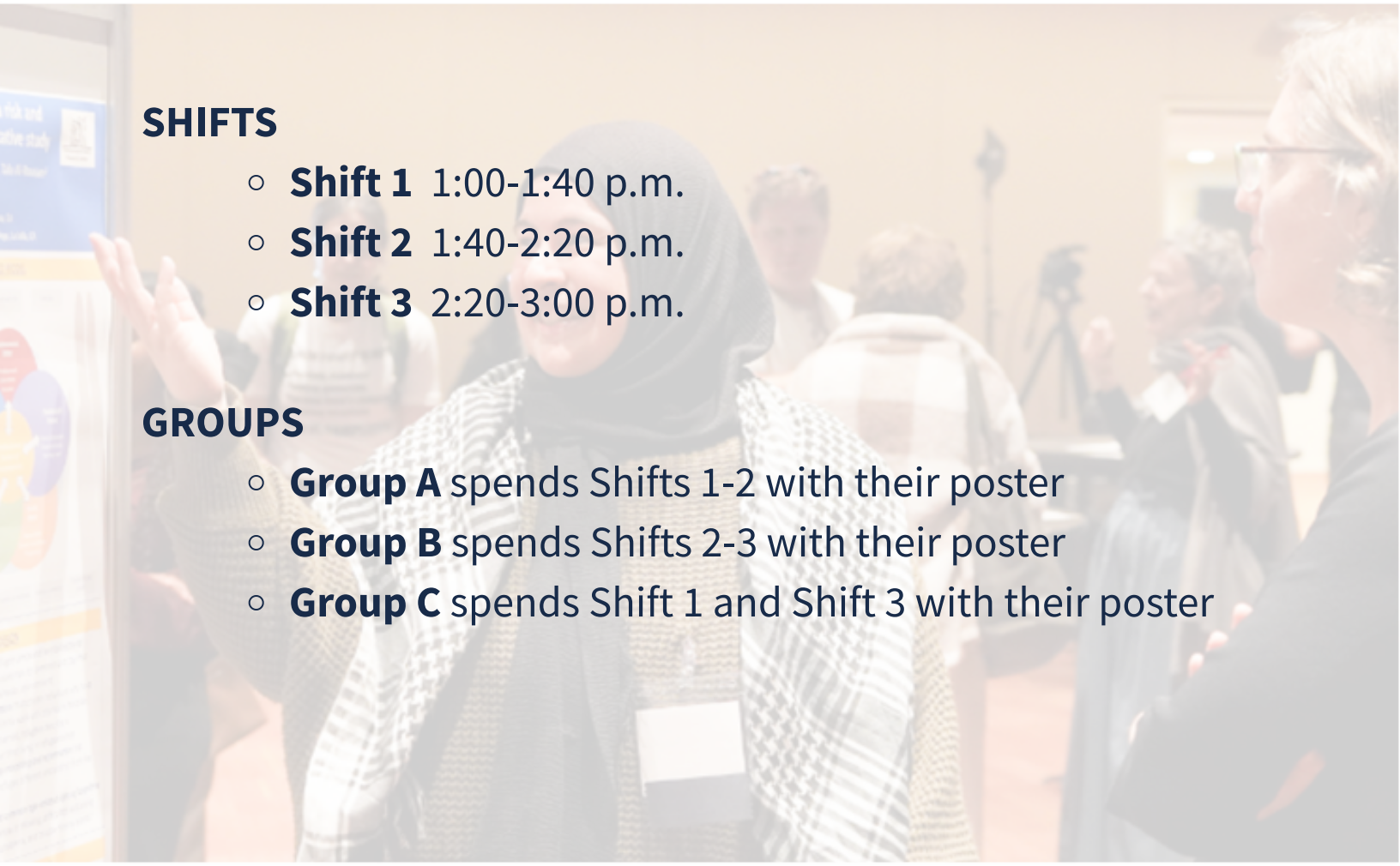
1:00 p.m. Welcome – Dean Anderson

1:05 p.m. Networking Session Overview – Carrie Goldsmith Mercer

1:10 p.m. Poster Session and Networking

2:55 p.m. Closing – Dean Anderson

Presentation & Networking Schedule



SHIFTS

- **Shift 1** 1:00-1:40 p.m.
- **Shift 2** 1:40-2:20 p.m.
- **Shift 3** 2:20-3:00 p.m.

GROUPS

- **Group A** spends Shifts 1-2 with their poster
- **Group B** spends Shifts 2-3 with their poster
- **Group C** spends Shift 1 and Shift 3 with their poster

Networking Topics

Building a Research Network – Shifts 1-3

Career Pathways in Public Health – Shifts 1-3

Internships and Research Opportunities – Shifts 1-3

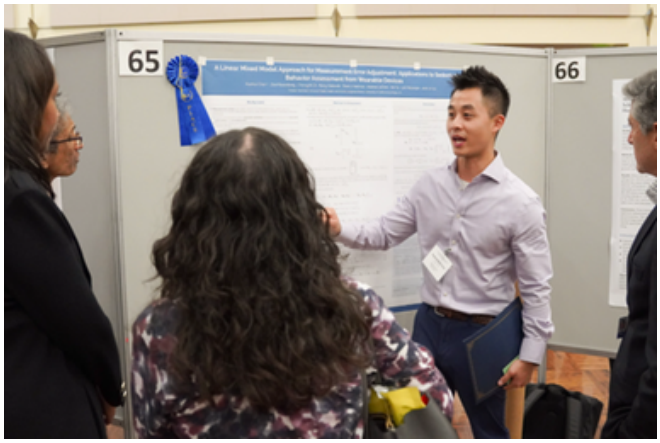
Researching Graduate Programs – Shifts 1-3

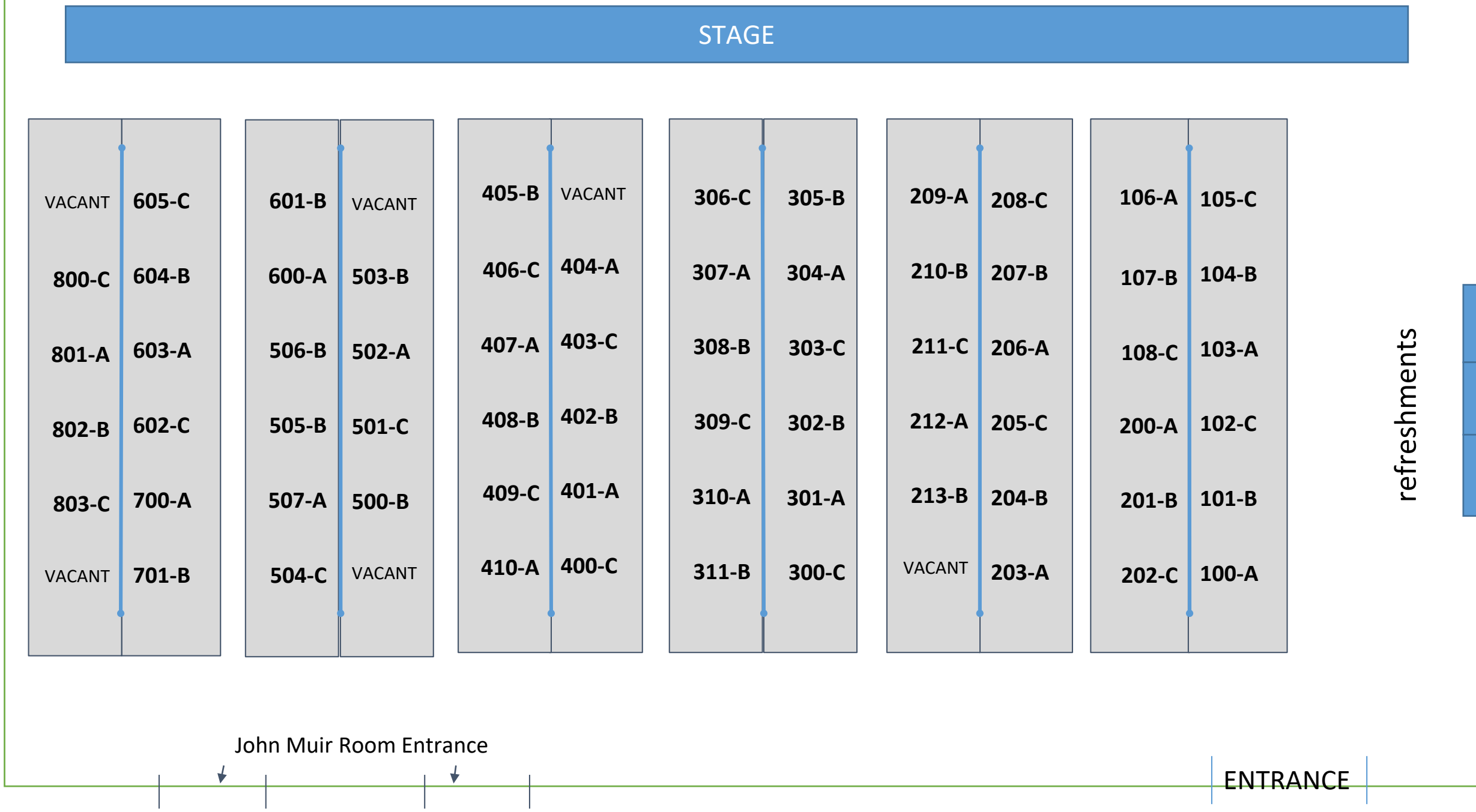
University-Community Partnerships – Shifts 1 and 2

Work-Life Balance and Resilience in Public Health – Shifts 1 and 3

Research Areas and Poster Numbering

100s Climate and Environmental Health
200s Health Equity and Global Health Justice
300s Healthy Aging and Human Longevity Science
400s Health Services Research and Health Policy
500s Mental Health and Substance Use
600s Quantitative Methods in Public Health
700s Women's Health and Reproductive Justice
800s Other




STAGE
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212-A 205-C
213-B 204-B
VACANT 203-A
106-A 105-C
107-B 104-B
108-C 103-A
200-A 102-C
201-B 101-B
202-C 100-A
refreshments
John Muir Room Entrance
ENTRANCE

Poster #: 100

Poster Abstracts

Climate and Environmental Health

Title: Youth Climate Advisors: Community-Based Participatory Research in Action
Authors: Marlene Flores, Megan Nguyen, Natalie Vawter

Background
Imperial Beach is currently experiencing one of the worst ongoing environmental health disasters in the country. Community members have complained of serious impact on their wellbeing, mental, and physical health. Academic researchers from UCSD, UT Austin, and the CDC have recently begun collecting environmental and health data in response to these community concerns. We sought to develop a youth-led participatory research (YPAR) project to center the voices of young people who have historically been omitted from this type of research.

Methods
Youth climate advisors (YCA) is an ongoing rotating cohort of high school students from Mar Vista High, a Title 1 school in Imperial Beach. With support from UCSD and Scripps researchers, students collect mixed methods data, developing and answering environmental health questions about their own community. In 2024, students collected oral histories from older community members. We facilitated a rapid thematic analysis of these oral histories to develop salient environmental health research questions.

Results
Students collected 20 oral histories in total. They identified 6 main themes from these: government negligence, binational problem/cooperation, loss of community and identity, and negative impact on physical and mental health. From these they developed 4 primary research topics: Occupational health, spatial disparities, and wildlife impact. Partnering with Scripps, they then collected air particle and environmental data to explore their questions.

Conclusion
Training students in YPAR mixed methods and receiving direct feedback enables scientists at UCSD to develop and implement research centered around concerns voiced directly by the community itself.

Poster #: 101

Poster Abstracts

Climate and Environmental Health

Title: Climate Change Impacts on Mental Well-being of Refugees: A Qualitative Analysis
Authors: Raghad Aljenabi, Nathaniel J. Gonzalez, Wael K. Al-Delaimy

Background
Displaced populations are rising at alarming rates due to the climate crisis. This issue will only worsen as the climate crisis progresses. The Middle Eastern North African region is at the frontline of the consequences of climate change on mental health. The aim of this study was to explore the perspectives of resettled Syrian refugees about climate change and its impacts on their mental health.

Methods
Syrian refugees who resettled in the U.S. less than two years ago were recruited in San Diego from September 2023 to April 2024. They participated in semi-structured qualitative focus groups to address their beliefs, attitudes, and perceptions about climate change and their mental well-being. Interviews were translated and transcribed from Arabic to English. Themes were coded using ATLAS.ti software.

Results
There were 12 total Syrian refugee participants in two semi-structured qualitative focus groups. Participants reported severe weather conditions in their transition countries that exacerbated stress and impacted their mental well-being. Pre-existing health conditions, income, unemployment, and discrimination were also made worse by these weather events during their transition compared to their native Syria. Participants reported that their mental and physical well-being is impacted by severe climate change.

Conclusion
Refugee experiences highlight the complex determinants of mental health within this population as a result of climate change. These findings suggest the need for ongoing mixed method analysis to develop culturally adequate mental health interventions specific to the experiences and beliefs common to refugees who are impacted by climate change events.

Poster Abstracts

Climate and Environmental Health

Title: Pesticides and Microbial Contamination in Irrigation Systems of Pedro Moncayo-Ecuador
Authors: Aracely Zambrano-Romero

Background
Neonicotinoid insecticides (NNIs) and atrazine are pesticides extensively used in agriculture, posing significant ecological and health risks. However, research on their presence in irrigation water remains limited, particularly in agricultural regions of Latin America. Thus, this study describes the concentrations of NNIs and atrazine in irrigation water samples collected in 2022, 2023 and 2024 in Pedro Moncayo-Ecuador, a region known for its intensive floriculture for exportation.

Methods
This study used irrigation water sampling linked to epidemiologycal data, during dry and wet seasons, to characterize concentrations of NNIs and atrazine in the two large-scale irrigation systems of Pedro Moncayo-Ecuador. Other physicochemical and microbiologycal parameters were also analyzed.

Results
NNIs were detected in 63.6% of samples (n=21 out of 33), with concentrations up to 2,401 ng/L. Imidacloprid and thiamethoxam were the most frequently detected. While atrazine just was detected during 2024 in 3.03% of the samples (n=1 out of 33). No metal(oids) exceeded quality standards. E. coli was present in 90.9% of the samples (n=30 out of 33), and free chlorine exceeded the quality standards in 6.1% of the samples (n=2 out of 33).

Conclusion
This study highlights the widespread presence of NNIs in irrigation water of Pedro Moncayo-Ecuador. Moreover, the high occurrence of E. coli concerns about poor microbiological quality and health risks for communities. These results highlight the need for ongoing pesticide and microbial monitoring in irrigation water to guide risk mitigation and sustainable agricultural practices.

Poster #: 103

Poster Abstracts

Climate and Environmental Health

Title: Wealth and Health: How Wealth Moderates Outcomes from Environmental Risk Factors
Authors: Zachary Blundell, Carlos Gould

Background
Health and wealth are positively linked at both the individual and community levels. An element of this association may be explained by how localization and the damages differ between poorer and wealthier communities. However, there is a lack of empirical evidence on a large scale supporting this assertion. We use nationwide data on the distribution of environmental causes of morbidity and mortality across three decades to investigate this theory.

Methods
We obtained country-year data on rates of DALYs and mortality attributable to specific risk factors from the Global Burden of Disease and the GDP from the World Bank for 203 countries from 1990-2021. Environmental risk factors were grouped into household, community, and global levels. To understand the relation between wealth and outcomes, we regressed outcomes over GDP, controlling for year and locations and weighting based on average population.

Results
Household outcomes declined with higher GDP. For the community level, the effect of GDP varies with risk factor: ambient air pollution and occupational carcinogens have opposite trends. For our current global factors, higher GDP slightly decreases outcomes. These effects vary when stratified by WHO region.

Conclusion
At the household level, higher GDP has a protective effect, due to developments in infrastructure that reduce population level outcomes. There is no clear pattern across community factors and there is a slight protective effect for global factors. However, we lack a solid way to track global risk factors and its outcomes. There may be a combination of social and cultural factors that affect these outcomes as well.

Poster Abstracts

Climate and Environmental Health

Title: Bike-Share Systems and Emergency Department Visit Rates in California
Authors: Daniela Hannah, Carlos Gould, Alexandra Heaney

Background
Bike-share systems offer both opportunities and risks for public health. While encouraging active transportation and reducing vehicle emissions, they also raise concerns about injury-related emergency department (ED) visits. This study investigates the association between bike-share usage and daily ED visit rates across California to explore whether the benefits of bike-share use outweigh the short-term risks.

Methods
A novel database of bike-share rides across California (2010–present) was developed and linked to daily ED visit records and hospitalization rates at the zip code level. Environmental factors, including wildfire smoke exposure, temperature, and precipitation, were integrated as controls. Statistical analyses examine associations between bike-share metrics—such as trip counts and distances ridden—and all-cause/cause-specific healthcare utilization.

Results
Preliminary findings reveal seasonal patterns in bike-share usage. Data integration confirms the feasibility of linking bike-share metrics to healthcare utilization at granular spatial and temporal scales, providing insights into the safety implications of bike-sharing programs. Statistical analysis of the associations between ridership and injury-related ED visits is in progress.

Conclusion
While bike-sharing promotes sustainable transportation, addressing safety concerns like injury prevention is critical to maximizing public health benefits. Findings will inform strategies to enhance safety through infrastructure improvements and targeted interventions for high-risk groups.

Poster Abstracts

Climate and Environmental Health

Title: Pesticide and Liver Biomarkers Among Ecuadorian Living in Agrarian Settings
Authors: Rajendra Prasad Parajuli, Priyanka Mehta, Briana N.C. Chronister, Ariel E. Feldstein, Kun Yang, Jose R Suarez-Lopez

Background
Experimental studies suggest that organophosphate pesticides, ethylene bis-dithiocarbamate fungicides, glyphosate herbicides, and pyrethroid insecticides can cause liver cell death. However, population-based evidence is limited. We aimed to assess the associations of insecticides and herbicides with liver biomarkers among adolescents and adults.

Methods
We analyzed data from 535 adolescents (11–17 years) in Ecuador in 2016 and examined again as young adults (17–24 years, N=505) in 2022. Plasma alanine aminotransferase (ALT), aspartate aminotransferase (AST), and soluble cytokeratin-18 (CK18, m30 and m65 fractions) were measured. Urinary concentrations of 2,4-dichlorophenoxyacetic acid (2,4-D), neonicotinoids, organophosphorus metabolites (para-nitrophenol [PNP]), pyrethroids (3-phenoxybenzoic acid or 3-PBA), organophosphorus herbicide and insect repellent were assessed using spectrophotometry. Generalized estimating equation (GEE) models examined associations between urinary pesticide metabolites and liver biomarkers, adjusting for covariates. We used GEE models with interaction and quadratic terms to assess age-related and curvilinear effects.

Results
Overall, we did not find evidence of associations between urinary pesticide biomarkers and liver biomarkers in longitudinal models or cross-sectional analyses (2022). Some evidence of a curvilinear association was observed between 3-PBA and ALT ($\beta_{quadratic}$ = -0.35, 95% CI: [-0.67, -0.04]). There was some evidence that age modification, as PNP was positively associated with ALT in participants <14.4 years ($\beta_{age\text{-}stratified}$= 0.62, 95% CI: [0.03, 1.21]) but negatively in older participants ($\beta_{age\text{-}stratified}$ = -0.60, 95% CI: [-1.08, -0.12]).

Conclusion
Overall, urinary pesticide metabolites did not correlate with liver biomarkers; however, some age-specific vulnerabilities were observed. Future research should account for these differences to better mitigate liver toxicity risks.

Poster #: 106

Poster Abstracts

Climate and Environmental Health

Title: Leveraging Remote Sensing and Machine Learning to Assess Pesticide Exposure from Agricultural Drift in Pedro Moncayo, Ecuador

Authors: Briana N.C. Chronister, Sarai Reyes, Ariana Huezo, Jose Suarez-Torres, Harvey Checkoway, Franklin de la Cruz, Raeanne C. Moore, Daniel Sousa, Jose R. Suarez-Lopez

Background

Off-target movement of pesticides (pesticide drift) exposes agricultural communities like Pedro Moncayo (PM), Ecuador to these chemicals. Characterizing exposure by pesticide drift is crucial in developing public health interventions, yet no contemporary agriculture maps exist for PM.

Methods

Uniform manifold approximation and projection (UMAP) was applied to Sentinel-2 vegetation fraction times series (January 2021- October 2022) to identify temporal endmembers (tEMs). Agriculture map accuracy was calculated using 2001 ground truth points. In 2022, 500 adults in PM were evaluated for urinary concentrations of organophosphate, pyrethroid, and herbicide biomarkers using mass spectrometry. Agricultural surface area around homes (home-ag SAbuffer size) were calculated. Generalized estimating equations (GEE) and logistic regression assessed associations between home-ag SA with biomarker concentration, overall and stratified by sex, adjusting for confounders.

Results

Four identified tEMs were used to create an agriculture map with 72.6% accuracy and 75.3% precision. A 1% increase in home-ag SA50m was associated with 103.7% higher 2,4- dichlorophenoxyacetic acid (2,4-D) concentration, strengthening in males (β=288.9% 95% Confidence Interval: 44.5%, 946.8%). Negative associations were observed for para-nitrophenol with home-ag SA50m (-31.0% [-53.0%, -1.4%]) overall and 3,5,6-Trichloro-2-pyridinol (TCPy) concentration with home-ag SA150m (-0.13% [-0.25, -0.01]) in women. A 1000m2 higher home-ag SA50m had a 33% higher risk of having detectable malathion dicarboxylic acid (MDA).

Conclusion

UMAP successfully identified distinct tEMs that mapped agriculture with moderate accuracy. Associations suggest pesticide drift of 2,4-D and MDA but not para-nitrophenol and TCPy. Future studies should integrate participant movement and crop type mapping for improved pesticide drift characterization.

Poster #: 107

Poster Abstracts

Climate and Environmental Health

Title: Associations between distributions of neighborhood socio-demographics and proximity to Toxic Release Inventory (TRI) facilities in San Diego County

Authors: Himani Yalamaddi, Jin Luo

Background

Previous environmental justice literature established that socioeconomically disadvantaged and/or minoritized populations experience greater exposure to pollution – particularly hazardous waste. While previous research examined the relationship between Toxics Release Program (TRI) facilities and the demographics of surrounding communities, none have focused on San Diego County.

Methods

3km facility buffers were created around each of the 75 TRI facilities (2023) in San Diego County. Facility presence and counts were merged with census tract-level demographic information from the American Community Survey (2023) and Decennial Census (2020), and a logistic regression and zero-inflated negative binomial model were fit to understand these phenomena. In addition, an interactive ArcGIS map was created to facilitate future community engagement.

Results

We found that a 1% increase in renters in a census tract was associated with a 3.59% (CI: 2.79%, 4.43%) increase in the odds of containing a facility. In addition, we find that a 1% increase in the Black-identifying population in a census tract was associated with a 5.88% (CI: 1.76%, 10.08%) decrease, while a 1% increase in the Asian-identifying population in the tract is associated with a 1.94% (CI: .48%, 3.47%) increase in the odds of being a host.

Conclusion

We found interesting results demonstrating a socioeconomic disparity among pollution exposure associated with the percentage of renters in a census tract. The percentage of people of color in a census tract results in mixed exposure to TRI facilities, and further exploration is needed.

Poster #: 108

Poster Abstracts

Climate and Environmental Health

Title: Does temperature affect maternal pregnancy complications? Impacts on hyperemesis and hypertensive disorders.

Authors: Val Catanzarite, Alexandra K. Heaney, Carlos F. Gould

Background

Prior studies have shown that elevated ambient temperatures are associated with pregnancy complications, but most have focused on adverse fetal/neonatal outcomes rather than maternal complications. We investigate the effect of temperature on emergency department (ED) visits and hospitalizations for two key maternal health outcomes: hyperemesis and hypertensive disorders.

Methods

We linked data on daily temperatures with encounter records of all non-federal hospital in California from 2006-2017. We aggregated data to the zip-code level and modeled the associations between daily temperatures and rates of ED visits and hospitalizations for hyperemesis and hypertensive disorders among women ages 18-49 using Poisson panel fixed effects regressions, accounting for one week of lags and flexible area and time controls to isolate the effects of variations in temperatures on outcomes.

Results

We compared outcomes to days with temperature 18-22°C. Pregnancy ED visits were 9.4% (95% CI 5.9-12.9%) lower with T< 6°C and 9.7% (5.3%-14.1%) higher with T>34°C, Hyperemesis ED visits were 4.4% (0.3-28.5%) higher with T>34°C, Hypertensive disorders hospitalizations were 14.7% (7.2-22.2%) and 10.3% (3.4%-18.2%) higher with T>6°C and T6- 16°C and 12.2% (0.9-23.5%) lower with T>34°C. Hyperemesis hospitalizations and hypertensive disorders ED visits did not vary with temperature.

Conclusion

Focused patient education for unusually hot days may reduce the need for ED visits for hyperemesis. The increased rate of hospitalization for hypertensive disorders may warrant a recommendation for home blood pressure monitoring for unusually cold periods. Obstetric ED staffing needs may be anticipated based on temperature.

Poster Abstracts

Health Equity and Global Health Justice

Title: Barriers to PSA Testing: Examining Sociodemographic Disparities in Prostate Cancer Screening
Authors: Daniel Sabater Minarim, Kaitlyn Lew, Suraj Rajan, Kylie M Morgan, Paul Riviere, Matthew P Banegas, Brent S Rose

Background
Prostate cancer disparities persist due to unequal screening access, leading to higher mortality rates. While prostate-specific antigen (PSA) testing enables early detection through shared decision-making, significant testing disparities remain.

Methods
Using the All of Us Research Program, we analyzed 43,652 individuals (assigned male at birth, aged 45-85, without prostate cancer). We examined demographics, socioeconomic status, healthcare access, health literacy, discrimination, and disability through multivariable logistic regression.

Results
Older age predicted higher PSA testing rates (OR 1.03, $p<0.001$). Significant barriers included: transgender/non-binary identity (OR 0.55, $p<0.001$), high neighborhood deprivation (OR 0.59, $p<0.001$), healthcare discrimination (OR 0.93, $p=0.007$), rural healthcare delays (OR 0.79, $p=0.002$), transportation barriers (OR 0.87, $p=0.009$), disability (OR 0.83, $p<0.001$), low health literacy (OR 0.82, $p<0.001$), and lack of shared decision-making (OR 0.86, $p<0.001$).

Conclusion
PSA testing disparities stem from socioeconomic, access-related, and health literacy barriers. Addressing these requires improved healthcare access, anti-discrimination efforts, and enhanced patient-provider communication, particularly for marginalized groups like transgender individuals and residents of deprived areas.

Poster #: 201

Poster Abstracts

Health Equity and Global Health Justice

Title: Bridging the Gap: Financial Insecurity Impacts on UC San Diego Students' Wellbeing
Authors: Melanie Martin Gallegos, Karla Garcia, Mark Lee, Leanne Liaw, Melissa Lupian, Nancy Binkin

Background
Financial insecurity makes it difficult for college students to meet their basic needs and may affect academic performance and well-being. Little is known about the prevalence and impact of financial insecurity at UC San Diego (UCSD). We therefore conducted a survey to assess its prevalence and highlight its impacts on academic performance and physical and mental health among UCSD undergraduates.

Methods
In February 2025, UCSD undergraduates enrolled in selected Economics and Public Health courses completed a Qualtrics questionnaire that collected information on financial insecurity and wellbeing. Students were considered financially insecure if they reported difficulty getting through with the funds available to them during at least one month during the current academic year. The PHQ-2 and GAD-2 were used to assess possible depression and anxiety. EpiInfo 7.2.6 was used to calculate frequencies and prevalence rate ratios and p-values.

Results
The response rate was 80%. Of the 774 respondents, 36% met the definition of financially insecure. Financially insecure students were 1.6 times as likely to have a GPA below 3.5 (65%v.40%, $p<0.0000001$), and were 1.5 times as likely to rate their general health as "poor/fair" (33%v.22%, $p=0.0005$). They were also 1.9 times as likely to have possible depression (27%v.14%, $p=0.000005$) and 1.5 times as likely to have possible anxiety (41%v.28%, $p=0.0001$).

Conclusion
Financial insecurity significantly impacts academic performance and wellbeing for the many students struggling to pay for basic needs. UCSD should invest in financial counseling and expand financial aid programs to assist students in attaining financial security.

Poster #: 202

Poster Abstracts

Health Equity and Global Health Justice

Title: Assessing UCSD Health Patient Navigation Services to Inform CMS Principal Illness Navigation Implementation

Authors: Lily Nguyen, Sakshith Chintala, Corinne McDaniels Davidson, Elizabeth Duran, Danielle McLaughlin, Guillermo Haro Miramontes, Jesse Nodora, Katheryn Rodriguez, Ann Valentine, Matthew P. Banegas

Background

Patients with cancer and unmet health-related social needs (HRSN) are vulnerable to adverse health outcomes. Centers for Medicare and Medicaid Services (CMS) passed a rule in 2024 to reimburse for screening and patient navigation (PN) services to address HRSN. The project aims to assess processes and experiences of PN service systems at UCSD Health/Moores Cancer Center (MCC) to inform implementation of the 2024 CMS rule.

Methods

This mixed-methods quality-improvement project utilizes electronic health record data of patients receiving oncology care and referred to PN services at UCSD Health/ MCC between 7/1/21-12/31/23 (n=23,450). Data included demographics, HRSN, and healthcare use 12 months following referral. Qualitative data will be collected from patients, family/caregivers, UCSD health staff, and community-based organization (CBO) partners.

Results

Among all patients (n=23,450), 23.8% were contacted and navigated, 61.6% were contacted but not navigated, and 14.6% were not reached. Among navigated patients, 45.8% reported transportation and lodging barriers; 39.9% and 6.5% reported cultural and financial barriers, respectively. A larger proportion of navigated patients had missed oncology visits, emergency department visits, and inpatient admissions. Qualitative findings collected from n=1 CBO partner and n=1 UCSD patient navigator, suggest streamlining HRSN assessment workflows and patient resource referrals as implementation facilitators, while learning new billing processes and potential increased patient cost-sharing as implementation barriers.

Conclusion

Findings underscore the importance of addressing HRSN to highlight factors to guide future implementation of HRSN navigation services for patients with cancer.

Poster #: 203

Poster Abstracts

Health Equity and Global Health Justice

Title: Making Ends Meet: How UC San Diego Students Pay for their Education and Overcome Financial Gaps
Authors: Madeline Alford, Jackie Aviles, Derrick Cha, Lindsey Ruiz, McKayla Dasha Sarmiento

Background
While financial aid packages provide grants and scholarships, they often include loans. To learn more about student loan attitudes and practices, we conducted a survey to assess the number of students who were offered and who accepted loans, anticipated total debt, the extent to which the loans alleviate financial insecurity, and concerns about their impact.

Methods
In February 2025, a multi-purpose Qualtrics survey that included a debt module was administered to undergraduate Public Health and Economics students at UCSD. EpiInfo 7.2.6 was used to calculate frequencies and prevalence rate ratios.

Results
The response rate was 80%. Of the 774 respondents, 440 (57%) received a financial aid package, of whom 35% were offered Federal loans. Of those offered loans, 74% accepted. Forty percent of students with loans believed they will accumulate loan debts greater than $20,000 by graduation. Despite the additional funds that loans provide, students with loans were still 1.3 times more likely to face financial difficulties than students with other forms of financial aid (53% vs. 41%; $p < 0.01$). Common reasons among respondents for rejecting loans are fear of accruing debt (27%) and insufficient knowledge of student loans (14%).

Conclusion
Many students rely on loans to meet rising attendance costs, although students are reluctant to take out loans, and current loans are not adequate to prevent financial insecurity. To ensure student needs are met, additional aid and resources on loan repayment and long-term financial wellness should be implemented.

Poster #: 204

Poster Abstracts

Health Equity and Global Health Justice

Title: Balancing Books and Paychecks: The Impact of Student Jobs on UCSD Students

Authors: Fiona Fisher, Catalina Jones, Jessica Jatiram, Michelle Griffith, Raigan Johnson, Natalie Kaplanyan, Nancy Binkin

Background

Working during college helps students cover costs, reduce debt, and obtain valuable experience, but may have negative consequences. Little is known about student employment and its effects among undergraduates at the University of California, San Diego (UCSD). We therefore conducted a survey examining prevalence, motivations, satisfaction, and challenges of student employment.

Methods

During February 2025, UCSD undergraduates enrolled in selected Public Health and Economics classes completed a Qualtrics questionnaire, which included questions about current working practices, scales to assess impact of working on academics, health, financial security, career development, and work satisfaction. Data analysis was performed using EpiInfo7.2.6.0.

Results

The response rate was 80%. Among the 774 respondents, 274 (36%) were currently working, of whom 33% worked >20 hours/week and 17% worked >1 job. When asked to rank their top motivation for working, 44% selected paying for basic needs, followed by gaining experience (24%), covering school expenses (18%), and earning extra money (14%). Negative academic effects were reported by 46% of working students, and 37% reported that working had negative health effects. However, 70% reported that working positively impacted financial security, and 59% said that it positively affected their career development. Overall, 84% reported enjoying work or that the pros of working outweighed the cons.

Conclusion

Student employment improved financial insecurity, but it had negative impacts on academics and health. Our findings suggest that greater consideration should be given to increasing access to basic needs, and that improving work conditions may lead to higher academic performance and improved wellbeing.

Poster Abstracts

Health Equity and Global Health Justice

Title: Association Between Perceived Post-Migration Health Status and Measured Cardiometabolic Risk Factors

Authors: Tamara Benrey, Nicole N. Karongo, Xochitl Aguinaga, Amy E. Atun, Kathryn Maysent, Sahra Abdi, Tsigealem Birhane, Meshate Mengistu, Connie M. Weaver, Cheryl A.M. Anderson

Background

There is a paucity of data characterizing the health status of East Africans post-migration to the U.S. We hypothesized that perceived post-migration health status would be significantly correlated with measured cardiometabolic indicators, body mass index (BMI) and blood pressure.

Methods

In partnership with the United Women of East Africa Support Team (UWEAST), we recruited 42 women who identify as East African immigrants. We asked participants about perceived health changes after migration to the U.S. with response categories being “Better”, “About the Same”, and “Worse”. Blood pressure and BMI were measured. One-way analysis of variance (ANOVA) was performed (R.version 4.4.1) to determine mean differences between perceived post-migration health with blood pressure and BMI.

Results

This all-female sample had a mean age of 49 years, mean (SD) systolic blood pressure, diastolic blood pressure, and BMI of 117.44(13.93) mmHg, 77.54(9.08) mmHg, and 31.55(5.54) kg/m2. Our results showed a non-significant difference between perceived post-migration health with blood pressure ($F = 0.89$, p-value = .42) and BMI ($F= 0.09$, p-value=.92). No further post hoc tests were conducted due to non-significance.

Conclusion

While participants perceive a decline in overall health after migration to the U.S., this may not be directly reflected in current measured blood pressure and BMI levels. Self- reported health assessments can capture well-being beyond physiological markers. Hence, qualitative exploration, especially beyond physical health, could provide additional context for perceived health status amongst East African immigrants. Future work should also include data collection on self-reported home-county blood pressure for post-migration comparison.

Poster Abstracts

Health Equity and Global Health Justice

Title: Association Between Food Insecurity and Depressive Symptoms among University Students in Eswatini
Authors: Andile Mkhonta, Fortunate Shabalala, Sakhile Masuku, Rebecca Fielding-Miller

Background
Food insecurity is a significant public health problem associated with increased risks of depression among university students. Studies show that food insecurity is linked to psychological distress, including depression, anxiety, and suicidal ideation, that impairs academic performance and increases dropout risk among university students. In Eswatini, where over half of the population faces chronic food insecurity and poverty, little is known about the link between food insecurity and depressive symptoms among university students. We sought to test the association between food insecurity and depressive symptoms among female students at the University of Eswatini.

Methods
We conducted a cross-sectional analysis of 372 randomly selected female students. Food insecurity was measured using a 7-item scale adapted from the Household Hunger Scale, and depressive symptoms were screened using the 10-item Center for Epidemiologic Studies Depression Scale (CES-D-10). We built bivariate and multivariable logistic regression models to assess associations between food insecurity and depressive symptoms, adjusting for orphan status, rural/urban residence, caregiving responsibilities, and SES.

Results
Compared to the third of students with the lowest food insecurity scores, those with moderate and high food insecurity scores had 6.86 times (95% CI: 3.19-16.2) and 7.91 times (95% CI: 3.61-19.0) the odds of depressive symptoms, respectively, adjusting for potential confounders. Being employed was significantly associated with food insecurity and higher depressive symptoms ($p = 0.031$).

Conclusion
Food insecurity was linked to depressive symptoms among female university students in Eswatini. Targeted interventions are essential to alleviate food insecurity and its psychological effects.

Poster #: 207

Poster Abstracts

Health Equity and Global Health Justice

Title: LGBT Students at UCSD Report Lower Self-Compassion than Non-LGBT Students
Authors: Ding Ding, Elsa Schmidt, Megan Nguyen, Rebecca Fielding-Miller

Background
Lesbian gay bisexual and transgender (LGBT) students have worse mental health outcomes than their heterosexual and cisgender peers. Self-compassion is protective against poor mental health.

Methods
We recruited a convenience sample for an online sexual health and self-compassion intervention. Participants were full-time UCSD students who were at least 18 and had a smartphone. Students completed a self-administered survey that included a self-compassion scale and basic demographics. We used bivariate tests and multivariable regressions to test our hypothesis that LGBT students would report lower levels of self-compassion than non-LGBT students.

Results
Two hundred and thirty two students completed the self-compassion scale and provided demographic data. 49% (n=114) self-identified as LGBT and 70% self-identified as female. Across the full sample, the median self-compassion score was 2.83 (range: 1-5). In simple bivariate analyses, LGBT students reported significantly lower overall self-compassion than non-LGBT students (2.65 vs 2.88, p = 0.01). In adjusted models, LGBT students reported significantly lower scores for isolation (b = -0.29 p = 0.035) and overidentification (b = -0.26 p = 0.05).

Conclusion
LGBT students reported lower self-compassion, suggesting they are at higher risk for adverse mental health outcomes. LGBT students likely require prioritized and tailored mental health and self-compassion support services. The effectiveness of university-delivered interventions will likely depend heavily on LGBT students' trust in the institution, therefore universities should prioritize fostering solidarity and group-based approaches to simultaneously address high levels of isolation and the role of structural drivers of poor mental health for LGBT students.

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Poster Abstracts

Health Equity and Global Health Justice

Title: Mind and Heart: Perceived Risk and Cognitive Impact of Hypertension Among Refugees
Authors: Ariana Khayamian, Roman Moness, Malak Saad, Arya Tanksale, Natalie Tran, Tala Al-Rousan

Background
Refugees face heightened cardiovascular and cognitive health risks due to complex sociocultural and structural barriers. Growing evidence among non-refugee cohorts suggest a potential relationship between these risks. Uncontrolled hypertension remains a concern within refugee populations, yet the cognitive and management implications remain underexplored. This study investigates perceived associations between hypertension and cognitive decline, and the structural and psychosocial factors affecting hypertension management among Arabic-speaking refugees.

Methods
Participants (n = 109) were recruited through a Federally Qualified Health Center system in San Diego, California, and completed surveys and interviews. Quantitative analyses examined associations between forgetfulness, BMI, and hypertension beliefs. Thematic analysis explored language barriers, psychological distress, hypertension self-management, and cultural interpretations of hypertension. This study is a substudy of a larger investigation into refugee patients' barriers to hypertension care and self-management improvements, examining remote hypertension self-management feasibility among resettled refugees in San Diego.

Results
83% of participants reported increased forgetfulness, statistically significantly associated with belief in ability to prevent stroke and heart attack ($p = .009$), but not with BMI or belief in hypertension-related brain damage. Distrust in monitoring devices and stress-related avoidance or overchecking impaired hypertension control. Language barriers impacted healthcare access and understanding, while having Arabic-speaking providers improved trust and treatment adherence. Refugees associated hypertension to cognitive decline, expressing the need for culturally responsive care.

Conclusion
Preliminary findings reveal intricate interactions between cognitive health, hypertension beliefs, and systemic barriers. Mental health, health literacy, and language access interventions are imperative to improving cardiovascular and cognitive outcomes within refugee populations.

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Poster Abstracts

Health Equity and Global Health Justice

Title: Factors Influencing Masking Behaviors During the COVID-19 Pandemic in a U.S.-Mexico Border

Authors: Keira Beltran-Murillo, Valeria Landa-Rosales, Stephanie Fruth, Angel Lomeli, Breanna Reyes, Linda Salgin, Nicole A. Stadnick, Louise C. Laurent, Borsika A. Rabin, Marva Seifert

Background

Mixed findings on adherence to mask mandates and recommendations suggest the potential influence of cultural and socioeconomic factors on masking practices, making border communities critical for examining the implementation of public health guidelines.

Methods

From May 2021-March 2023, as part of the NIH-funded CO-CREATE-EX study, research staff surveyed a U.S.-Mexico border community about masking behaviors across three settings: public indoor spaces, outdoor spaces within six feet of others, and outdoor spaces more than six feet apart. Univariate analyses were used to compare participant characteristics and covariates such as sex, age, education, and ethnicity to masking behavior. Significant variables were included in ordinal logistic regression models. A timeline was created to illustrate how masking behaviors changed alongside updates to CDC masking mandates.

Results

A total of 9,143 adult participants completed the survey, the majority of whom identified as Hispanic (94.1%) and female (60.6%). In public indoor spaces, participants with a university degree were 1.39 times more likely to report frequent masking compared to those with less than a high school education ($p < .001$). In outdoor spaces within six feet of others, Hispanic participants were 2.05 times more likely to report frequent masking compared to non-Hispanic participants ($p < .001$). In outdoor spaces more than six feet apart, participants with a high perceived risk of COVID-19 were 1.31 times more likely to report frequent masking compared to those with low perceived risk ($p < .001$).

Conclusion

These findings suggest that demographic characteristics and risk perceptions may influence masking behaviors.

Poster Abstracts

Health Equity and Global Health Justice

Title: The Future of Artificial Intelligence (AI) in Oncology: Enhancing Training and Implementation to Advance Clinical Care

Authors: Rithik Kumar, Ramya M. Rajagopalan

Background

Artificial intelligence (AI) has the potential to support clinical decision-making and enhance patient care, but will depend on clinicians' receptivity to the technology. Residents and fellows will enter clinical practice as these tools are beginning to be deployed, and will be on the front-lines of their implementation. This study investigated resident/fellow perspectives on and preparedness for AI tools for cancer care.

Methods

We conducted semi-structured interviews with 10 oncology residents/fellows at UCSD Health between September 2024 - April 2025. Interviews explored preparedness for AI integration, and perspectives on AI's clinical utility in oncology, benefits for physician wellness and patient care, and impact on equity and compassion in care. Transcribed interviews were analyzed using thematic analysis with Atlas.ti. Following interviews, a survey was distributed to residents / fellows across subspecialties to assess broader perspectives on AI adoption, its role in cancer diagnosis and treatment, and potential impact on empathy and healthcare equity.

Results

Participants were generally receptive to AI but those with minimal prior exposure reported being less likely to adopt AI in their practice. Most felt unprepared for implementation and preferred live demonstrations for training. Many saw AI as a tool to enhance workplace wellness by reducing administrative tasks. While AI may mitigate disparities in cancer care, concerns were raised about its potential to exacerbate inequities, particularly in marginalized communities with limited health innovation infrastructure.

Conclusion

Familiarity with AI may influence clinician rates of adoption. Effective implementation will benefit from prioritizing structured training, practitioner wellness, and sufficiently addressing equity concerns.

Poster Abstracts

Health Equity and Global Health Justice

Title: Food insecurity among displaced populations in Armenia during the 2020 Artsakh conflict
Authors: Araz Majnoonian, Carine Tamamian, Musheh Ovanesian, Tala Al-Rousan

Background
The 2020 Nagorno-Karabakh conflict resulted in displacement of approximately 90,000 ethnic Armenians from Nagorno-Karabakh to Armenia. This study investigates food insecurity among displaced populations and host communities in Armenia during the conflict.

Methods
Using secondary analysis of cross-sectional data from the 2020 REACH ARM Database Multi-Sector Needs Assessment across six Armenian provinces, we examine the relationship between displacement status and food insecurity, focusing on household food purchasing ability and reduced portion sizes. Multivariable logistic regression was used for each outcome.

Results
The study sample includes 1,309 households, predominantly male-headed (68.1%), with most heads of household under 50 years old (81.2%). Of the sample, 10.2% were displaced in collective centers, 50.3% were displaced with family or friends, and 39.5% were hosting displaced people. Displaced individuals in collective centers had 3.89 times higher odds of reporting reduced food purchasing ability compared to non-displaced individuals (aOR: 3.89, 95% CI: 2.39-6.45). Those displaced with family or friends had 2.5 times higher odds of experiencing food purchasing difficulties (aOR: 2.53, 95% CI: 1.87- 3.42) compared to non-displaced individuals. Additionally, displaced individuals in collective centers had 1.94 times the odds of reducing portion sizes (aOR: 1.94, 95% CI: 1.12–3.29) compared to non-displaced individuals. Vulnerabilities such as household debt, having children, and having a lactating woman in the household were associated with increased risks of food insecurity.

Conclusion
These findings highlight the urgent need for targeted humanitarian interventions, particularly gender-sensitive approaches, to address food insecurity among displaced populations in conflict settings.

Poster Abstracts

Health Equity and Global Health Justice

Title: Evaluating Domestic Violence Support Services in Armenia: Perspectives from Service Providers
Authors: Stella Ghevondyan, Araz Majnoonian, Tala Al-Rousan

Background
Domestic violence (DV) is a critical global public health issue, with profound physical, psychological, and socioeconomic consequences for survivors and their families. Consistent with global prevalence, nearly one in four women in Armenia experience DV, yet support services have not been formally evaluated. The recent Nagorno-Karabakh conflict has exacerbated DV and increased pressure on service systems, making it urgent to evaluate DV support services.

Methods
This qualitative study aims to assess Armenia's DV support services from the perspectives of service providers. In-depth interviews with up to 20 social workers, psychologists, legal counselors, and shelter staff will explore insights on service accessibility, quality, and systemic barriers. Interviews will be conducted virtually in Armenian, transcribed, and translated to English for thematic analysis.

Results
Preliminary findings indicate that DV support providers face significant challenges due to deeply rooted cultural stigma, which discourages women from reporting abuse. Inadequate police responses such as reluctance to intervene, victim-blaming, and, in some cases, even returning women to their abusers along with gaps in DV policies, further endanger survivors. Addressing these issues requires comprehensive strategies to shift societal attitudes and strengthen institutional support for survivors.

Conclusion
Service providers, policymakers, and police must collaborate more effectively to strengthen the response to DV and address systemic gaps. Survivor-centered intervention protocols should be established to prioritize safety and prevent harmful practices. Police must receive mandatory trauma-informed training from DV support centers to address victim-blaming and improve intervention practices. Finally, targeted public awareness campaigns are essential to challenging cultural stigma.

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Poster Abstracts

Health Equity and Global Health Justice

Title: Testing Student-Driven Solutions to Improve Food Security at UC San Diego

Authors: Madison Rodriguez, Rachel Handa, Parsa Naghshineh, Nancy Binkin, Blanca Meléndrez, Elle Mari, Richard Garfein

Background

Student food insecurity, defined as limited access to nutritionally adequate and culturally appropriate food is related to poor eating habits, reduced physical activity, worse mental health, and lower GPA. This pre intervention study establishes baseline data to evaluate a campus campaign targeting: (1) awareness and use of campus food assistance programs and CalFresh, (2) expansion of Learning Programs to Increase Employability eligibility, and (3) undergraduate food security outcomes at UC San Diego.

Methods

Using a serial, cross-sectional study design, students enrolled in introductory or capstone courses within Public Health, Urban Studies and Planning, Cognitive Science, or Engineering departments were invited to participate in Fall 2024. The confidential survey collected information about demographics, awareness and use of CalFresh and other campus food resources, and food insecurity experiences using the 6-item USDA scale. Descriptive statistics and Chi-square tests analyzed disparities.

Results

Among 1,680 participants, 39% reported food insecurity, with higher rates among first-generation (52%) and low-income students (57%). Continuing students had higher very low food security (19% vs. 16% entering). 14% of participants received CalFresh benefits; among recipients, 66% reported benefits covered ≥75% of their grocery costs. The Basic Needs Hub achieved 94% approval rates for assisted applicants, though only 9% of participants used this service. Triton Food Pantry awareness was high at 80%, with 13% utilization.

Conclusion

The study identified significant food insecurity burdens, especially among marginalized student groups. While most CalFresh recipients reported substantial reductions in grocery costs, program participation remained limited. Similarly, awareness of campus food resources far exceeded actual utilization rates.

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Poster Abstracts

Healthy Aging and Human Longevity Science

Title: Validating the Longitudinal Assessment of Sedentary Behavior in an RCT via Deep-Learning
Authors: Jasmine Morales, Rong W. Zablocki, Lucy Shao, Sheri J Hartman, Loki Natarajan

Background
Sedentary behavior(SB) is a risk factor for cardiometabolic disease. Commonly used cut-points of hip-worn accelerometers to quantify SB underestimate sedentary bout durations by not accounting for posture. To address this gap, we previously developed a deep learning algorithm(CHAP) to predict sitting and breaks from sitting. This study applies CHAP to a 3-arm randomized control trial(RCT) validating accuracy in classifying sitting versus not sitting in 10-second intervals and estimating intervention-related changes in SB.

Methods
CHAP was applied to 30Hz tri-axial hip-worn ActiGraph-GT3X+(AG) accelerometer data from free-living postmenopausal overweight women(≥55yrs) in a SB reduction trial. Performance metrics, SB-metrics and GEE models were used to compare CHAP-predicted SB-metrics and AG100 to ground-truth posture-based thigh- worn device activPAL(AP) at BL(n=387) and at FV(n=351).

Results
BL and FV CHAP performance metrics were all above 84.8%. Both AP and CHAP registered changes in the intervention vs control arms. Intervention effects mean (SE,p) for (I.) total sedentary time (min/day) were AP 65.1 (16.2,p<0.001) vs CHAP 38.2 (15.4,p=0.013) vs AG100 0.28 (13.9,p=0.98) (Reduce Sitting); (II.) breaks from sitting (num/day) were AP ~22 (4.3,p<0.001) vs CHAP ~4 (1.5,p=0.003) vs AG100 0.366 (2.07,p=0.860) (Increase Transitions).

Conclusion
Strong validation results indicate that CHAP is an accurate method for quantifying changes in SB patterns; the AG100 method failed to capture changes. Despite no new training to CHAP for this RCT it accurately measured both SB patterns and changes in SB, unlike AG100. CHAP, a publicly available method, could be a valuable tool for measuring change in SB intervention studies.

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Poster Abstracts

Healthy Aging and Human Longevity Science

Title: Using Machine Learning as a Heuristic Tool to Identify Predictors of Tuberculosis
Authors: Hannah Battey, Naomi Hillery, Sabira Tahseen, Jennifer Doran, Richard Garfein, Timothy Rodwell

Background
Beyond clinical diagnostic confirmation, the patient factors most predictive of active tuberculosis (aTB) remain unclear. This study applies machine learning-based models for predicting aTB using demographic, symptom, blood marker and imaging data.

Methods
This cross-sectional study analyzed 795 symptomatic participants in Pakistan, incorporating demographics, symptoms, provider-interpreted chest X-ray (CXR) findings, blood markers, and an AI-generated CXR abnormality score. Participants were classified as aTB or TB-negative based on culture, GeneXpert, or physician diagnosis. Using XGBoost, we developed five predictive models, sequentially integrating variable categories and selecting the 15 most predictive features per model. Model performance was assessed via area under the curve (AUC), sensitivity, specificity, positive predictive value, and negative predictive value. SHapley Additive exPlanations (SHAP) determined feature ranking, magnitude, and direction.

Results
Overall, 22% were diagnosed with aTB. Standalone CXR interpretation had 90% sensitivity, 53% specificity, compared to 90% sensitivity, 67% specificity for AI-based scoring (threshold=0.4). The top model (AUC=0.917) identified key predictors: high AI abnormality score, TB history, positive QuantiFERON, low lymphocyte frequency, and high neutrophil frequency. Decision trees prioritized a high abnormality score threshold (0.76) for sensitivity-specificity balance.

Conclusion
Machine learning is a useful heuristic tool for understanding the relative importance of TB-related variables. Future research should explore how best to integrate AI-based and traditional diagnostic approaches to optimize TB detection across diverse clinical settings.

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Poster Abstracts

Healthy Aging and Human Longevity Science

Title: Episodic Memory and Loss of Control Eating Among Adults with Overweight/Obesity
Authors: Ellen K. Pasquale, David R. Strong, Dawn M. Eichen, Carol B. Peterson, Kerri N. Boutelle

Background
Research has demonstrated relationships between overeating, obesity, and memory deficits, implicating the hippocampus in both episodic memory and satiety. However, few studies have examined relationships between memory processes and loss of control (LOC) eating. We sought to examine these relationships among treatment-seeking adults with overweight or obesity (OW/OB).

Methods
Adults with OW/OB (N=164) completed the Eating Disorder Examination and a verbal list learning task modified with food words (VLLT-Food). We compared 51 adults who endorsed LOC (m age=44.69(12.36) years; m body mass index (BMI)=33.8(5.2) kg/m2; female=88%; 51.0% Non-Hispanic White; 19.6% Hispanic, and 29.4% Non-Hispanic Non-White) with 113 participants without LOC (m age=44.74(12.56) years; m BMI=34.8(4.9) kg/m2; female=74%; 60.2% Non-Hispanic White; 23.9% Hispanic, and 15.9% Non-Hispanic Non-White).

Results
Linear regression adjusting for ethnicity and BMI showed that those with LOC had significantly lower t-score (adjusted for age and gender) on recall across trials 1-5 than those without LOC (b=-3.63, se=1.53, p=0.02). Those with LOC also demonstrated reduced semantic clustering during trials 1-5 (b=-0.38, se=0.19, p=0.047). Learning slope, recall consistency, subjective clustering on trials 1-5, short-delay free recall and discriminability, and long-delay free recall, discriminability, and semantic clustering did not differ between those with and without LOC (ps>0.35). However, differences between groups on trial 1-5 discriminability, serial clustering, and short-delay semantic clustering did not reach significance but were in the expected direction (ps<0.25).

Conclusion
This preliminary analysis provides evidence that LOC eating may be related to hippocampal-dependent memory processes and provides rationale for more research in this area.

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Poster Abstracts

Healthy Aging and Human Longevity Science

Title: Factors that Influence Flourishing for Older Adults Living with HIV
Authors: Ali Punsalan, Annie L. Nguyen

Background
Flourishing refers to the optimal feeling of well-being in multiple aspects of life. Six domains are proposed: 1) happiness and life satisfaction, 2) good physical and mental health, 3) meaning and purpose, 4) character and virtue, 5) close social relationships, and 6) financial and material security. Older adults living with HIV (OALWH) are a unique group because HIV care has shifted over time, and HIV is now a mostly manageable, chronic condition. Many OALWH in the US are also long-term survivors who have had to psychologically shift from surviving to thriving with HIV.

Methods
The study utilizes the Diener Flourishing Scale to characterize scores into Low/Moderate vs High flourishing. We 1) examined the prevalence of "flourishing" among a group of OALWH, and 2) determine the factors that drive flourishing. Cross-sectional data (N=102) from a community-based sample of OALWH ages 50+ were analyzed using descriptive statistics and binary logistic regression models.

Results
The mean flourishing score was 45.32; 59.8% were High Flourishing. Bivariate analyses showed that people in the High Flourishing group were more likely to be older (62.04), have a higher percentage of heterosexuals (31.3%), in a relationship/married (44.3%), Black (34.4%), and have a CD4 count of 200 cells/mm3 or higher (78.25%) compared to those in Low/Moderate Flourishing. The adjusted logistic regression model showed lower social isolation (aOR=0.737, p=0.006), greater optimism (aOR=1.30, p=0.015), and greater resilience (aOR=1.230, p=0.050) to be significantly associated with higher flourishing.

Conclusion
These findings can be used to improve programs for healthy aging among OALWH.

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Poster Abstracts

Healthy Aging and Human Longevity Science

Title: Yoga Evidence for the Elderly Population

Authors: Mariana Cabral Schveitzer, Ricardo Ghelman, Caio Fabio Portella, Lissandra Zanovelo Fogaça, Luiz Ramos, Michael Pratt

Background

Yoga studies have grown exponentially, revealing compelling insights into yoga's therapeutic potential, but there's is lack of systematization of the results for the elderly population. Evidence maps organize and synthesize information about scientific evidence and show where there is consensus and gaps. It facilitates rapid access to available knowledge for researchers, policymakers, or practitioners to identify areas that are most studied and need further investigation.

Methods

Based on an updated Yoga Evidence Map from CABSIN-BIREME/PAHO containing 318 reviews, we selected and analyze 17 systematic reviews of clinical trials published between 2016 and 2024 involving the elderly population. The AMSTAR 2 instrument was used to assess the methodological quality of the systematic reviews.

Results

The analysis of 58 outcomes related to yoga effects highlights significant positive effects of Yoga across diverse health outcomes for the elderly. Notably, yoga demonstrates efficacy in enhancing physical well-being, improving balance, flexibility, muscle strength, and alleviating chronic and joint pain. Furthermore, it yields positive impacts on psychological health, reducing depressive symptoms, improving quality of life, mental well-being, cognitive performance, and resilience. However, results regarding anxiety disorders were mixed, indicating a need for further research. Importantly, the studies consistently reported a favorable safety profile, with minimal adverse effects.

Conclusion

These findings suggest that yoga is a valuable intervention for promoting holistic health for the elderly, warranting further exploration of its mechanisms and applications in specific clinical contexts. This evidence provides a valuable information for patients, professionals, and policymakers to promote evidence-based complementary therapies.

Poster Abstracts

Healthy Aging and Human Longevity Science

Title: Accuracy of Medication Reconciliation: Analysis of Electronic Medical Records against Brown Bag Review
Authors: Anna Hovak, Jordyn Nicolas, Ryan Moran, Sara Baird, Chelsea Isom, Linda Hill, Kelly C. Lee

Background
Medication reconciliation minimizes medication errors aligning with key quality measure goals. The “brown bag” medication history (BBMH) is considered evidence-based best practice, yet systematic comparisons to electronic medical record audits (EMRA) are lacking, particularly among older adults, who have increased propensity to polypharmacy. The aim of this study is to evaluate congruence between BBMH and EMRA for a cohort of community-dwelling older adult drivers.

Methods
The AAA LongROAD study enrolled 615 older adults from the San Diego region with a baseline BBMR performed between July 2015 and March 2017. Two study investigators independently recorded all medications from a UC San Diego Health ambulatory encounter within 6 months of the BBMR. Medication discrepancies were documented and characterized.

Results
Of 615 participants, 550 (93.2%) had a matching ambulatory encounter and were included for analysis. Of these, 464 (84.4%) had a discrepancy in the number of medications, including 386 (70.2%) with fewer medications in the BBMR, and 75 (13.6%) with more medications in BBMR, compared to EMRA. Only 89 participants (16.2%) had an equal number of medications; of these participants, who underwent detailed medication review, only 47 (52.8%) had an identical medication list. For all participants, the mean number of medications was higher in the EMRA group than BBMR group for prescription (mean 5.47 [SD 3.81] vs 3.96 [3.18]) and OTC (mean 3.61 [SD 2.96] vs 2.67 [3.21]) medications.

Conclusion
Among this population of older adults, almost all participants had a medication discrepancy with fewer medications documented in the BBMR.

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Poster Abstracts

Healthy Aging and Human Longevity Science

Title: The Association Between Sleep Duration and Heart Disease: Insights from BRFSS 2020
Authors: Albert Gu, Muhan An, Hanchang Cai, Zhaoxuan Fan

Background
Heart disease is the leading cause of mortality in the U.S., responsible for approximately 647,000 deaths annually. Many cases are diagnosed only after severe symptoms, highlighting the need for early detection. Prior studies suggest short sleep (<5–6 hours) is linked to higher heart disease risk. Our logistic model using BRFSS data supports this association.

Methods
We examined the relationship between average sleep duration and heart disease among adults aged 40–65 and whether age moderates this relationship.

Results
Sleep duration was categorized as Short (<5 hours), Moderate (5–9 hours, reference), and Long (≥9 hours). We hypothesized longer sleep would lower heart disease odds, but this protective effect would decline with age. Using data from the 2020 BRFSS, we conducted stepwise logistic regression, adjusting for covariates and including interaction terms.

Conclusion
Among 400,000 respondents, 170,000 were aged 40–65 (our sample). Compared to moderate sleepers, long sleepers had 2.28 times higher odds of heart disease (OR = 2.28, 95% CI: 1.24–4.18), while short sleepers had 6.79 times higher odds (OR = 6.79, 95% CI: 3.89–11.83). Each additional year of age increased odds by 6.5% (OR = 1.07, 95% CI: 1.06–1.07). Interaction terms suggest the effects of both short and long sleep weaken slightly with age (Short × Age OR = 0.98; Long × Age OR = 0.99).

Poster Abstracts

Healthy Aging and Human Longevity Science

Title: Neurocognitive performance and perceived acculturation and in Hispanic older adults
Authors: Destiny Ruiz, Andrea Vargas, David P. Salmon, María Marquine, Caytre Ede, Zvinka Z. Zlatar

Background
The U.S. Hispanic population faces an increased risk of developing Alzheimer's disease and related dementias (ADRD) but remains underrepresented in ADRD research. This study examined the associations between social determinants of health (SDOH)— acculturation, neighborhood deprivation, and healthcare access—and neurocognition in Hispanic older adults from Alzheimer's Disease Research Centers in Miami and San Diego.

Methods
Participants were 158 Hispanic adults (62% women, 67.7% Spanish speakers; mean age=73.15 years, SD=6.74; mean education=14.02 years, SD=4.15). Neurocognition was assessed via demographically adjusted composite scores (global, memory, and executive function) from the Neuropsychological Test Battery of the National Alzheimer's Coordinating Center Uniform Dataset version 3. Acculturation to U.S. mainstream culture and the English language were assessed with the Psychological Acculturation Scale (PAS) and the Short Acculturation Scale (SAS). Healthcare access was assessed using the Health Access Questionnaire (HAQ). Socioeconomic neighborhood disadvantage was measured using the Area Deprivation Index (ADI) from the Neighborhood Atlas. Spearman correlations examined associations between SDOH and neurocognition as well as correlations between all SDOH variables.

Results
Lower acculturation to the U.S. mainstream culture was significantly correlated with worse memory performance (PAS rho=.16, p<.05), worse perceived healthcare access (SAS rho= -0.17, p<.05), and residing in more disadvantaged neighborhoods (SAS rho=-.32, p<.001). ADI, SAS, and HAQ were not significantly correlated with neurocognition.

Conclusion
Perceived acculturation may be a significant SDOH associated with memory performance of Hispanic older adults. Future research on cognitive health trajectories for this population should consider the role of perceived acculturation and its correlates.

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Poster Abstracts

Healthy Aging and Human Longevity Science

Title: Measuring Up: Evaluating Exercise Intensity Across Research and Consumer Devices in Children
Authors: Isaiah Cabebe, David Wing, Michael Higgins, Shoshi Barkai, Brandon Torres, Job Godino, Linda Hill

Background
People use devices to track a variety of health related metrics, including exercise intensity. WHO based recommendations are that everyone get 150 minutes of moderate exercise or 75 minutes of vigorous exercise per week. However, the manner in which different devices measure intensity is different. For instance, many health related studies rely on research grade accelerometers which base intensity solely on movement while consumer devices, like Fitbit, use movement and heart rate. Researchers should carefully consider their study objectives when selecting a measuring device for intensity assessment. The purpose of this study is to explore the differences in intensity based upon device.

Methods
55 children, ages 8-10, were recruited to perform a variety of tasks while wearing three different devices: a research grade accelerometer (processed in two different ways), a Fitbit Charge HR, and an indirect calorimeter. We compared the intensity reported by each device, and compared them to our criterion device (i.e. indirect calorimeter) to see minute level sensitivity and specificity.

Results
Data Table of just accelerometer to Calorimeter and Fitbit.

Conclusion
Preliminary findings indicate that the accelerometer accurately identifies moderate and vigorous intensity, with classification percentages exceeding the 50% threshold. These results suggest that research-grade accelerometers are a valid tool for measuring exercise intensity in children. Further analysis will refine these conclusions.

Poster Abstracts

Healthy Aging and Human Longevity Science

Title: Learning Treatment Effects under Covariate Dependent Le8 Trunca9on and Right Censoring
Authors: Yuyao Wang, Andrew Ying, Ronghui Xu

Background
In observational studies with delayed entry, causal inference for time-to-event outcomes can be challenging. In addition to the potential confounding bias, the data can also suffer from selection bias due to left truncation, as well as bias from informative right censoring. To estimate treatment effects on time-to-event outcomes, inverse probability weighting (IPW) is often employed. However, IPW can be inefficient, and is sensitive to model misspecifications.

Methods
To address these challenges, we extend our earlier works and develop an orthogonal and a doubly robust framework for handling covariate dependent left truncation and right censoring. The framework can be applied to a variety of problems, including estimation of the average treatment effect (ATE) and the conditional average treatment effect (CATE).

Results
For ATE, we establish model double robustness and rate double robustness with respect to all three sources of bias: confounding, covariate dependent left truncation and right censoring. For CATE, we show that the orthogonal and the doubly robust learners can achieve the oracle rate of convergence. We apply the proposed methods to analyzing the effect of midlife alcohol consumption on late-life cognitive impairment, using data from the Honolulu Asia Aging Study.

Conclusion
Besides having better theoretical properties, the proposed approaches also show better finite sample performances than the existing approaches.

Poster #: 310

Poster Abstracts

Healthy Aging and Human Longevity Science

Title: Intersection of Tobacco Retail and E-commerce in California: Impact of Local Flavor Bans
Authors: Jenna Brooks, Prosperity Land, Nina Rice

Background
This capstone project investigates the intersection of tobacco retail and e-commerce in California, focusing on how local flavor bans influence the prevalence of online tobacco sales.

Methods
We examine a comprehensive dataset of 311 tobacco retailers in San Diego, collected using the Google Places and Yelp APIs. Logistic regression analysis is used to estimate the likelihood of a retailer operating online based on flavor bans.

Results
Of 311 total vape shops, 37 had e-commerce websites. 54% of retailers with e-commerce websites had flavored tobacco products, and 13% were in a part of the country that restricted internet sales of tobacco. Vape shops in parts of the county with local flavor restrictions were 3 times as likely to have websites.

Conclusion
Vape shops located in areas with local flavor restrictions are more likely to maintain an online presence compared to those in areas without such restrictions. This suggests that flavor bans may incentivize retailers to establish e-commerce platforms as a way to maintain sales despite local limitations. These results underscore the adaptive strategies of tobacco retailers in response to regulatory changes and provide insight into the unintended consequences of flavor bans on online tobacco sales. Further research could explore the broader implications of these findings and examine similar patterns across California.

Poster Abstracts

Healthy Aging and Human Longevity Science

Title: DNA damage and neurodegeneration after AAV infection in Parp1-KO mice

Authors: Mikaela Joya, Anais Gonzalez, Aadit Karve, Andrew Doan, Ellen Duong, Daniel Enterria-Morales, Matthew Shtrahman

Background

Neurodegenerative disorders represent a significant challenge in healthcare. Recombinant Adeno-Associated Virus (rAAV) is widely used in experimental biology and human gene therapy. Given the widespread use of rAAV in gene therapy, understanding its potential neurotoxic effects is critical. Recent studies suggest that rAAV may induce toxicity in neural progenitor cells (NPCs) and immature neurons, raising concerns about its broader neurological implications.

Methods

This study investigates the impact of rAAV infection in the absence of Poly (ADP-ribose) polymerase 1 (Parp1), a key enzyme in DNA damage repair. We aim to determine the role of Parp1 deficiency in rAAV-induced DNA damage, neurodegeneration and inflammation in the murine hippocampus. Comparisons were made between Parp1-KO and wild-type mice to elucidate differences in susceptibility to rAAV infection. Our findings indicate that rAAV infection in wild-type mice leads to a dose-dependent increase in the expression of γH2AX, a marker of double-strand DNA breaks, in dentate granule cells. In Parp1-KO mice, rAAV infection induces lower levels of γH2AX, decreased neuronal loss, and persistent neuroinflammation, compared to wild-type mice. Additionally, the expression of 53BP1, a protein involved in DNA Damage Repair, is similar in both groups of mice after rAAV infection.

Results

These results suggest that Parp1 plays a protective role in mitigating rAAV-induced neurotoxicity.

Conclusion

Future investigations will focus on identifying the molecular pathways mediating rAAV toxicity to develop strategies for minimizing adverse effects in therapeutic applications.

Poster #: 400

Poster Abstracts

Health Services Research and Health Policy

Title: Online Vaping Retailers Conceal Tobacco Contents in Shipped Packages
Authors: Emily A.C. Austin, Shannon E. Ellis, Lara Berghammer, Nina M. Rice, Giovanni Appolon, Eric C. Leas

Background
The Prevent All Cigarette Trafficking (PACT) Act requires shipped packages containing tobacco to be clearly labeled. The extent to which online vaping retailers comply with correct labeling of tobacco shipments remains unclear.

Methods
Sixteen buyers working in pairs attempted 156 purchases from 78 online vaping retailers (2 from each website) and had them shipped to their home addresses in San Diego, California. All buyers were 21+ years old and used their personal billing and shipping information. Delivered packages were examined by study staff to determine whether they were in compliance with PACT Act requirements by indicating the packages contained tobacco. Additionally, study staff reviewed whether package labels attempted to disguise contents by using a false business name, or mischaracterized the contents by indicating they were something other than tobacco.

Results
Of the 78 retailers, 58 delivered at least one package; 41 delivered both with identical business names and tobacco labeling on the shipping label. Only 8.2% of retailers labeled their packages to indicate they contained tobacco. Among those not labeled correctly, only 10.7% of retailers used their actual business name on the shipping label. Three retailers explicitly mischaracterized the package contents, labeling them as a phone case, screen protector, essential oils, or a sex toy company.

Conclusion
In this study of online vaping retailers, most did not comply with PACT Act labeling requirements. Nearly all the packages concealed the tobacco contents by omitting the actual business name on the shipping label, and some mischaracterized the contents by labeling them as something else.

Poster #: 401

Poster Abstracts

Health Services Research and Health Policy

Title: Addressing Policy Gaps for Latino and Indigenous Community Nutrition Equity
Authors: Lucia Canul

Background
Latino and Indigenous Latin American Communities (LILAC) experience disproportionately high rates of nutrition-related noncommunicable diseases (NCDs). Existing federal and state nutrition policies inadequately address their unique cultural and structural barriers, resulting in persistent health disparities.

Methods
A systematic policy analysis (2010-2024) was conducted using governmental databases, peer-reviewed literature, and health policy reports. The analysis targeted nutrition care policies, Medicare/Medicaid coverage of Medical Nutrition Therapy (MNT), culturally tailored dietary interventions, and disaggregated health data specific to LILAC populations. This analysis identified gaps included insufficient MNT insurance coverage, inadequate culturally competent provider training, and limited availability of disaggregated data to inform targeted policy implementation.

Results
Policy implementation inconsistency between federal acknowledgment and state-level execution significantly hinders effective interventions for LILAC populations. Effective state-level examples, such as California's Health in All Policies and California Senate Bill 1016 Latino and Indigenous Health Disparities Reduction Act, highlight the importance of comprehensive, culturally tailored, and data-informed strategies.

Conclusion
To achieve nutrition equity, it is critical to expand MNT coverage through federal and state policy reforms, mandate collection and use of culturally disaggregated health data, and integrate culturally competent dietary practices into public health nutrition policy. Policymakers and stakeholders should adopt models from successful state-level initiatives to reduce disparities among Latino and Indigenous communities.

Poster #: 402

Poster Abstracts

Health Services Research and Health Policy

Title: Improving Tobacco Treatment Engagement: Understanding Community-Level Factors

Authors: Brittany Olivera, Paloma Mohn, Gabriela Ramirez, Nathaniel Zall Badii, Kimberly Brouwer, Job Godino, Charles Bart Smoot, Mark Myers, Sukhpreet Maan, Karim Ghobrial-Sedky, David Strong

Background

Low-income Californians are twice as likely to smoke and 21% less likely to quit. Family Health Centers of San Diego (FHCSD), a major Federally Qualified Health Center (FQHC), serves these populations and offers tobacco-related services. Examining demographics, comorbidities, smoking rates, and tobacco retail density can inform tobacco treatment strategies.

Methods

We used FHCSD clinic population data, CDC Places data, and a tobacco retail density map to analyze community and clinical factors around eight FHCSD clinics engaged in a tobacco treatment trial. Multi-level logistic models assessed the relationship between these factors and tobacco use prevalence and treatment engagement.

Results

Among 39,629 patients, racial/ethnic composition included 19% Mexican, 17% Other Hispanic, 10% Black, and 36% Non-Hispanic White. Smoking rates in San Diego County averaged 11% (95% CI: 10%-13%), varying from 8% to 18% across communities. Clinic tobacco use rates were 13% in majority Hispanic-serving clinics, 39% in large urban clinics, and 22% in SGM-serving clinics. Tobacco retail density was highest in urban areas. Coronary heart disease (CHD) rates ranged from 4% to 8% across communities. Tobacco treatment engagement varied (8%-19%) and was significantly higher among patients with CHD (AOR=1.50; $p<0.05$) and respiratory diseases (AOR=1.34; $p<0.05$).

Conclusion

Considering environmental and institutional contexts in behavioral medicine can strengthen tobacco control strategies and improve health outcomes in underserved communities.

Poster #: 403

Poster Abstracts

Health Services Research and Health Policy

Title: Financial Literacy Among UCSD Undergraduates
Authors: S. Plummer, S. Puliady, M. Schaerer, E. Schmidt, J. Yoa

Background
Financial literacy (FL) is crucial for college students, who often lack skills to manage their financial resources and avoid serious debt and other financial pitfalls. Little is known about financial literacy among UCSD undergraduates. We therefore conducted a survey to examine rates and risk factors for low FL and student interest in improving their FL skills.

Methods
In February 2025, UCSD undergraduates enrolled in selected Public Health and Economics classes completed a Qualtrics questionnaire that included FL questions. We used Epilnfo 7.2.6 to calculate frequencies of perceived FL, interest in FL topics, and preferred modalities for learning. Prevalence rate ratios (PRR) were calculated to examine sociodemographic risk factors for low FL. Students were assigned FL scores based on self-reported knowledge of budgeting, savings, credit, and student loans; low FL was defined as < 9 points on an 18 point scale.

Results
The response rate was 80%. Of the 775 respondents, 33% met the definition of low FL. Factors associated with low FL included being female (PRR = 2.2), a public health student (PRR = 2.11), Hispanic/Latino (PRR = 1.3), and lower family income (PRR = 2.3). All associations were statistically significant ($p < 0.01$). Families were the main source of FL knowledge (75%), and 78% of students were interested in learning more, especially about financial goals and credit, preferably through online modules, elective courses, and one-on-one counseling.

Conclusion
FL among UCSD undergraduates is low, but interest in learning more is high. UCSD should consider implementing a multiple-format program to maximize engagement and participation.

Poster #: 404

Poster Abstracts

Health Services Research and Health Policy

Title: Self-reported use and reasons for cannabidiol (CBD) vaping and smoking among US adults
Authors: Lara Berghammer, Emily A. C. Austin, Emily, Giovanni Appolon, Eric C. Leas

Background
The US Food and Drug Administration has issued a number of warning letters to Cannabidiol (CBD) manufacturers for selling products with false medical claims while expressing public health concern for inhaled CBD products. However, US adult CBD inhalation rate is unknown.

Methods
We estimated weighted prevalence of lifetime and primary CBD product use by route of administration (inhalation, ingestion, and topical) and reasons (medicinal, recreational, or both) among a representative sample of US adults (n=1,523).

Results
Among US adults, ingestion (26.2%; 95% CI: 25.1-27.3) was the most commonly reported administration route, followed by inhalation (15.6%; 95% CI: 14.7-16.4) and topical (15.1%; 95% CI: 14.3-15.9). Smoking of CBD joints was the most prevalent inhaled product type (4.5% 95% CI: 4.1-5.0), followed by concentrate vaping (2.5%; 95% CI: 2.2-2.9), and smoking pipes, bowls, or bongs (1.7%; 95% CI: 1.5-2.0). Adults who inhaled CBD were more likely to report recreational use (75.7%; 95% CI: 69.5-80.9) compared to those who ingested CBD (49.3%; 95% CI: 44.4-54.1) or used CBD topically (22.6%; 95% CI: 17.7-28.3). Adults who primarily inhaled CBD also reported use for medicinal purposes (63.5%; 95% CI: 57-69.6).

Conclusion
An appreciable number of US adults report using inhalable CBD products with many using inhaled CBD for recreational and medicinal purposes. Regulatory efforts that protect consumers are warranted.

Poster Abstracts

Health Services Research and Health Policy

Title: The Role of Lung Ultrasound and CAD in the Emergency Department

Authors: Nolan R Premack, Sergio J Sanabria, Jenny M Vo-Phamhi, Neha Antil, Anthony Trieu, Amelie Lutz, Kenton L Anderson, Ahmed El Kaffas

Background

Acute Respiratory Distress (ARD) is a condition requiring efficient assessment in the ED. Compared to the gold-standard, lung ultrasound (LUS) offers a safe and rapid diagnostic alternative. This study compares point-of-care LUS to clinical variables, chest X-ray, and computed tomography for predicting outcomes in ARD patients, while investigating Computer-Assisted-Diagnostic (CAD) enhanced LUS with clinical variables to improve predictive outcomes.

Methods

Retrospective ED imaging features and clinical variables from 284 patients presenting with ARD in 2020 were correlated with clinical outcomes (hospital admission, 2-month mortality). Spearman's correlation rs identified predictive features. Machine learning models were trained with repeated k-fold cross-validation to predict clinical outcomes based on clinical variables, imaging features and combinations thereof.

Results

78% of patients had a LUS report, 84% an X-ray and 42% a CT report. Normal lung in LUS (rs:-0.384), effusion in X-ray (rs:0.250) and presence of GGO+consolidations in CT (rs:0.387), were respectively the most predictive imaging features for hospitalization, and mortality. Hospitalization was best predicted by LUS (rs:0.386); mortality by clinical features (rs:0.377). Combination of clinical and imaging features improved correlation scores from (weak, moderate) to (moderate, strong). Highest AUROC was achieved with Clinical+LUS features for hospitalization (0.788), and Clinical+X-ray features for mortality (0.786).

Conclusion

Utilization of LUS and Computer-Assisted-Diagnostics upon patient presentation to the ED improves triage decisions and outcome prediction in ARD patients compared to independent analysis of features. LUS features add value to clinical features when triaging patients with ARD. Given its benefits, this technique should be considered for adoption.

Poster Abstracts

Health Services Research and Health Policy

Title: AI-Driven Insights into Risky Commercial Vehicle Driver Behaviors
Authors: N.K. Kam, R. Zhao, R.J. Moran, J.J. Rogers, L.L. Hill, X. Tu, R.S. Garfein

Background
Commercial motor vehicle (CMV) crashes have higher fatality and injury rates than passenger vehicle crashes, and CMV-involved crashes are increasing nationally. We conducted a naturalistic study using AI and object recognition to quantify risky CMV driver behaviors in real-world settings.

Methods
In April–August 2024, a trailer equipped with cameras and radar was placed along 16 roadways across San Diego County for one week each to quantify driving offenses. Chi-square statistics were used to examine relationships between risky behaviors and contextual factors (time, location, road type) to inform targeted interventions.

Results
Overall, 160,671 CMVs were observed, among which 56.4% of drivers were speeding, 4.4% not wearing a seatbelt, and 2.6% using a cell phone. The prevalence of speeding was higher at three freeway sites paralleling the US-Mexico border compared to other locations (67.8% vs. 41.7%) and on Caltrans versus non-Caltrans roadways (57.5% vs. 5.8%). Speeding was highest at 8:00AM–11:59AM (65.1%) and on flat/curvy roads (67.8%). Seatbelt non-compliance was higher on non-Caltrans (8.0%) and an Indian Reservation (6.5%) versus Caltrans roadways (4.4%) and in the far-right lane (6.0% vs. 1.3%). Cell phone use was highest along the border (3.5%), on flat/curvy roads (3.5%), in the far-right lane (3.4%), and during early mornings (3.2%). All p-values were <0.0001.

Conclusion
These findings inform interventions for enhanced enforcement at high-risk locations and will guide future work with variable message systems.

Poster #: 407

Poster Abstracts

Health Services Research and Health Policy

Title: Examining clinical interactions: A longitudinal conversation analysis of rural general surgery visits

Authors: Diya Patel, Anne White

Background

Doctor-patient interactions are central to medical decision-making and relationships, particularly in chronic illness care. In rural healthcare settings, physicians have a wide scope of practice and often rely on collaborative discussions with patients and caregivers to form treatment plans. This study examines the triadic interaction between a general surgeon, his singular patient with scleroderma, and the patient's spouse across 22 visits spanning 23 months. This study is unique because it a) is the first analysis to capture patient care across this many consecutive visits, and b) examines collaboration in action as these participants together explore novel treatments to prolong quality of life.

Methods

This study uses Conversation Analysis to examine 22 video-recorded clinic visits of a single patient in a rural Texas general surgery practice. Conversation Analysis is a qualitative method for studying naturally occurring communication by analyzing recurrent, systematic practices of behavior.

Results

We analyzed how the patient's symptoms can escalate, resolve, and transform into new concerns across visits. We found that discussions centered around future-oriented, trial-and-error treatment plans which bolstered the patient with optimism despite her uncertain prognosis. The surgeon built a shared-history by referencing past visits using "memory cues", while the patient's spouse, present at every visit, actively aided in navigating and brokering the patient's illness experience.

Conclusion

This study furthers our understanding of how continuity of care works at the ground level. Longitudinal analysis of patient care highlights the benefits of caregiver input, leveraging medical history, and future planning in chronic illness management.

Poster Abstracts

Health Services Research and Health Policy

Title: Assessing Community-Academic Communication to Advance Health Equity in California Community Engagement Alliance

Authors: Isaac Bouchard, Andrea Balcan, Kelli Cain, Carrie Geremia, Nicole A. Stadnick, Paul Watson, Bill Oswald, Angel Lomeli, Marina Ibarra, Borsika Rabin

Background

The California Community Engagement Alliance collaborative unites academic institutions and community-based organizations to develop, implement, and evaluate interventions that address public health vulnerabilities and social needs in underserved communities. A statewide Theory of Change was co-created to address public health vulnerabilities and social needs through trusted community-academic partnerships. This study examines communication patterns among partners in the sessions to assess the dynamics of community-academic engagement.

Methods

Fifteen virtual sessions between September 2024 and February 2025 were documented using established ethnographic methods. Minutes spoken and interaction types were categorized using observation logs and structured coding of transcripts. Participants included 11 academic partners, 16 community partners, and 5 meeting facilitators. Spanish language needs were managed through interpretation services.

Results

Meeting facilitators accounted for the highest proportion of speaking time (63.3%), followed by community members (19.7%) and academics (17.0%). Meeting facilitators led in interaction counts (46.0%), followed by community (27.4%) and academic partners (26.6%). Most community and academic partner interactions involved giving information (48.2%, 37.4%) and making suggestions (21.1%, 27.2%), respectively. Interactions from meeting facilitators were centered around giving (56.3%) and seeking information (38.3%).

Conclusion

Community and academic partners contributed equitably and meaningfully through information sharing and suggestions, although community partners provided more information related to focus questions while academics provided more suggestions related to consensus building. Evaluation of engagement within community-academic settings should go beyond metrics such as time spent talking and focus on strategies to encourage diverse interaction types and equitable participation.

Poster Abstracts

Health Services Research and Health Policy

Title: Examining the Impact of COVID-19 Antibody Awareness on Patient Perception of Infection Risk and Masking Behavior

Authors: Angel Lomeli, Marni Jacobs

Background

Understanding how one's awareness of antibody levels could influence their behavior and risk perception is essential for effective public health messaging. This study examines the overlooked relationship between patient antibody awareness and changes in risk perception and masking behavior during the COVID-19 pandemic in a large university setting.

Methods

University students and staff were recruited for the Neutralizing Antibody Project for COVID-19 (ZAP) study. Participants provided a finger-prick blood sample to test for COVID-19 antibodies and completed surveys on demographics and risk perception and behaviors at baseline and 90 days follow-up. Antibody results were returned to participants in their medial record and were categorized as low/high based on median levels for analysis. Associations with changes in risk perception and masking behavior from baseline to follow-up was examined using multinomial logistic regression adjusting for significant demographic differences.

Results

816 participants reported receiving their antibody results and completed a 90-day survey. Compared to patients with high antibody levels, those with low levels were 1.75 times more likely to report an increase in risk perception (OR=1.75; p=<.01), and 1.47 times more likely to maintain the same risk perception (OR=1.47; p=.05) versus decreased risk perception. Masking behavior was not affected by patient knowledge of their antibody results.

Conclusion

Knowledge of low or high antibody levels influences patient risk perceptions, even when results are for research purposes only, though it may not influence behaviors. These findings emphasize the need for clear and accurate public health communication strategies.

Poster #: 410

Poster Abstracts

Health Services Research and Health Policy

Title: Establishing a Student-Staffed Emergency Medical Services Program at UCSD
Authors: Amoha A. Bhale, Lillian Walkover

Background
A comprehensive review as of Feb 2025 on collegiate-based Emergency Medical Services (EMS) programs demonstrated student-staffed EMS programs improve emergency response times and provide hands-on experience for aspiring healthcare professionals. This report analyzes the feasibility and benefits of implementing a student-staffed EMS program at UCSD. Challenges to past efforts to create such a program at UCSD include budgeting and staff acquisition for oversight. This study assesses the need, feasibility, proposed structure and impact of a student-staffed EMS program at UCSD, focusing on emergency response times, student interest, and logistical requirements.

Methods
A mixed-methods approach was used, including: (1) interviews with university officials and EMS providers to assess current institutional support and student engagement; (2) review of published quantitative resources and policy documents to analyze proposed program structures; (3) collection of peer institutions' models to identify best practices.

Results
Peer institutions demonstrate that student EMS programs reduce response times and provide valuable training. University stakeholders show cautious support, contingent on financial feasibility and integration with existing services. Preliminary findings indicate strong student interest.

Conclusion
A student-staffed EMS program at UCSD would enhance campus safety, offer educational benefits, and support local emergency response efforts. We propose collaboration across Environmental Health & Safety (EHS), the EMS at UCSD student organization, and UCPD to develop a role nested within the existing community service officer (CSO) program to offer preliminary EMS sans full ambulatory response. Further avenues are explored too. Next steps include securing institutional backing via data-driven analysis, formalizing training, and developing a sustainable implementation plan.

Poster #: 500

Poster Abstracts

Mental Health and Substance Use

Title: Multilevel determinants of cannabis prices in U.S. legal markets
Authors: Bing Han, Yuyan Shi

Background
Following cannabis legalization, sales in legal markets have steadily increased. Policies influencing product prices are crucial for cannabis regulation and control. This study aimed to evaluate the determinants of cannabis prices at the product, dispensary, and state levels in legal markets in the United States.

Methods
Nationwide data on product- and dispensary-level characteristics were collected in 2022 and merged with state-level policy data. The final analysis included 710,588 cannabis flower products from 3,693 dispensaries across 30 states and Washington D.C. with recreational and/or medical cannabis legalization. Multilevel mixed-effects regressions were used to estimate the associations between cannabis prices and product-, dispensary-, and state-level characteristics. Pre-rolls and dried flowers were analyzed separately.

Results
The average standardized price per gram was $11.72 for pre-rolls and $9.05 for dried flowers, with significant variations across states. A positive association was found between prices and THC level (THC elasticity of price = 0.17, 95 % CI: 0.088, 0.25) and a negative association was found between prices and item weight (weight elasticity of price = -0.18, 95 % CI: -0.22, -0.14). There was limited evidence of associations between prices and dispensary-level characteristics. State tax rates at the retail level were positively associated with prices. These relationships were consistent for both pre-rolls and dried flowers.

Conclusion
Policies targeting potency and item weight may have substantial impacts on cannabis prices in legal markets. Future research is needed to examine how consumers respond to these policies.

Poster #: 501

Poster Abstracts

Mental Health and Substance Use

Title: Behaviors and Perceptions of Mental Health Among South Asian College Students
Authors: Shivani Sharma

Background
In South Asian culture, the topic of mental health is extremely stigmatized. For young adults who are susceptible to facing various obstacles that impact their mental well-being, it is important to examine the cultural factors that contribute to the stigma surrounding this topic. Delving into the behaviors and perceptions of South Asian college students uncovers the multitude of intertwined influences that impact the development of one's mental health. This study aims to answer the question, "What are the behaviors and perceptions surrounding mental health for UC San Diego students who are South Asian?"

Methods
An online survey was implemented to collect data from 148 students at UC San Diego who are South Asian. This was a mixed-methods design used to draw findings. Descriptive analysis was used to draw findings.

Results
The results revealed that mental well-being is significantly shaped by the interaction of sociocultural factors, such as family dynamics and pressures, experiences of stereotyping, comfortability with discussing mental health, and expectations surrounding sexuality and gender identity.

Conclusion
These findings bring awareness to the significant stigma surrounding mental health topics in South Asian culture and reflect the interventions needed to destigmatize this topic. This study sheds light on the cultural stigma that this community faces, presenting the critical need for strategies to create safe environments for South Asian young adults to express their mental well-being.

Poster #: 502

Poster Abstracts

Mental Health and Substance Use

Title: Promises and pitfalls of safer smoking supply distribution in the United States: a thematic analysis of open-ended survey questions from syringe service programs

Authors: Kirstin Kielhold, William H. Eger, Angel Gomez, Tyler S. Bartholomew, Angela R. Bazzi

Background

With rising prevalence of smoking unregulated drugs across the United States, there is a need for more community-based distribution of safer smoking supplies (e.g., glass pipes). These supplies are increasingly offered through harm reduction organizations (HRO), though little is known about HROs' experiences implementing this service.

Methods

Between November 2023–January 2024, we administered a survey with closed- and open-ended questions about safer smoking supplies to representatives of U.S. HROs. Thematic analysis of open-ended question responses identified themes related to HROs' motivations and experiences implementing safer smoking supplies, including challenges with addressing smoking drug use.

Results

Of 118 organizations responding to the survey, most were community-based organizations (74%) and 67% (n=79) had implemented safer smoking supplies. From open- ended responses, the most common motivations for distributing safer smoking supplies included shifting local drug supplies (e.g., from heroin to fentanyl) and increased community demand. Offering these supplies carried positive implications for HROs, including increasing engagement and ability to reach more diverse communities. Funding restrictions presented major challenges to implementing safer smoking supplies, and some respondents expressed concerns about potential negative health consequences of smoking drugs, including oral, mouth, and lung problems.

Conclusion

Many organizations have implemented safer smoking supplies in response to community demand, resulting in improved engagement of new communities. However, concerns remain regarding the feasibility, sustainability, and health implications of supply distribution. Policies, programmatic funding, and research that can flex with shifting drug supplies and better align with community needs are necessary.

Poster #: 503

Poster Abstracts

Mental Health and Substance Use

Title: Cannabis Use and Progression to Current Regular Tobacco Use among US Youth and Young Adults: Wave 4 – Wave 6 of the PATH Study

Authors: Jiayu Chen, Karen Messer, Natalie E. Quach, Yuyan Shi, Sara B. McMenamin, Thet New Myo Khin, Anahy Castaneda, David R. Strong, Matthew D. Stone, John P. Pierce, Dennis R. Trinidad

Background

As more states legalize recreational cannabis, there is concern that cannabis use may serve as a gateway to eventual tobacco use among youth and young adults.

Methods

We analyzed longitudinal PATH1 survey data from 13,851 respondents aged 12-24 who participated in Wave 4 (W4; 2016-18) and Wave 6 (W6; 2021) and had never regularly used tobacco at W4. Past 12-month(P12M) cannabis use was assessed at W4; and current regular tobacco use at W6. We used 2:1 propensity score matching without replacement (R package 'MatchIt'), with a caliper of 0.10 and exact matching on W4 age groups (youth vs. young adults) and W4 tobacco use status (ever vs. never). Weighted logistic regression was used as a sensitivity analysis.

Results

Among baseline US youth who had never regularly used tobacco, 8.4% (95%CI: 7.7-9.1) reported P12M cannabis use, and 33.8% (95%CI: 30.0-37.6) progressed to current regular tobacco users at W6; among baseline US young adult, 23.6% (95%CI: 21.6-25.7) reported P12M cannabis use, and 14.4% (95%CI: 11.9-16.9) progressed. P12M cannabis use increased the progression by 15-16 percentage points (pp.) for youth and by 0-5 pp. for young adults, compared to matched controls. Meanwhile, P12M cannabis use increased the adjusted odds of progression by 2.25 times (95%CI: 1.77-2.88) among youth; and 1.67 times (95%CI: 1.22-2.27) among young adults.

Conclusion

P12M cannabis use is a strong risk factor for progression to current regular tobacco use among US youth and young adults. The legalization of recreational cannabis may have the unintended consequence of undermining national progress made in tobacco use.

Poster #: 504

Poster Abstracts

Mental Health and Substance Use

Title: Preliminary Evaluation of a Novel Psychotherapy for Empowerment of Veterans of Color
Authors: Angel Sta. Maria, Ashley Faytol, Clarice Wang, Arpi Minassian, Jafer Vazquez Alcaraz, Andrea Henneken, Ariel Lang

Background
Previous research identified Veterans of Color (VOC) as a vulnerable population for mental health disorders, with VOC reporting greater symptom severity compared to White veterans, including “Miserable” ratings of health, and lower quality of care. Racial discrimination can perpetuate negative healthcare interactions and outcomes through physiological and psychological symptoms of race-based stress.

Methods
This study examines the impact of the Race-Based Stress and Trauma Empowerment group (RBSTE) on trauma symptoms and wellness. We analyzed data from a larger randomized clinical trial, using a pretest-posttest design on 19 VOC who have experienced discrimination with four measures: the Personal Health Inventory (PHI), Coping With Discrimination Scale (CDS), Trauma Symptoms of Discrimination Scale (TSDS), and the Multigroup Ethnic Identity Measure-Revised (MEIM-R). Given the preliminary nature of the study, large effect size changes are reported, and no inferential statistics are used.

Results
Baseline results suggest dissatisfaction of VOC with wellbeing, marked by trauma symptoms and low ratings of physical, mental, and daily wellness. Participant racial trauma symptoms decreased (Cohen’s d = 1.03) and wellness ratings increased after the intervention. Among the five CDS coping subcategories, Resistance showed an increase as a coping strategy (Cohen’s d = -1.31). There were no notable changes in MEIM-R scores.

Conclusion
This research identifies negative health impacts of racial discrimination and supports the utilization of self-empowerment interventions like RBSTE to target traumatic stress specific to VOC. As this pilot study shows promising findings from a relatively small sample, future studies should evaluate RBSTE and consider similar interventions for non-Veteran settings.

Poster Abstracts

Poster #: 505

Mental Health and Substance Use

Title: The Effects of Extreme Temperatures on Mental Health in California

Authors: David Du, Alexandra K. Heaney, Carlos F. Gould

Background

Climate change is increasing the frequency and intensity of extreme weather events, including wildfires, hurricanes, droughts, and extreme heat. While previous studies have examined the physical impacts of these extreme weather events, the mental effects of these events have not been studied as much. This original research paper seeks to examine the effects of extreme heat and wildfire smoke on mental-health related emergency department (ED) visits and hospital admissions.

Methods

We obtained data on all ED visits and hospital admissions to non-federal hospitals in California from 2006 to 2017, including the primary and secondary causes for each visit. We defined mental health-related outcomes according to the International Classification of Diseases (ICD) codes, including alcohol related disorders; opioid related disorders; narcotic poisonings; adverse effect from drug poisonings; and substance use disorders. Data were aggregated to the zip code level and merged with data on daily temperatures and precipitation. We used Poisson regression to model each outcome of interest as a flexible, nonlinear function of average monthly maximum temperature, including fixed effects for zip code by year and zip code by month to account for seasonal and long-term trends in both the exposure and outcome.

Results

Our Poisson regression analyses showed that for outcomes “Poisoning Narcotics”; “Opioid Related Disorders”; and “Substance Use Disorders”, both ED visit rate and hospital admissions decreased from an average monthly maximum temperature of about 5°C to about 25°C. Starting around 25°C though, both ED visits and hospital admissions started trending upwards. For Alcohol Related Disorders, both ED visit rate and hospital admissions increased from an average monthly maximum temperature of 5°C to about 30°C, although for hospital admissions, the upward trend reached a plateau around 28°C. For the outcome named Poisoning Adverse Effect Drugs, ED visit rate increased from 5°C to about 28°C, then started decreasing afterwards. Hospital admissions saw the opposite trend, where it was generally negative from 5°C to about 25°C, then it reached a plateau.

Conclusion

Our results indicate that a range of mental health outcomes can be impacted by both low and high temperatures. For most of the outcomes of interest (3 out of 5), relative to 22°C, both ED visit rate and hospital admissions were higher at very low temperatures (5°C or less) and at very high temperatures (more than 30°C). More ED visits and hospital utilization for mental health conditions at very low temperatures make sense as seasonal depression usually peak during winter times. However, on the other end of the spectrum, more ED visits and hospital admissions at very high temperatures suggests that one’s mental health can be negatively impacted by extreme high temperatures, and to the extent that it requires them to seek care in the hospital. Both hot and cold days may cause worsened mental health outcomes, including those that cause individuals to seek medical care. This suggests that additional staffing for mental health specialists may be needed on both hot and cold days.

Poster #: 506

Poster Abstracts

Mental Health and Substance Use

Title: Prevalence of Smoking Behavior and its Association to Anticholinergic Medication Burden
Authors: Isabel Gandarilla, Jordan Kohn, Mariyan Moreno Bravo, Emily Troyer, Suzi Hong

Background
Acetylcholine signaling within the central nervous system has profound effects on mood, cognition, and behavior and is dysregulated in schizophrenia, bipolar, and depression. Current research does not yet clarify the contribution that anticholinergic medications may have on smoking behavior despite cholinergic effects of smoking itself. Patients living with mental illness also have higher anticholinergic burden (ACB) compared to individuals without these psychiatric comorbidities due to disease-specific medications as well as higher smoking rates. The purpose of this study is to assess the relationship between the anticholinergic burden of current medications and smoking status among individuals living with psychiatric diagnoses.

Methods
This study is an observational, cross-sectional analysis that involved the extraction of exposure and outcome data from the University of California San Diego Health Epic electronic medical record system. The exposure variable was medication ACB and the outcome variable was smoking status. Multinomial logistic regression is employed to assess the cross-sectional relationship between ACB scores and smoking status among 300,000 patients with either schizophrenia, bipolar disorder, or depression while controlling for covariates.

Results
We received IRB approval and are waiting for approval of an amendment to finalize data extraction. Preliminary overview of the data indicates that among patients diagnosed with severe mental illness, there is a difference in the number of current and former smokers between patients with anticholinergic burden and those without. We anticipate that we will have specific results to present by the date of Public Health Research Day.

Conclusion
Conclusion pending result completion.

Poster #: 507

Poster Abstracts

Mental Health and Substance Use

Title: Telehealth Parent-Only Treatment for Youth with Autism and Overweight/Obesity: Progress Update
Authors: Claire Pinson, Lauren Brookman-Frazee, Dawn Eichen, David Strong, Natacha Akshoomoff, Kay Rhee, Lauren Hamel, Sara Bock, Kerri Boutelle

Background
Autistic children have a prevalence of overweight/obesity (OW/OB) often exceeding rates in typically developing peers and are often excluded from behavioral weight loss trials. This ongoing clinical trial evaluates child weight outcomes in a six-month telehealth parent-based treatment tailored for autistic children (PBT-ASD) compared to an active health education (HE) program.

Methods
Target enrollment is 150 parent-child dyads, randomized to PBT-ASD or HE by child sex, BMIz and parent-reported autism-related traits from the Social Responsiveness Scale (SRS-2). PBT- ASD promotes new eating-related behaviors and skills through strategies specifically adapted for autistic children. HE provides general health education on weight-related topics without behavioral modification strategies. Primary inclusion criteria are parents with autistic children aged 6-12 (diagnosis confirmed with the Autism Diagnostic Interview-Revised) and overweight/obesity (≥85.0% BMI percentile for age). Child BMIz/%BMIp95 is the primary outcome, measured at baseline, 3, 6, 12, and 18 months.

Results
65 dyads are enrolled. Parents are 100% female (n=65), an average age of 44.03 (SD=6.03), average BMI of 35.02 (SD=9.45), and 61.5% White. Children are 26.2% female (n=17), an average age of 10.02 (SD=2.07), and average BMIz of 2.25 (SD=0.45). Average SRS-2 score is 78.17 (SD=10.83). For six-month treatment-completed families (n=32), PBT-ASD (n=15) had a median baseline BMIz=2.43 and median posttreatment BMIz=2.37. HE had a median baseline BMIz=2.38 and median posttreatment BMIz=2.17.

Conclusion
43.3% of the target sample is enrolled. However, recruitment and data collection remain ongoing, precluding definitive statistical conclusions. Continued recruitment efforts and long-term follow-ups will clarify intervention efficacy and inform future tailored obesity treatments for autistic children.

Poster Abstracts

Quantitative Methods in Public Health

Title: Martingale R-learner: estimating time-varying heterogeneous treatment effects for survival data
Authors: Yuchen Qi, Ronghui Xu, Jue Hou

Background
Future precision medicine requires accurate assessment on the explainable variability in treatment effects, known as heterogeneous treatment effects (HTE), to guide the optimal clinical decision at individual level. Although considerable efforts have been put into developing methods for HTE estimation, there are few theoretical guarantees and approaches for estimating a time-varying HTE are not well studied. We aim to address.

Methods
Measuring HTE by the ratio of survival probabilities under structural failure time model, we develop a martingale R-learner to estimate HTE. Our martingale R-learner incorporates flexible estimators for 1) marginal survival or cumulative hazards for association between outcome and confounders, and 2) time-varying propensity score in risk sets, which enables leveraging advances in machine learning. To reduce the impact of estimation bias in these two nuisance models on HTE, we proposed a Neyman orthogonal score based on an orthogonal decomposition of conditional model martingale residuals into residuals of propensity score and marginal model martingale.

Results
The resulting martingale R-learner attains the quasi-oracle property, i.e. estimation error of nuisance models has no impact on HTE if their estimators are consistent at o(n−1/4) rate. Numerical experiments in various settings demonstrated valid empirical performance consistent with theoretical properties.

Conclusion
We propose a Neyman orthogonal score for estimating time-varying heterogeneous treatment effects, and the resulting martingale R-learner attains a quasi-oracle property.

Poster #: 601

Poster Abstracts

Quantitative Methods in Public Health

Title: Optimizing Random Forest Hyperparameters for Disease Prediction: A Theoretical and Empirical Analysis of Variance Scaling in Disease Prediction Datasets
Authors: Imani Beckett

Background
Random Forests (RFs) are widely used in medical research, but improper hyperparameter tuning can reduce model stability and reproducibility. There is currently no established framework linking dataset characteristics to optimal RF tuning.

Methods
We analyzed 12 real-world medical datasets (e.g., lung cancer, diabetes, Alzheimer's) to evaluate the relationship between dataset size, feature correlations, and optimal RF hyperparameters. A systematic grid search was performed to determine the best ntree (number of trees) and mtry (number of variables per split) values for each dataset. Out-of-bag (OOB) error rates and confidence intervals (CIs) were used to assess model stability. To uncover patterns in hyperparameter relationships, we applied ANOVA, Pearson correlation, Spearman Correlations, regression analysis, and canonical correlation analysis (CCA). Additionally, 99 synthetically generated datasets were used to validate whether these relationships extend beyond real-world medical data.

Results
A strong quadratic relationship ($r = 0.78$, $p < 0.01$) was observed between dataset dimensionality (rows/columns ratio) and the optimal ntree/mtry ratio, showing that smaller datasets require proportionally higher mtry values for model stability. Notably, this relationship was absent in synthetic datasets, indicating that real-world feature correlations influence optimal hyperparameter selection. Permutation tests confirmed that dataset-dependent hyperparameter tuning significantly improves model reproducibility, particularly in small-to-moderate-sized datasets ($n < 1000$) common in clinical research.

Conclusion
We present a data-driven framework linking dataset characteristics to RF hyperparameters, improving model stability and reproducibility in clinical AI applications.

Poster #: 602

Poster Abstracts

Quantitative Methods in Public Health

Title: Investigating the Association between BMI and Sedentary Behavior derived from Wearable Sensor
Authors: Weiwei Shi, Jasmine Morales, Rong W. Zablocki, Marta M. Jankowska, Jiue-An Yang, Loki Natarajan

Background
Sedentary behavior (SB) is a known risk factor for chronic diseases. Accurate classification of sedentary behavior patterns is critical for understanding their association with health outcomes.

Methods
In this study, we evaluated the accuracy of the Convolution neural network Hip Accelerometer Posture (CHAP) SB prediction model in a new cohort against the ground truth camera SenseCam. We also examined the associations between BMI and three sedentary behavior features including daily sedentary time (DST), mean sedentary bout duration (MSBD), and number of sit-to-stand transitions (STS).

Results
CHAP exhibited robust classification performance across gender, age, and BMI, with positive predictive value over 92.8% (SD = 0.111), sensitivity and specificity above 86.2% (SD = 0.199), and negative predictive value above 74.0% (SD = 0.174). SB based on SenseCam was associated
with BMI: -0.0001 (P = 0.3428) DST, 0.0027 (P = 0.0358) MSBD, -0.0097 (P = 0.0008) STS. Bootstrap analyses of the slope differences revealed that CHAP and SenseCam yielded similar slopes, as all confidence intervals included 0. Our findings support a positive association between increased SB and higher BMI.

Conclusion
In conclusion, these results highlight CHAP as a reliable and consistent tool for classifying sedentary behavior.

Poster #: 603

Poster Abstracts

Quantitative Methods in Public Health

Title: Real-Time Driver Alerts to Improve CMV Safety in California Work Zones
Authors: Carly Glasson, Linda Hill

Background
Commercial motor vehicles (CMVs) are disproportionately involved in work zone crashes, contributing to significant mortality. This study evaluated location-based in-cab alerts to reduce crash risk by improving driver awareness, speed management among CMVs, and user perception of benefit.

Methods
Participants were users of a mobile safety app providing free alerts to CMVs. The experimental group received pop-up notifications and audible chimes 500m before work zones via geofencing, while controls received no alerts across nine California counties. Location data was collected for all CMVs from 30 seconds before to 5 minutes after the geofence, enabling speed analysis comparisons. To focus on immediate driver behavior, we examined the 10 seconds before and after the geofence. An anonymous email survey assessed perceptions of the alerting experience and potential safety impacts.

Results
228,713 vehicle visits across 4,080 work zones were evaluated with 168,153 receiving alerts. Within the first 10 seconds of alerts, CMVs above 55 mph reduced speed 0.5 mph more than the controls ($p = .02$), a 30% greater magnitude of speed reduction. Lane-specific alerts found deceleration slopes 1.5 times steeper than generic alerts ($p < .001$). Survey results from 422 drivers revealed that 82% reported slowing down and 83% reported increased situational awareness when receiving alerts.

Conclusion
In-cab notifications of work zones appear to effectively promote safer driving behaviors among commercial drivers, with more informative and targeted alerts potentially offering more pronounced safety benefits. Users found these alerts usable and beneficial to their safe driving practices.

Poster Abstracts

Quantitative Methods in Public Health

Title: Learning Treatment Effects under Informative Censoring in Semi-competing Risks Data
Authors: Jiyue Qin, Yuyao Wang, Ronghui Xu

Background
Semi-competing risks data involve a non-terminal event (e.g., disease) and a terminal event (e.g., death), where the terminal event censors the non-terminal one, but not vice versa. This structure poses analytical challenges, especially in observational studies, where biases due to confounding and informative censoring are common. While augmented inverse probability of censoring weighting (AIPCW) has been applied to handle informative censoring in univariate survival settings (i.e., involving only a single event), its extension to bivariate settings such as semi-competing risks remains unexplored. We propose a method to fill this gap.

Methods
We use semiparametric theory to develop an AIPCW estimator that accounts for informative censoring in semi-competing risks data. We further integrate this estimator with augmented inverse probability weighting of treatment (AIPTW) to develop an estimator of a general causal effect under informative censoring. We consider various causal esti-mands, such as difference in cumulative incidence function of the non-terminal event and the terminal event. We evaluate the finite-sample performance of the proposed method through simulations.

Results
We prove that the proposed estimators are doubly robust, i.e., they are consistent if either the event time models are correct or both the censoring and treatment models are correct. Simulation results demonstrate their robustness and superior performance compared to existing methods.

Conclusion
Our method provides a framework to estimate treatment effect under informative censoring in semi-competing risk data. It offers a valuable tool for causal inference in complex observational studies and has broad applicability in statistical research.

Poster #: 605

Poster Abstracts

Quantitative Methods in Public Health

Title: Incremental Causal Effect for Time to Treatment Initialization Without Positivity Assumption
Authors: Zhichen Zhao, Andrew Ying, Ronghui Xu

Background
Time to treatment initialization is critical in clinical and public health settings. We aim to identify and estimate the incremental causal effect of time to treatment initialization by shifting its hazard function via hazard ratio. Unlike traditional causal estimands, our approach does not rely on the often restrictive positivity assumption and requires only consistency and no unmeasured confounding.

Methods
We developed an inverse probability weighted estimator with statistical inference, accommodating flexible hazard models. Finite-sample performance was assessed via Monte Carlo simulations. We applied our framework to estimate incremental causal effect of Methotrexate on the average number of tender joints at one-year follow-up among 1010 rheumatoid arthritis patients enrolled between 1981 and 1999.

Results
Simulation results showed that, as sample size increased, biases decreased (below 0.05% for n=5000), empirical standard errors approached the estimated standard errors, and Wald-type confidence intervals achieved nominal coverage. In the application, doubling the hazard of Methotrexate initialization reduced the average number of tender joints by 1.23%, and a five-fold increase reduced it by 5.42%. Conversely, halving the hazard increased the average by 0.83%, and a five-fold decrease increased it by 1.51%. The decline in the average as the hazard ratio increases aligns with the protective effect of Methotrexate shown in Tchetgen Tchetgen et al..

Conclusion
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Poster #: 700

Poster Abstracts

Women's Health and Reproductive Justice

Title: Women's strategies around food security in Oaxaca, Mexico
Authors: Nadia Hemmat, Lucia Canul, Ramona Perez

Background
Food insecurity in Oaxaca, Mexico, is a major public health issue, disproportionately impacting food-gathering women. Limited access to nutritious foods contributes to mental health struggles, nutrient deficiencies, chronic diseases, and poor maternal and child health outcomes. Many women depend on food production for income, but face barriers to adequate food access. This study explores the multifaceted roles of women, focusing on their responsibilities as food producers, vendors, and cooks, and the broader impact of their responsibilities on family, cultural retention, and well-being.

Methods
This qualitative study used semi-structured interviews from 2024 (n=8) with women from rural, peri-urban, and urban communities in Oaxaca to explore food security, economic reliance on food production, and dietary practices. Ethnographic field notes from 2019-2024 (n=20) were coded to assess community perspectives and structural challenges to food access.

Results
Women begin food-related responsibilities as early as childhood, often cooking by age nine. Many sell nutritious, agricultural-staple products in markets such as corn and beans, yet do not consume what they produce. While food is viewed positively, the burden of responsibility limits educational attainment and economic advancement, particularly after marriage. These intersecting factors contribute to cycles of food insecurity among women despite their central role in food systems.

Conclusion
Women are essential in addressing food security in Oaxaca, but their food access remains compromised. This study highlights the need for policies and interventions that empower women economically, promote equitable food distribution, and address the structural barriers limiting their health and opportunities.

Poster #: 701

Poster Abstracts

Women's Health and Reproductive Justice

Title: Maternal Pre-Pregnancy Smoking and Low Birth Weight in Low-Income Mothers
Authors: Chris Xu, Malia Pandes, Siyi Chen, Yiqi Liu

Background
Previous studies have researched the impact of smoking during pregnancy on low birth weight. However, few have focused on the effect of pre-pregnancy smoking. Low birth weight is associated with neonatal mortality, developmental issues, and chronic disease later in life. We hypothesize that smoking habits affect birth weight.

Methods
We analyzed 1000 dyads from the Baby's First Years dataset, which was collected from 2018 to 2019. Analysis was conducted on matched and unmatched data. Missing entries were imputed, and data was matched using propensity scores. Maternal education, alcohol consumption, race, ethnicity, and income were included as potential controls in the model before variable selection. Associations between smoking and birth weight were assessed using logistic regression.

Results
The odds of low birth weight were 1.9 (95% CI: [0.945, 3.847], P = 0.071) times higher in those who smoked during pregnancy and 1.2 (95% CI: [0.460, 3.183], P = 0.700) times higher in those who only smoked before pregnancy relative to those who haven't smoked. The matched data had similar results for smokers during pregnancy 2.1 (95% CI: [0.936, 4.613], P = 0.072) and those who smoked before pregnancy 1.4 (CI: [0.478, 3.808], P = 0.572).

Conclusion
There was no significant association between smoking and low birth weight, but the odds ratios suggested a positive relationship. We suspect the non-significant p-value is due to a small number of cases and recommend further exploration with a larger cohort.

Poster #: 800

Poster Abstracts

Title: Adolescents' Perspectives on Digital Monitoring in Schools: Reflections on the Process and Early Insights
Authors: Paulina Munoz, Alison O'Daffer, Natalie Gonzalez, Kimberly Center, Melissa M. Karnaze, Cinnamon S. Bloss, Elizabeth V. Eikey

Background
In order to try to address cyberbullying, threats, and mental health issues, many schools have purchased digital monitoring software to track student behavior. This study aims to understand adolescent perspectives by focusing on their experiences, beliefs and desired improvements regarding monitoring, with the goal of sharing these insights with their peers through an informative pamphlet.

Methods
In December 2024, we conducted five 1.5-hour focus groups with 42 adolescents ages 13-17. The majority were White non-Hispanic, followed by Hispanic and Black non-Hispanic from all four regions (West, Northeast, South, Midwest). There were slightly more males, and the majority described themselves as straight/heterosexual. Currently, we utilizing thematic analysis to identify and analyze various themes. Three researchers first familiarized ourselves with the data by reading transcripts and chats and recording preliminary codes alongside notes. We met to discuss those and then refined and combined our notes to begin to develop a codebook.

Results
Preliminary insights indicate varying perspectives on the impacts depending on the context of the school environment, who is involved, and the particular situation. Themes related to desired changes and harms/benefits will be transformed into questions about who and how adolescents are monitored, the boundaries of what is appropriate to monitor, and how monitoring is handled.

Conclusion
This work will culminate in a pamphlet for adolescents that showcases their peers' perspectives on key aspects of digital monitoring and empowers them to ask informed questions and gain a deeper understanding of monitoring practices.

Poster #: 801

Poster Abstracts

Title: Hypertension and Culinary Salt Use among East African Immigrants in San Diego

Authors: Riya Agarwal, Winnie Y. Cheung, Nicole N. Karongo, Xochitl Aguinaga, Amy E. Atun, Kathryn Maysent, Sahra Abdi, Tsigealem Birhane, Meshate Mengistu, Connie M. Weaver, Cheryl A.M. Anderson

Background

Little is known about engaging East African immigrants in interventions focused on healthy home cooking. This project aims to determine if hypertension status influences home-cooking practices, particularly salt use.

Methods

In collaboration with United Women of East Africa, individuals who are East African immigrants living in San Diego (n=43) were recruited for the study. Data collection occurred between May 2023 and June 2024, via REDCap surveys covering demographics and health status and focus group interviews addressing beliefs and culinary practices regarding salt use, with translation as needed. Thematic analysis was performed via NVivo 12.

Results

Thirty-seven percent (16/43) of participants reported having hypertension. When asked about which cooking ingredients impact cardiometabolic health, all participants identified excessive salt as a risk factor for hypertension. Individuals with hypertension or an immediate family member with the condition reported being more conscious of salt use while cooking, and all participants with hypertension reported reduced salt intake after their diagnosis. Among participants without hypertension (n=27), 46.2% (12/27) reported decreasing household salt use due to cooking for a family member with a cardiometabolic disease, citing convenience and increased perceived susceptibility as reasons. However, all participants, regardless of hypertension status, reported using salt-containing spice blends (e.g., lemon pepper, berbere, Vegeta).

Conclusion

While reducing salt intake is recognized as important for hypertension management, the reported use of spice blends alongside salt provides an opportunity for interventions focused on sources of sodium used while cooking. Culturally tailored, educational dietary interventions could promote sustainable behavioral changes that align with health and cultural values.

Poster #: 802

Poster Abstracts

Title: Community-engaged research across the University of California system: Lessons for UCSD
Authors: Alexia Marmolejo Juarez, Megan Nguyen, Natalie Vawter, Marlene Flores, Abigail Andrews, Rebecca Fielding-Miller

Background
There is currently no collaborative platform at the University of California, San Diego (UCSD) that connects community-engaged researchers across various disciplines. To start addressing this gap, we examined how other University of California (UC) campuses operationalize community-engaged research and synthesized principles across UC campuses in order to explore opportunities for enhancing community-engaged research at UCSD.

Methods
We assessed the current state of evidence regarding best practices across all UC campuses. We conducted literature reviews and reviewed all available documents, reports, and publications related to the goals, policies, and objectives of community-engaged research. We then reviewed all sources and synthesized findings to extract common principles.

Results
Our review yielded 29 reports from UC campuses. We identified three key common principles across UC campuses: 1) The incorporation of community-centered theories, methods, and techniques into research aimed at promoting equity, diversity, and inclusion; 2) A dedication to fostering an environment where all individuals are treated with respect and acceptance; and 3) Research that emphasizes the development of opportunities to drive positive systemic change through collaboration with community organizations, students, and faculty.

Conclusion
This project revealed common principles in community-engaged research across the UC system. Our next step is to leverage these valuable insights to develop a robust framework to support community-engaged research at UCSD.

Poster #: 803

Poster Abstracts

Title: Parent-Child Dyads Reduce UPFs in Family-Based Behavioral Treatment
Authors: Ingrid Rivera-Iniguez, David R. Strong, Kyung Rhee, Dawn M. Eichen, Kerri N. Boutelle

Background
High consumption of ultra-processed foods (UPF) is linked to obesity and metabolic disorders. In the U.S., adults and children consume approximately 58-67% of their energy from UPF, and reducing UPF consumption could ultimately improve adult and child health. Family-based behavioral weight loss
treatment (FBT) is delivered to both parents and children and is considered the most efficacious treatment for children with obesity. Parent-based treatment (PBT) is delivered to the parent without the child and includes the same skills as FBT. This study compared UPF changes in parent-child dyads assigned to 6-months of FBT or PBT.

Methods
141 parent-child dyads (child age=9.9y(1.3), BMIz=2.0 (0.3), 67% female, 30% Hispanic, 44% White, 25% Other; parent age=43y(6.6), BMI=32(6.4), 82% female) completed anthropometrics and three 24-hour dietary recalls at baseline, post-treatment, and 18-month follow-up. Foods were classified as UPF using the NOVA system. A linear model using generalized least squares evaluated UPF changes across time points, controlling for age, sex, race, and education.

Results
This preliminary analysis showed that parents (-24.29(2.16), $p<0.001$) and children (-23.99(1.99), $p<0.001$) reduced UPF consumption in both FBT and PBT and there were no differences between the two groups over time.

Conclusion
Parents and children who attended FBT and PBT reduced UPF. Future research directions will evaluate potential moderators of treatment outcomes, including parent and child age, race, sex, education, and parent executive function. These results could contribute to interventions targeting UPF for adults and children.