

Public Health

Poster Forum

2026

**DATA TO ACTION:
PUBLIC HEALTH CLIMATE & AI INNOVATION**

March 27th, 2026

Health Sciences Innovation Building



THE UNIVERSITY OF ARIZONA

Mel & Enid Zuckerman
College of Public Health



THE UNIVERSITY OF ARIZONA

Mel & Enid Zuckerman
College of Public Health

Presents

The Public Health Poster Forum

The Public Health Poster Forum serves as a platform to:

- **Showcase and provide constructive feedback on student research.**
- **Foster connections and encourage collaborative efforts among participants.**
- **Enhance professional development through skill-building opportunities.**
- **Introduce students to public health research and community engagement initiatives.**



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POSTER FORUM AGENDA 2026

Friday, March 27th, 2026
12:00 PM – 5:00 PM

Registration & Poster Setup

12:00 PM

**Keynote Speakers -
Panel Presentation**

1:00 PM

Poster Presentations & Judging

2:00 PM

MEZCOPH Tabling Event

2:00 PM

**Presentation of Awards &
Closing Remarks**

4:30 PM



PUBLIC HEALTH POSTER FORUM KEYNOTE SPEAKERS

Keynote Speaker



Chris Lim, PhD

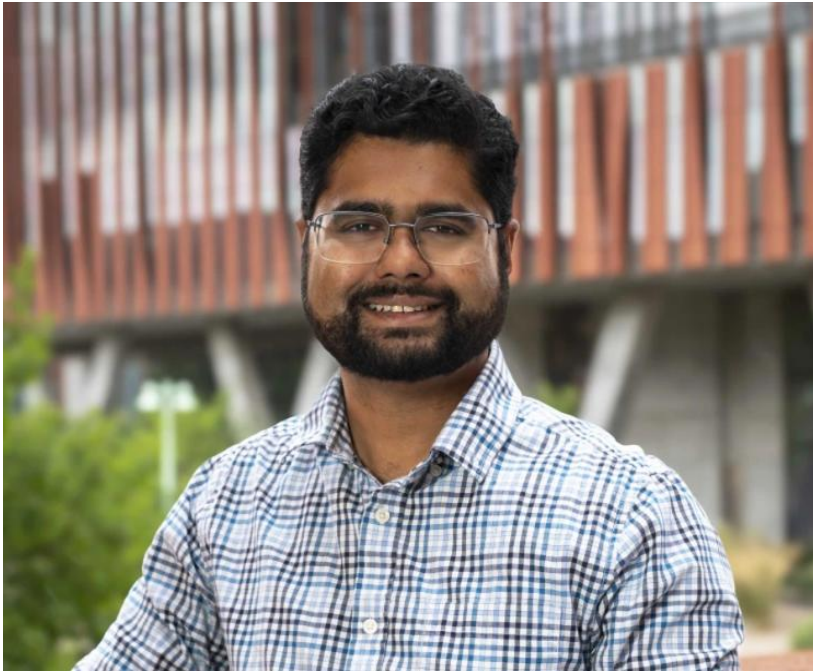
Dr. Lim's research examines how the environment impacts human health applying epidemiologic, statistical, and data science methods. Specifically, he is interested in the health effects of air pollution and climate change, and whether there are disparities in the exposures and associated health outcomes. He also explores the potential application of low-cost sensor technologies for personal-level exposure assessment, urban air pollution modeling, and community-based environmental justice projects. Lim currently leads a study examining the health and academic impact of green playground renovations in New York City public schools, and another study that will look at the impact of air pollution on pediatric asthma in Tucson schools. He completed his postdoctoral training at the Yale School of the Environment and obtained his PhD from NYU School of Medicine.



Onicio B. Leal-Neto, MSc, PhD

Onicio B. Leal-Neto is biomedical scientist, holds a MS and PhD in Public Health and Epidemiology. Currently, he is the leader of Global Flu View and Assistant Research Professor at the Department of Epidemiology and Biostatistics, University of Arizona. He is also responsible for the AI for Public Health Initiative, leading the PH & AI Summer School and new course offerings on AI and Public Health. Previously, he was senior researcher at the Department of Computer Science, ETH Zürich, Switzerland. He serves as academic editor for the journals NPJ Digital Public Health, PLOS Digital Health and JMIR Public Health & Surveillance. Leal-Neto's research focuses on digital epidemiology and digital public health innovation integrating artificial intelligence, crowdsourcing, wearables and data science methods, with a global reach that includes countries like Malawi, Kenya, Ivory Coast, Brazil and Switzerland. In addition to his academic role, Leal-Neto is also an entrepreneur. He founded the digital epidemiology startup Epitrack, which was acquired in 2021 by Colab GovTech.

Keynote Speaker

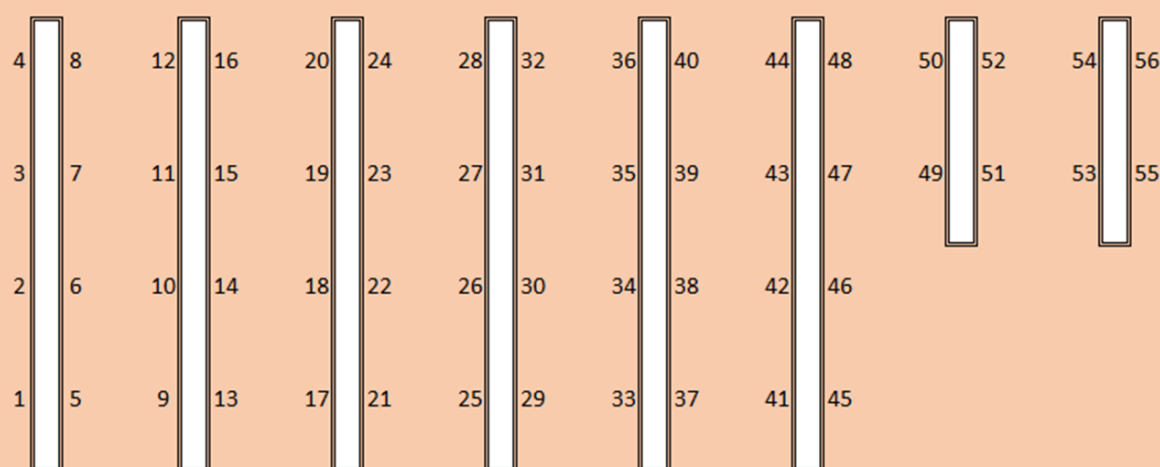


Shravan Aras, PhD

Shravan Aras, PhD works with CB2 to help integrate wearable sensor technology and smart health platforms such as IoT devices into various clinical studies run across University of Arizona centers.

He graduated from the Department of Computer Science at University of Arizona in 2018. Dr. Aras' research areas span across energy optimization for sensors, clinical imaging using machine learning techniques, graded authentication based on biometrics and biomedical algorithms for cardiovascular systems. He is also instrumental in pushing the Low Code - No Code initiative, giving clinicians, and non-technical personnel the tools to develop sensor-based applications for distributed clinical data collection. In the past Dr. Aras has also worked on and managed teams for Pico-Satellite projects, and several nationwide mobile applications including HIPAA compliant clinical applications. His several years of experience in startups along with his academic background has prepared him to balance various commercialization aspects along with research goals. His motto is to reduce the initial inertia for adopting sensor based mobile technologies in distributed at-home clinical studies, thus giving physicians, residents, and research personnel the tools needed to focus on their goals rather than the underlying computational technology.

Welcome!



2026 Public Health Poster Forum

Stage

Poster Presenters

Community Engagement

1	Shunrang Chin
2	Pedro Flores Gallardo
3	Jeffrey Greenfield
4	Luis Hernandez Anaya
5	Sanvi Lamba
6	Dora Le
7	Samantha McDonald
8	Mohammed Najeeb Naabo
9	James Rozelle
10	McKenna Schultz
11	Celina Urquidez

Research

12	Enock Adu Bonsu
13	Jumah Alkhaibari
14	Munthir Almoslem
15	Nana Adwoa Amoh-Asante
16	Ahamed Ashraf
17	Kevin Begay

Research

18	Kendrick Begay Jr.
19	Auditi Bhowmick
20	Jenifer Bova
21	Harrison Brown
22	Leah Callovini
23	Katelyn Carter
24	Grace Chao
25	Reagan Conner
26	Ashley Danforth
27	Ashley Danforth
28	Mahdi Faraji
29	Tina Fingesi-Johnson
30	Mehedi Hasan
31	Brooke Hawkes
32	Ana Hernandez
33	Alicia Hernandez
34	Dina Jacqueline Inzunza
35	Kayla Silva Maravilla

Research

36	Kelly Lau
37	Kyra Long
38	Connor Lopez
39	Bhuvi Mamtani
40	Victor Okpanachi
41	Feruz Oripov
42	Milin Patel
43	Jack Picton
44	Cynthia Porter
45	Noah Rios
46	Orli Sanyal
47	Azmat Sidhu
48	Aiya Tawakkol
49	Cheryl Valdez
50	Molly Wert
51	Jingyue Wu
52	Audrey Yang
53	Jeonggyo Yoon



PUBLIC HEALTH POSTER FORUM COMMITTEE MEMBERS





Public Health Poster Forum Committee



Lyn Duran

Assistant Dean, Student Affairs,
MEZCOPH
PHPF Staff Advisor

Michael J. Tearne, MEd

Manager, MS and Doctoral
Programs, MEZCOPH
PHPF Staff Advisor



Refugio Sepulveda, DrPH, MPH, MPA

Assistant Research Professor
MEZCOPH
PHPF Staff Advisor

Courtney Faryab

Senior Coordinator,
Admissions & Recruitment
Office of Student Affairs,
MEZCOPH
PHPF Staff Advisor



Sheila Soto, DrPH, MPH

Assistant Research Professor
Director of the Community Engagement
and Outreach Programs (CEO),
MEZCOPH
PHPF Staff Advisor



Public Health Poster Forum Committee



Committee Co-Chair & Booklet Coordinator

Yva Luc
PhD Student in Environmental
Health Sciences



Committee Co-Chair

Kizil Yusoof
PhD Student in Health Behavior
& Health Promotion



Committee Co-Chair & Advertising Coordinator

Hannah Vu
MPH Student in Epidemiology



Abstract & Poster Coordinator

Royani Saha
PhD Student in Environmental
Health Sciences



Abstract & Poster Coordinator

Sheneil Agyemang
PhD Student in Environmental
Health Sciences



Public Health Poster Forum Committee



Abstract & Poster Coordinator
Joanne Dehnbostel
PhD Student in Epidemiology



Fundraising Coordinator
Daniela Valdez
MPH Student in Health
Behavior & Health
Promotion



Fundraising Coordinator
Kinsey Clyne
MS Student in Biostatistics



Outreach Coordinator
Rachel Figueroa
MPH Student in Health
Behavior & Health
Promotion



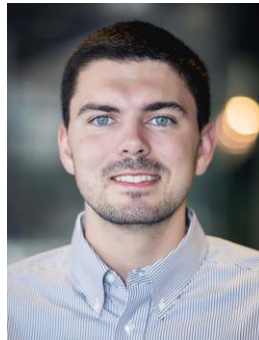
Outreach Coordinator
Myra Rahman
MPH Student in Epidemiology



Public Health Poster Forum Committee



Website Coordinator
Ran Wei
PhD Student in Biostatistics



Judge Coordinator
Matthew Lujan
PhD Student in Health Behavior
& Health Promotion



Facilities Coordinator
Jumah Alkhaibari
PhD Student in Environmental
Health Sciences



Judge Coordinator
Victor Okpanachi
PhD Student in Environmental
Health Sciences



Keynote Coordinator
Benjamin Pope
PhD Student in Biostatistics



PUBLIC HEALTH POSTER FORUM JUDGES



Amrita Mukherjee, PhD

Amrita Mukherjee, PhD, is an Assistant Professor in the Department of Epidemiology and Biostatistics at the University of Arizona Mel and Enid Zuckerman College of Public Health (MEZCOPH). Dr. Mukherjee has a master's and a doctorate degree in Epidemiology from the University of Alabama at Birmingham. Prior to joining MEZCOPH, Dr. Mukherjee completed her postdoctoral training in Cancer Epidemiology at Kaiser Permanente Southern California, Pasadena. Her research focuses on risk factors, health disparities, and cardiometabolic health in cancer survivors.



Andrés A. Portela III, MS

Andrés A. Portela III is a Health Equity Program Manager with the Pima County Health Department in Tucson, Arizona, where he leads initiatives focused on advancing equity, community partnership, and culturally responsive public health practice. His work centers on building cross-sector collaborations that address structural drivers of health through policy, community leadership, and systems change. Beyond his professional work, he is a writer and community mentor whose reflections on fatherhood, culture, and care shape both his creative writing and his approach to leadership.



**Brenda Sánchez, MPH,
CHES, CHW**

Brenda Sánchez, (MPH, CHES, CHW), serves as the Executive Director of the Southeast Arizona Health Education Center (SEAHEC), where she leads initiatives focused on improving rural, border, and migrant health across Southern Arizona. With a background in community health, binational collaboration, and workforce development, her work centers on strengthening Community Health Worker programs and advancing health equity in underserved communities



Brian Dodge, PhD, MSc

Dr. Brian Dodge a Professor in the Department of Health Promotion Sciences at the University of Arizona Mel & Enid Zuckerman College of Public Health and the Director of the University of Arizona LGBTQ+ Institute. His research focuses on health among sexual and gender minority populations in a wide range of global contexts.



**Bridget Murphy, DBH,
M.Ed.**

Bridget Murphy, DBH, M.Ed. is an assistant research professor in the Mel & Enid Zuckerman College of Public Health in the Department of Health Promotion Sciences. Dr. Murphy is also the education and workforce research director for the Comprehensive Center for Pain and Addiction. She has more than three decades of education, research/evaluation, and experience in public and behavioral health.



Bryna Koch, DrPH

Bryna Koch, DrPH is an assistant research professor and interim director of the public health policy & management program at the Zuckerman College of Public Health. She has 19 years of experience in public health policy analysis, research, and evaluation at the local, state, and national level. Her current research program is largely focused within the domain of applied public health policy in three activity areas 1) using rural-specific data to inform policy and practice, 2) analysis of rural public health, healthcare system factors like workforce shortages, and 3) development of interactive maps and reports to inform and educate the public health policy community about rural health.



Chris Lim, PhD

Dr. Lim's research examines how the environment impacts human health applying epidemiologic, statistical, and data science methods. Specifically, he is interested in the health effects of air pollution and climate change, and whether there are disparities in the exposures and associated health outcomes. He also explores the potential application of low-cost sensor technologies for personal-level exposure assessment, urban air pollution modeling, and community-based environmental justice projects. He completed his postdoctoral training at the Yale School of the Environment and obtained his PhD from NYU School of Medicine.



Christina Cutshaw, PhD

Dr. Christina Cutshaw is an Assistant Professor of Practice in Health Promotion Sciences, Program Director in Family and Child Health, and Director of Online Education at the Zuckerman College of Public Health. Dr. Cutshaw has been with the College of Public Health for over 20 years. Her research has been in the areas of early childhood care, education, health and development. Other interests include public health education and history. She also works for the United Way of Tucson and Southern Arizona as part-time Director of Health and Public Policy. Dr. Cutshaw received her BA in psychology from Emory University, and a Masters of Health Science and PhD. in public health from the Johns Hopkins Bloomberg College of Public Health with a concentration in mental hygiene.



Flavia Nakayima Miiro, MS

Flavia Nakayima Miiro is a PhD candidate in Epidemiology at the Mel and Enid Zuckerman College of Public Health with a passion for health research as a gateway to disease prevention and treatment. She has either as a team leader or member of a team conducted research in HIV/AIDS, Malaria, Maternal and Child Health, adolescent health and health systems strengthening focusing on service provision and utilization looking at bottlenecks and how they can be overcome. Flavia has previously worked with The World Bank, UNICEF, CDC, UNFPA and other local and international NGOs in her home country Uganda. On the African continent, she has conducted evaluations in Kenya, Malawi, Nigeria, Swaziland, Liberia and Zimbabwe.



Gloria Coronado, PhD

Dr. Coronado is a Professor of Epidemiology at the Mel and Enid College of Public Health and Associate Director of Population Sciences for the UA Cancer Center. Her research focuses on preventing cancer through early detection and timely screening.



**Halimatou Alaofè, PhD,
MSc**

Dr. Halimatou Alaofè is a public health nutrition researcher specializing in maternal, adolescent, and child nutrition, with a focus on dietary assessment and malnutrition risk. She has led large-scale interventions in West Africa and contributed to global nutrition initiatives, including work with USAID and Feed the Future.



**Jeff Burgess, MD,
MS, MPH**

Jeff Burgess, MD, MS, MPH is a Professor in the Community, Environment and Policy Department of the Zuckerman College of Public Health. His research focus is on occupational and environmental exposures, health effects, and intervention effectiveness. He currently carries out community-engaged research with the fire service, and in previous research worked with essential workers, tribal communities, and miners.



**John E. Ehiri, PhD, MPH,
MSc**

John E. Ehiri, PhD, MPH, MSc (Econ.), is a University Distinguished Professor and Vice Dean for Education and Faculty Affairs at the University of Arizona's Mel and Enid Zuckerman College of Public Health. His work focuses on global maternal and child health, behavioral health interventions, and health system strengthening.



Katherine Ellingson, PhD

Katherine (Kate) Ellingson, PhD, is an Associate Professor of Epidemiology at the University of Arizona. Her research focuses on infection prevention and antimicrobial stewardship across healthcare and community settings, with particular attention to aging populations, border health, and emerging infectious disease threats, as well as occupational health risks such as heat exposure among agricultural workers. She collaborates with healthcare systems and community partners to develop practical, community-engaged and One Health-informed solutions that improve public health and healthcare safety.



Maia Ingram, MPH

Maia Ingram is the Co-Director of the University of Arizona Center for Participatory Prevention, Evaluation and Action Research (PEAR Center) and a member of the Department of Health Promotion Sciences in the College of Public Health where she teaches graduate courses in public health advocacy and community-based participatory research (CBPR). Ms. Ingram has expertise CBPR, participatory evaluation and qualitative research methods which she has applied in partnership with community health centers, local health departments and grassroots agencies in rural, urban and US-Mexico border communities.



Melissa Furlong, PhD

Dr. Furlong is an environmental epidemiologist with expertise in pesticides, neurological outcomes over the life course, and occupational factors related to firefighting. Dr. Furlong's primary research interests include developing and implementing novel approaches in big data to investigate associations between environmental contaminants and longitudinal chronic health outcomes, particularly neurological health.



Dr. Mohan Tanniru is the Adjunct Professor in the Department of Public Health Practice, Policy & Translational Research in the Mel and Enid Zuckerman College of Public Health, U of Arizona. He was a Fulbright Scholar to Canada to study Indigenous Health between Sept-Dec 2022 and is an emeritus professor of MIS of Oakland University.

Mohan Tanniru, PhD



Nicole P. Yuan, PhD, MPH, is an Associate Professor of Public Health and Program Director of Health Behavior Health Promotion at the University of Arizona. She received her PhD in clinical psychology from Bowling Green State University and MPH from the University of Washington. Her research focuses on adverse and positive life experiences, resilience, healthy aging, and digital technology, with an emphasis on community engagement and mixed methods designs with diverse populations. She is licensed clinical psychologist in Arizona

Nicole P. Yuan, PhD, MPH



**Onicio B. Leal-Neto, MSc,
PhD**

Onicio B. Leal-Neto is biomedical scientist, holds a MSc and PhD in Public Health and Epidemiology. Currently, he is the leader of Global Flu View and Assistant Research Professor at the Department of Epidemiology and Biostatistics, University of Arizona. He is also responsible for the AI for Public Health Initiative, leading the PH & AI Summer School and new course offerings on AI and Public Health. His research focuses on digital epidemiology and digital public health innovation integrating artificial intelligence, crowdsourcing, wearables and data science methods, with a global reach. In addition to his academic role, Leal-Neto is also an entrepreneur. He founded the digital epidemiology startup EpiTrack, which was acquired in 2021 by Colab GovTech.



Chiu-Hsieh (Paul) Hsu, PhD

Dr. Paul Hsu is a Professor of Biostatistics in the Department of Epidemiology and Biostatistics. His research interests include developing statistical methods for data subject to the non-ignorable missing mechanism and developing statistical approaches to better analyze biomedical data.



**Shannon Newton, MPH,
CIH**

Ms. Newton is a Senior Lecturer at the MEZCOPH, Department of Community, Environment and Policy teaching both core Environmental and Occupational Health and elective Industrial Hygiene courses. She coordinates the NIOSH Training Project Grant in industrial hygiene mentoring students who aspire to professional practice in Occupational, Safety and Health. Ms. Newton graduated from the United States Air Force Academy in 1995 (Environmental Engineering) and the University of Arizona in 2005 (MPH, Environmental and Occupational Health) practicing industrial hygiene throughout her career in the military and consulting fields. Ms. Newton is a member of the Delta Omega Honorary Society and holds professional certification as a Certified Industrial Hygienist by the Board of Global Credentialing (CP 8000).



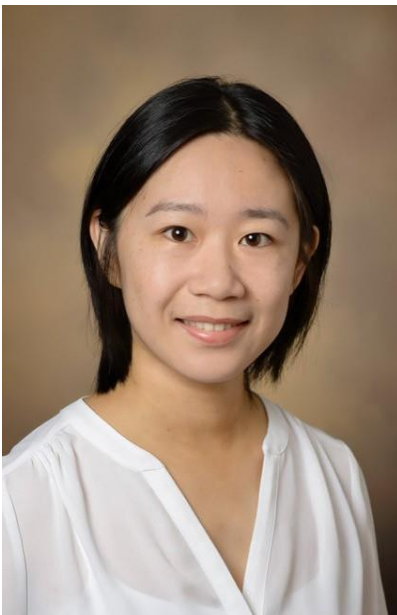
Yann Klimentidis, PhD

Yann Klimentidis, PhD, is a Professor in the Department of Epidemiology and Biostatistics at the Mel and Enid Zuckerman College of Public Health at the University of Arizona. His research focuses mainly on the use of genetic information to learn about body composition, health-related behavior, and cardio-metabolic, and neurodegenerative traits/diseases. The broad goals of his research are to: 1) understand mechanisms of disease, 2) identify risk factors for disease, 3) understand health disparities, and 4) improve prediction of disease risk. Approaches include genome-wide association studies, Mendelian randomization, gene-by-environment interactions, and genetic ancestry studies.



Yevheniia Varyvoda, PhD, is an Assistant Professor and Program Director for Environmental Health Sciences. With a background in environmental geography, she has over a decade of experience in interdisciplinary research, teaching, and program development at the intersection of climate change, food systems, and public health.

Yevheniia Varyvoda, PhD



Dr. Liu is an Assistant Professor in the Department of Epidemiology and Biostatistics at the University of Arizona. Her research focuses on developing statistical methods for high-dimensional and multi-source data, with applications in interdisciplinary studies integrating genomic, proteomics, and other large-scale biomedical data to better understand complex disease mechanisms.

Yiwen Liu, PhD



ABSTRACTS

Title: Strengthening Extreme Heat Resilience in Rural and Tribal Arizona Communities**Lead Presenter:** Shunrang Chin**Faculty Advisor:** Mona Arora**Partners/Settings:**

The Southwest Center on Resilience for Climate and Health (SCORCH), in partnership with the Arizona Center for Rural Health and the Arizona Department of Health Services, collaborated with rural and Tribal partners to address Arizona's growing extreme heat crisis. Sessions were conducted across rural and Tribal Arizona, regions where geographic isolation, limited infrastructure, and reduced access to essential services intensify heat-related risks and require tailored, community-specific approaches.

Activities:

Six structured listening sessions were convened between June and October 2025 to identify heat-related preparedness gaps and opportunities. Sessions were designed to capture lived experiences, local expertise, and distinct governance structures across diverse geographies, moving away from one-size-fits-all heat response models toward community-informed strategies.

Engagement:

A total of 90 participants from 64 organizations engaged across the six sessions, representing health departments, Tribal governments and health services, community health centers, hospitals, non-profits, educational institutions, and others actively involved in heat risk management across rural and Tribal Arizona.

Outcomes:

Five cross-cutting priorities emerged: flexible and long-term funding mechanisms, localized and community-informed data systems, formalized Tribal data sovereignty protections, culturally appropriate and multi-channel communication strategies, and coordinated heat response policies that reflect community realities and governance structures.

Conclusion

Extreme heat disproportionately impacts rural and Tribal communities due to geographic isolation, limited infrastructure, and inequitable service access. Effective heat preparedness must incorporate lived experiences, local expertise, and culturally grounded approaches. Together, the identified priorities offer a community-centered roadmap for advancing a "heat in all policies" framework across Arizona.

Title: Empowering Arizona Communities Through Air Quality Monitor Lending

Lead Presenter: Pedro Flores Gallardo

Faculty Advisor: Paloma Beamer

Partner/Setting:

The Southwest Environmental Health Sciences Center (SWEHSC) implemented an Arizona-wide Air Quality Monitor Lending Library for community groups and UA students/staff. The program supports communities concerned about indoor/outdoor air pollution and benefits populations vulnerable to particulate and pollutant exposures (e.g., children, older adults, and people with respiratory conditions). We addressed concerns about PM_{2.5} and other air pollutants near homes, schools, and workplaces, aiming to increase equitable access to monitoring tools, build community capacity, and inform exposure-reduction actions.

Activities:

Borrowers received monitors matched to community questions: PurpleAir PA-II-SD (stationary PM_{2.5}), Temtop M2000 (PM_{2.5}/PM₁₀/CO₂/formaldehyde), and Aeroqual Series 200 (PM_{2.5}/PM₁₀/O₃ via sensor heads). SWEHSC provided quality-assurance (QA) training, Standard Operating Procedures (SOPs) for installation/connectivity/troubleshooting, documentation templates, and virtual/in-person technical support. Borrower-generated data remained borrower-owned.

Engagement:

Engagement included consultation, co-planning, bilingual communication as needed, and on-site setup/training. Two community groups were supported intensively in 2025: (1) Vail, AZ residents borrowed 10 PurpleAir monitors for six months to establish a pre-operation baseline before a nearby copper mine; (2) Benson, AZ residents borrowed seven PurpleAir monitors for six months to establish a pre-operation baseline before an aluminum recycling plant begins operation. Both groups received on-site installation, SOPs, and documentation support.

Outcomes

Communities gained practical skills, locally relevant baseline datasets, and monitoring infrastructure for ongoing community-led surveillance and communication.

Conclusion

Key lessons were the importance of sustained technical support, standardized QA/SOP workflows, and community data ownership for trust and action. Next steps include repeat deployments, pre/post comparisons, and expansion to additional Arizona communities.

Title: Plain Language with Patients with Disabilities: An Ongoing Educational Platform

Lead Presenter: Jeffrey Greenfield

Faculty Advisor: Julie Armin

Partner/Settings:

This project represents a partnership between three independent programs: UACOM-T, Special Olympics Arizona, and Artworks.

Methods:

"Caring for Patients with Intellectual and/or Developmental Disabilities (I/DD)" was instituted as a two-hour lecture for medical students at UACOM-T. It includes an introduction to access and equity issues, principles of universal design, presentation of clinical skills necessary for inclusive clinical environments, and a 45-minute exercise on plain language occurring in small groups. Each group had facilitators with I/DD. Self-advocates were all from two programs with long collaborative relationships with UACOM-T in student education.

Engagement:

Facilitators were recruited from long-standing partners who regularly engage with COM-T medical learners: ArtWorks, an art studio/gallery for individuals with I/DD, and Special Olympics Arizona. These facilitators are empowered to share their experiences with the health care system to augment medical education.

Outcomes:

Preliminary results showed 97% of respondents (178/183) reported increased confidence in interacting with patients with I/DD, and increases in knowledge about health disparities for people with disabilities, using plain language in a medical setting, and the physician's role in promoting self-advocacy.

Conclusions:

Medical students appreciated the course to improve their skills in working with patients with I/DD and felt more comfortable providing quality care in the future. Positive results have been replicable through the first two years of teaching, so this material will remain part of the first-year curriculum. It will continue to encourage students to learn how to work with patients with disabilities and provide equitable and effective healthcare to all.

Title: Improving Public Health Messaging Around Substance Use Addiction for Students**Lead Presenter:** Luis Hernandez Anaya**Faculty Advisor:** Bridget Murphy**Partner/Setting:**

Involving community partners like Campus Health, which oversees health services for student population at the UofA, is done through "Wellness Surveys" conducted annually for the past twenty-nine years. The survey provides relevant public health information highlighting symptoms like exhaustion, isolation, and awareness about seeking mental health services. Students in the Spring 2026 HPS 306 class examined Campus Health wellness data, specific to mental health and substance use. The goal of this activity was to foster ideas about advancing public health messaging to diverse audiences about mental health and substance use for multi-disciplinary interventions that include families, faculty, and administrators.

Activities:

During class, students reviewed the 2025 Campus Health Survey to consider key messages for students, family members, faculty, administrators, and recommend public health interventions. The goal was accomplished during class, where ideas, recorded results, and multi-faceted intervention proposals were shared table by table.

Engagement:

Through this exercise, it actively involved student participation to provide personal insights, creativity, and practicality for public health messaging.

Outcomes

Our goal is to disseminate, publicize, and highlight this information to the broader student population and share it with Campus Health for suggestions for engaging various audiences.

Conclusion

Stigma plays a role in hindering pressing issues our youth experiences, like substance-use addiction to cope with loneliness, stress, and mental health issues. To form an interdisciplinary response, this involves stakeholders like Campus Health, educating families, and bringing in faculty to address these "blind" symptoms, which ultimately, affect the physical and mental wellbeing of our student population.

Title: Program Evaluation of Community-Based Clinics in Agua Prieta, Mexico

Lead Presenter: Sanvi Lamba

Faculty Advisor: Brianna Rooney

Background:

While literature exists on healthcare seeking in the U.S.–Mexico border region, there remains a critical gap in understanding the specific health needs of this community to ensure services are tailored and resources are effectively prioritized, particularly in the border city of Agua Prieta, Sonora, Mexico. Concurrently, there is an educational need for students to gain high-impact clinical exposure.

Objectives:

The Flying Samaritans at the University of Arizona (FSUA) is a student-run organization providing free medical and dental services in Agua Prieta. This project aims to conduct a quantitative patient needs assessment to identify healthcare and health education priorities while providing experiential learning opportunities through the FSUA clinic.

Methods:

A quantitative patient survey will evaluate clinic services, including quality of care, wait times, patient satisfaction, and health education needs. Surveys and consent forms have undergone IRB review and will be professionally translated into Spanish. Participants will consist of clinic patients recruited via convenience sampling, with advisory support from a local partner organization to ensure cultural appropriateness. Students will be involved in survey distribution, interpretation, and data analysis.

Results/Outcomes/Products:

Currently a work in progress, our presentation focuses on the comprehensive literature review and study methodology. Future outcomes will involve quantitative data to characterize patient satisfaction, identify unmet healthcare needs, and determine priority health education topics. Additionally, we will assess shifts in student self-efficacy regarding research skills and cultural competency.

Conclusion/Discussion/Significance:

Evidence-based patient needs data will allow the clinic to optimize resource allocation and improve care outcomes while amplifying community voice.

Title: Developing a Disability Navigation Program for Refugees in Pima County

Lead Presenter: Dora Le

Faculty Advisor: Julie Armin

Partner/Setting:

UA faculty and fellows collaborated with the International Rescue Committee (IRC) and Encircle Families in Pima County to address barriers refugees with disabilities face in accessing healthcare and social services. This activity benefits refugee clients, resettlement staff, and disability service providers, focusing on unmet needs and health inequities related to disability navigation. The goal was to identify essential components of a culturally responsive disability navigation program to improve equitable access to care.

Activities:

Four training and data collection sessions are planned with IRC staff, disability organizations, and clients. Trainings cover Division of Developmental Disabilities and Arizona Long-Term Care System eligibility, programming, and navigation. Preparatory steps included literature review and stakeholder engagement. Evaluation consists of retrospective post-test surveys assessing knowledge, confidence, and intended application, and follow-up semi-structured interviews at 30, 60, and 90 days.

Engagement:

Community partners, IRC staff, disability organizations, and clients contributed to content development, training design, and identifying priorities for future sessions. Collaboration ensured cultural responsiveness and relevance to refugee needs.

Outcomes

Anticipated outcomes include improved staff knowledge, confidence, and practical application of disability navigation strategies. Formative evaluation will inform core competencies for a disability navigator and provide a scalable model for refugee-focused interventions.

Conclusion

Community-responsive program design and interprofessional collaboration enhance feasibility, relevance, and sustainability. Lessons learned will guide expansion to additional staff and clients and support equitable access to health and social services for refugees.

Title: Preventative Health Screening For Mexican Migrants Through Consulate-based Outreach

Lead Presenter: Samantha McDonald

Faculty Advisor: Sheila Soto

Setting:

The Ventanillas de Salud–Phoenix (VDS-Phoenix) program is an outreach initiative addressing healthcare access disparities among Mexican migrant populations in Arizona. The program operates through a collaboration between the Mexican Consulate in Phoenix and the University of Arizona Mel and Enid Zuckerman College of Public Health, delivering services within the consulate. VDS-Phoenix serves Mexican migrant adults who face structural barriers to preventive care, including limited healthcare access, language barriers, and healthcare system mistrust. The program provides culturally and linguistically appropriate preventive health screenings, health education, and referrals to low-cost community healthcare resources. The goal is to assess community health needs, identify chronic disease risk, and enhance linkage to ongoing care.

Methods:

From January 2023 through December 2025, VDS-Phoenix conducted ongoing preventive health screenings, including blood pressure, blood glucose, cholesterol, body mass index, and HIV testing. Participants completed a brief questionnaire assessing demographics and insurance status. Screening results guided individualized health education and referrals to community clinics and federally qualified health centers.

Engagement:

Community engagement involved sustained collaboration with Mexican Consulate staff, bilingual health educators, and community partners to provide culturally appropriate services and build trust.

Outcomes:

During this period, VDS-Phoenix reached 3,624 participants (1,415 men; 2,209 women). Screenings included 2,865 blood pressure, 2,834 glucose, 639 cholesterol, and 615 HIV tests. Elevated results were identified in 1,489 blood pressure, 736 glucose, and 213 cholesterol screenings, indicating a high burden of chronic disease risk.

Conclusions:

Screening data demonstrated significant chronic disease risk, supporting continued outreach, stronger referrals, and sustainable preventive care services.

Title: Trauma-Informed Care Curriculum for Disability-Focused Healthcare Training

Lead Presenter: Mohammed Najeeb Naabo

Faculty Advisor: Burris Duncan

Partner/Setting:

Trauma exposure is widespread across the life course, with disproportionately high prevalence among individuals with disabilities. Despite this burden, trauma-informed training resources remain limited. This project is conducted in partnership with the Sonoran Center for Excellence in Disabilities, a center focused on training, service, and systems improvement for individuals with disabilities. The project seeks to address gaps in trauma-informed care training among healthcare providers for individuals with disabilities and will benefit pre-health students and healthcare providers.

Activities:

The project uses a community-engaged, mixed-methods approach. Activities completed include a literature review and dissemination of a needs assessment survey to identify training priorities, interviews with self-advocates and lecture recordings. In addition, some existing University of Arizona disability- and health-focused coursework has been identified as potential venues for integrating the final curriculum.

Engagement:

Engagement activities include collaboration with social workers, clinicians, and Sonoran Center staff and individuals with lived experience of disability. Self-advocates shared lived experiences and insights related to trauma, healthcare interactions, and systems-level barriers. Stakeholder input is also incorporated to ensure relevance, accessibility, and applicability to disability-focused healthcare.

Outcomes:

Current products include completion of a needs assessment survey, interviews with self-advocates, a structured curriculum outline, and a two-part recorded lecture series.

Conclusion:

This project highlights the value of community engagement in addressing gaps in trauma-informed care training for individuals with disabilities. Next steps include finalizing curriculum modules and supporting dissemination across educational and healthcare settings.

Title: Student-Driven Research: Lessons from a Vertically Integrated, Graduate-Led Research Model

Lead Presenter: James Rozelle

Faculty Advisor: Abdul Tawab Saljuqi

Partner/Setting:

In 2023, a student-led health literacy study was accepted by the University of Arizona Vertically Integrated Projects program. The study aimed to explore patient experiences regarding discharge paperwork and the influence of demographics and health literacy. An indirect aim of the project was increasing undergraduate exposure to research with a health literacy focus. Vertically integrated programs (VIPs) are intentionally designed to empower graduate-level students with leadership roles while mentoring undergraduate and peer trainees within a structured research ecosystem.

Activities:

A core feature of the vertically integrated model was the use of graduate-level leadership to train, supervise, and mentor undergraduate researchers while maintaining continuity and research rigor.

Engagement:

Undergraduates participated in patient recruitment, data collection/review, scientific writing, and conferences/presentations.

Outcomes:

This project faced several challenges: short term involvement of students (single semester), difficulty streamlining new student training, challenges navigating and optimizing work-flow. Several successes were also appreciated: increased student exposure to research, building a vertically integrated research system, professional development, leadership growth, development of new skills. The presence of graduate-level mentors helped mitigate turnover by providing continuity, peer leadership, and structured skill development across student cohorts. Of ten, five undergraduates remained involved across multiple semesters.

Conclusion:

While the process can be messy, student-driven research is highly valuable, allowing for growth and exploration of strengths and weaknesses. In the realm of health literacy, student led research offers early exposure to the field. VIPs strengthen this model by cultivating leadership among graduate students while creating sustainable mentorship pathways for undergraduate researchers.

Title: Wound CUP Clinic: First-year Review of a Free Student-run Clinic

Lead Presenter: McKenna Schultz

Faculty Advisor: Lourdes Castañón

Partner/Setting: The Wound CUP clinic, part of the University of Arizona College of Medicine-Tucson's (UACOMT) commitment to underserved people (CUP) program provides free, student-run wound care services to the medically underserved and underinsured.

Methods

In 2024, the Wound CUP Clinic began offering services with a monthly clinic as well as offering as-needed pop-up clinics at UACOMT/Banner. Patients were evaluated and treated by a team of medical students supervised by a trauma surgeon.

Activities:

Patients were recruited in the community via flyers posted throughout Tucson – in clinical and non-clinical settings – and contacted the medical student team to schedule an appointment.

Engagement:

In the clinic's first year of service, it saw 24 patients with diverse care needs. An additional 14 patients had been scheduled but unable to attend. Among patients seen, 79% reported having no insurance. Clinical settings utilized by these patients prior to the Wound CUP Clinic varied with 31% previously utilizing the emergency department, 12% having been hospitalized, and 56% receiving no prior wound care.

Outcomes:

Our results underscore significant gaps in access to care in Tucson as well as identify opportunities to provide community-based, no-cost intervention so as to prevent complications related to untreated wounds and to mitigate reliance on emergency or informal health services. The rate of missed appointments signifies transportation as a key barrier in addition to low rates of insurance coverage. Further developments of this clinic include collaboration with existing community organizations and establishing robust pop-up or mobile clinics to meet the community's needs.

Title: Strengthening Disability-Inclusive Maternal Health Systems**Lead Presenter:** Celina Urquidez**Faculty Advisor:** Jacy Farkas**Partner/Setting:**

This systems-level initiative was led by the Sonoran Center for Excellence in Disabilities at the University of Arizona in collaboration with Arizona maternal-child health agencies, disability service providers, self-advocates, and family leaders. The project benefits pregnant and parenting individuals with intellectual and developmental disabilities (IDD) and other disabilities who experience disproportionate health inequities, including inadequate access to inclusive reproductive health services. We addressed structural gaps in provider training, accessible health education, and cross-system coordination. The goal was to advance disability-inclusive maternal health systems while strengthening public health workforce capacity statewide.

Activities: Using a community-engaged and health equity framework, we conducted listening sessions and cross-sector consultations to identify workforce and systems barriers. We developed bilingual, plain-language pregnancy and parenting resources and implemented workforce trainings for public health professionals, healthcare providers, and community-based organizations. Trainings emphasized trauma-informed care, reproductive justice, policy awareness, and systems navigation. Technical assistance supported integration of inclusive practices into organizational policies and service delivery models.

Engagement:

Engagement-centered lived experience through co-development with self-advocates and sustained collaboration between disability and maternal-child health systems to align practice, policy, and training priorities.

Outcomes:

We increased workforce knowledge and institutional readiness, produced accessible educational toolkits, and strengthened cross-sector partnerships to promote systems-level change.

Conclusion:

Embedding disability competence within the public health workforce is essential to advancing maternal health equity. Next steps include formal evaluation, policy integration, and institutionalization of disability-inclusive standards across Arizona's maternal-child health infrastructure.

Title: A Vulnerability Index for Detecting Algorithmic Bias in Clinical Prediction

Lead Presenter: Enock Adu Bonsu

Co-Presenter: Gongzheng Yao

Faculty Advisor: Edward Bedrick

Partner/Setting:

Machine learning models in healthcare can achieve 94% overall performance while failing in vulnerable populations demonstrating only 64% accuracy in elderly patients, for instance. This 30-point performance gap poses serious patient safety and equity concerns, yet standard validation approaches systematically miss these subgroup-specific failures. Current methods lack frameworks to prospectively identify which patient populations face highest algorithmic risk before model deployment.

Objective: To develop and validate a mathematical framework for prospective identification of patient subgroups at highest risk of algorithmic harm before clinical deployment.

Activities:

The Vulnerability Index $V(S) = P(\text{Fail}|S) \times P(\text{Death}|S)$ quantifies expected patient harm as the product of model failure probability and mortality rate, with component weights derived to approximate this probability structure. We validated across trauma mortality ($n=3,132$) and ICU mortality ($n=13,942$) datasets, comparing against explainable AI (SHAP) and direct stratification. Simulation studies tested 30,000 scenarios varying subgroup size and effect magnitude.

Engagement:

$V(S)$ prospectively identified elderly trauma patients as highest vulnerability ($V=0.42$). Subsequent validation revealed substantial Random Forest discrimination loss: $\text{AUC}=0.64$ versus 0.91 for logistic regression ($\Delta\text{AUC}=-0.27$, $p=0.03$), a 27-point deficit neither aggregate metrics ($p=0.46$) nor SHAP detected. External validation confirmed elderly ranked top 2 in ICU mortality despite 205-fold sample difference. Simulations showed $V(S)$ detected failures $2.5\times$ more effectively than alternatives (84.5% vs 33.4% , $p<0.001$).

Conclusion:

This framework enables systematic, pre-deployment detection of algorithmic bias, supporting targeted validation of high-risk populations and equitable AI implementation in healthcare settings.

Title: Global QMRA Applications: A Scoping Review**Lead Presenter:** Jumah Alkhaibari**Faculty Advisor:** Kelly Reynolds**Background:**

Quantitative Microbial Risk Assessment (QMRA) has been increasingly used to estimate the health risks associated with exposure to pathogens in various environments. Although QMRA has been widely applied in water- and food-related contexts, built environments and other applications remain understudied.

Aim:

This scoping review synthesizes findings from existing literature on the use of QMRA across diverse environments. It underscores QMRA's role in assessing health risks, setting guidelines, supporting policy, and enhancing outbreak detection

Methodology:

A scoping review was conducted according to the PRISMA guidelines. Peer-reviewed studies published between 2000 and 2024 were identified using PubMed and Scopus. Eligible studies applied QMRA to assess health risks via ingestion and fomite-related exposure routes in water, food, and other environmental settings. Data were extracted based on reviewers' agreements on environmental settings, geographic regions, exposure pathways, and publication years.

Results:

A total of 264 studies were included. Most studies were conducted on water applications, followed by food applications. Fewer studies regarding fomites and indoor built environments. Bacteria and viruses were the most assessed hazards. More than 60% of the studies were published after 2010. Most studies were conducted in Asia and Europe.

Conclusion:

This scoping review presents the status and patterns of QMRA use, highlighting the key gaps. The findings show that QMRA has been used beyond water and food contexts; however, its use remains uneven across other applications. This review offers recommendations for future research and supports the continued development of QMRA as a tool for understanding and managing microbial health risks.

Title: Impact of Terminal Cleaning on Infection Pathogens in Healthcare Facilities**Lead Presenter:** Munthir Almoslem**Faculty Advisor:** Kelly Reynolds**Background:**

Healthcare environmental surfaces play a crucial role in transmitting healthcare-associated infections (HAIs), and the contribution of fomites to HAIs may vary geographically based on infection prevention guidance and culture. Some studies have indicated that the HAI rates in Saudi Arabia (8%) are roughly double those found in the United States (4%). The study objective was to measure the effect of terminal cleaning on the bioburden of HAI-associated pathogens in Saudi Arabian facilities.

Methods:

Highly touched surfaces were swabbed from 19 rooms previously occupied by patients with HAIs linked to four targeted pathogens: methicillin-resistant *Staphylococcus aureus* (MRSA), carbapenem-resistant Enterobacterales (CRE), multidrug-resistant *Pseudomonas aeruginosa* (MDR *P. aeruginosa*), and multidrug-resistant *Acinetobacter* (MDR *Acinetobacter*). Six high-touch surfaces were swabbed before and after terminal cleaning to detect the presence and quantify the concentrations of these target pathogens. Each sample was quantitatively assayed to detect the target pathogens, and Matrix-Assisted Laser Desorption Ionization–Time of Flight and antibiotic susceptibility testing were used to confirm the genus and species.

Results:

The findings indicated that CRE pathogens were not detected on any surfaces pre- or post-terminal cleaning. However, MRSA (n=2), MDR *Acinetobacter* (n=4), and *P. aeruginosa* (n=2) were identified pre-cleaning, with no confirmed samples of the target pathogen found post-cleaning. Pathogens were generally reduced after terminal cleaning, but increased in some cases on the nurse call button and doorknob inside the bathroom.

Conclusion:

This study emphasizes the potential for terminal cleaning to reduce environmental burden when done properly. However, in some cases can contribute to further spread.

Title: Decision-Making on Cleaning and Disinfection Products and Protocols in Healthcare

Lead Presenter: Nana Adwoa Amoh-Asante

Faculty Advisor: Amanda Wilson

Background:

Cleaning and disinfection products are important for infection prevention in the healthcare environment. Many studies have shown the association between these products and adverse respiratory outcomes, making it important to understand how decisions about product selection and use are made in practice. The objective of this study was to use a constructivist grounded theory approach to develop theories that describe how cleaning and disinfection products and protocols are selected and implemented in healthcare, based on real-life experiences of the individuals involved or affected by these decisions.

Methods:

Purposive and snowball sampling were done to recruit participants who were well versed with cleaning and disinfection processes including nurses, infection preventionists and occupational health professionals. Semi-structured interviews were conducted via Zoom and transcribed verbatim. Interview transcripts were analyzed by two independent researchers who met regularly to discuss emerging concepts. Summaries from the interviews were compiled and Chat GPT-4.1 was used to organize the notes into theories which were manually edited by the research team.

Results:

After eighteen interviews, eight theories described the decision-making process regarding cleaning and disinfection products and protocols in healthcare. Decision-making was often fragmented and context-dependent, with tradeoffs between product choices and worker health. Participants described gaps in training, poor structure for reporting adverse reactions to products and poor involvement of frontline workers like nurses and EVS staff in product purchasing decisions.

Conclusion

Understanding these decision-making processes can inform more inclusive purchasing, training, and reporting strategies that better balance infection prevention goals with protecting the health of workers.

Title: Public Risk Perceptions About Biosolids Land Application In Arizona

Lead Presenter: Ahamed Ashraf

Faculty Advisor: Amanda Wilson

Introduction:

Biosolids are organic substances produced from wastewater treatment. They serve as a source of organic matter and nutrients, such as nitrogen and phosphorus, but may also contain microbial organisms and chemical contaminants.

Methodology:

We recruited participants via Facebook who lived within 3-20 km of permitted biosolid land application sites. The questions gathered information about participants' risk perceptions of biosolids land application, their demographics, and knowledge of biosolids terms and usual practices.

Results:

There were 149 respondents (81 female, 56 male). Fifty-nine respondents aged 65+, 12% resided within 5 km and 42% lived within 10 km of biosolids land application sites. Around 80% reported familiarity with biosolids. About 5% of participants reported that they and their children interact with biosolid application sites, and 17% mentioned purchasing biosolids for personal use (e.g., gardening). Most participants (59%) viewed biosolids as a valuable resource that provides general benefits (69%). However, support declined for personal adoption: only 44% are willing to use biosolids on their own land. Nearly half (49%) reported a lack of understanding of associated risks.

Conclusion:

The findings indicate gaps between perceived societal benefits and personal acceptance of biosolids. These results highlight the importance of improved risk communication and community engagement.

Title: Geographic Patterns of Helicobacter Pylori and Gastric Cancer in Arizona**Lead Presenter:** Kevin Begay**Faculty Advisor:** James Cunningham**Background:**

Helicobacter pylori (H. pylori) infection is a well-established risk factor for gastric cancer, yet its impact on the health care system in Arizona is not well understood. This study uses Arizona Department of Health Services Hospital Discharge data to examine hospital admissions for H. pylori infection and gastric cancer from 2018 to 2023.

Objectives:

The objective of this research is to investigate whether H. pylori and gastric cancer share common demographic patterns and risk factors between different geographic regions in Arizona.

Methods:

This study will examine the prevalence of H. pylori or gastric cancer related admissions to hospitals in Arizona, identified using ICD-10 diagnosis codes, and geographically mapped according to 3-digit Arizona Zip codes, while examining demographic variation across age, sex, and race/ethnicity.

Results:

During 2018 through 2023, there were 3,124 hospital admissions for H. pylori infections. Females accounted for 53.6% of admissions. The majority of admissions (20.2%) occurred among individuals 0-9 years of age. The racial and ethnic distribution of admitted patients was as follows: White (59.4%), American Indian/Alaska Native (3.7%), Hispanic (19.8%), African American (5.2%), Asian (1.6%), and other/unknown (1.4%).

Conclusion:

The number of H. Pylori related infections and gastric cancer diagnoses is a substantial burden on the Arizona healthcare system. This novel study characterizes these diseases to support downstream research efforts and support policy makers in developing targeted interventions aimed at preventing H. Pylori infections and gastric cancer throughout the state.

Title: Resilience, Indigenous Identity, and Perceived Stress among Indigenous University Students

Lead Presenter: Kendrick Begay Jr.

Faculty Advisor: Felina Cordova-Marks

Background:

Indigenous students are a great benefit to their communities, but they face adverse conditions, such as elevated levels of stress and lower rates of retention compared to other racial and minority groups, when attending college with research showing an increase in stress at school.

Methods:

We recruited undergraduate and graduate Indigenous students from Tribal Nations within the United States. Participants were recruited through community partnerships and in person communication. This survey included the Perceived Stress Scale (PSS-10), the Multiethnic Identity Measure (MEIM), and the Connor-Davidson Resilience Scale 10 (CD-RISC-10). We conducted a general linear model (GLM) analysis to examine the association between resilience (continuous outcome) and perceived stress category (low, moderate, high) and ethnic identity (continuous).

Results:

Among 153 Indigenous college students (118 female, 31 males, 4 other), the model significantly explained variance in resilience, $F(6, 134) = 4.27, p = .0006$. Ethnic identity positively predicted resilience ($F(1, 134) = 7.46, p = .007$), while perceived stress was a negative predictor ($F(2, 134) = 9.84, p < .001$).

Discussion:

This study found that resilience among Indigenous college students at this university is linked to a stronger Indigenous identity and lower perceived stress. Institutions should support Indigenous students in ways that reinforce their identities

Title: Examining the Predictors of Anti-Müllerian Hormone Using NHANES Data**Lead Presenter:** Auditi Bhowmick**Faculty Advisor:** Leslie Farland**Background:**

Anti-Müllerian hormone (AMH) is a biomarker of ovarian reserve and reproductive aging. Mental health conditions and antidepressant use are prevalent among reproductive-aged women and may influence reproductive physiology, yet population-level evidence linking selective serotonin re-uptake inhibitor (SSRI) use to AMH remains limited.

Objectives:

To examine the association between depression, SSRI use, and AMH levels among U.S. women aged 18-44 using nationally representative NHANES data.

Methods:

This cross-sectional analysis included 1,422 women with available AMH measurements from NHANES 2017-March 2020. Depression was assessed using the PHQ-9, and SSRI use was identified from prescription medication records. Survey-weighted linear regression models examined associations between SSRI use and log-transformed AMH, adjusting for age, age², and body mass index (BMI). Sensitivity analyses included stratification by depression status, exclusion of participants with AMH > 10 ng/mL, and multiple imputation for missing PHQ-9 data.

Results:

In unadjusted analyses, SSRI use was associated with lower mean AMH. In multivariable adjusted models, people who used SSRIs had a 47.2% lower AMH level (95% CI: -64.3% to -21.9%) compared to people who did not use SSRIs. Sensitivity analyses showed attenuated and non-statistically significant associations, while age and age² remained strongly associated with AMH across models.

Discussion:

Findings suggest an association between SSRI use and lower AMH levels among women, though results were model-dependent. This study adds nationally representative evidence to the limited literature and raises important questions about whether SSRI use may influence ovarian reserve, fertility, and timing of reproductive aging.

Title: Evaluation of Vision Screening Practices in a Pediatric Arizona Population

Lead Presenter: Jennifer Bova

Faculty Advisor: Halimatou Alaofe

Background:

Vision screening for pediatric and adolescent populations is a critical public health strategy for the early detection of visual impairments, enabling timely intervention and reducing long-term impacts on development. Despite established guidelines, screening practices vary across healthcare settings.

Objectives:

This study evaluated vision screening practices during pediatric and adolescent well-child visits in Arizona, focusing on screening methods and variability across clinical settings to identify opportunities for improving care.

Methods:

A cross-sectional survey was conducted among 94 clinics representing all Arizona counties except Greenlee. A statewide sampling frame was developed using Arizona Medical Board records, and clinics were randomly selected. Surveys were conducted by telephone, with follow-up email invitations when necessary. Respondents included clinical and support staff involved in pediatric care delivery.

Results:

Of the 94 clinics contacted, 91 reported providing vision screening services, while three saw pediatric patients but did not conduct screenings. Most respondents were medical assistants (86.2%), followed by nurse practitioners (5.3%), licensed practical nurses (3.2%), physicians (2.1%), and registered nurses (1.1%). Among clinics offering screening, 46.2% relied exclusively on visual acuity charts, while 53.8% reported using alternative or supplemental screening methods.

Conclusion:

Leading organizations—including AAPOS, the U.S. Preventive Services Task Force, and the American Academy of Ophthalmology—recommend vision screening at key developmental ages (1, 3, 5, and prior to school) to detect conditions such as amblyopia, strabismus, and refractive errors. Findings reveal substantial variability in vision screening practices across Arizona clinics, highlighting the need for improved standardization and resource support to enhance screening quality and equity statewide.

Title: County-Level Heat Advisories in the U.S. and Arizona

Lead Presenter: Harrison Brown

Faculty Advisor: Heidi Brown

Background:

Extreme heat is increasing in frequency, duration, and geographic extent across the United States, posing a growing public health threat. While prior work documents rising heat waves, less is known about how official heat advisories and warnings are distributed over time and space at fine geographic scales, particularly in high-risk states such as Arizona.

Objectives: This research examines county-month patterns of National Weather Service heat advisories and excessive heat warnings from 2006–2024, comparing national trends with those observed in Arizona.

Methods:

National Weather Service heat advisory and excessive heat warning data were compiled, cleaned, and spatially joined to U.S. county boundaries. County-month observations were developed to assess the frequency and seasonal distribution of heat alerts over time. Descriptive and comparative analyses were conducted to evaluate temporal trends and differences between Arizona and the U.S. overall.

Results:

Results indicate a clear increase over time in the number of county-months experiencing heat advisories and warnings, as well as an expansion of the heat-alert season beyond traditional summer months. Nationally, heat advisories (heat index $\geq 100^{\circ}\text{F}$ and $< 105^{\circ}\text{F}$) were most prevalent, whereas Arizona experienced a disproportionately higher frequency of excessive heat warnings (heat index $\geq 105^{\circ}\text{F}$).

Conclusion:

These findings align with existing evidence of intensifying heat exposure while highlighting meaningful geographic differences in heat severity. This work supports the treatment of extreme heat as a recurring natural hazard and provides a foundation for county-level, multi-hazard public health planning, emphasizing the need for earlier and sustained heat mitigation efforts.

Title: Social Rhythms, Sleep, and Mental Health: Availability of Evidence**Lead Presenter:** Leah Callovini**Faculty Advisor:** Patricia Haynes**Background:**

Social rhythms, defined as regular patterns of activities constituting individual's daily routine, play a role in the development or exacerbation of depression symptoms. There is also evidence that social rhythms affect sleep health and anxiety symptoms, but it seems that less evidence exists on these outcomes than depression. The purpose of this analysis is to understand the difference in evidence availability on the relationships between social rhythm stability and outcomes related to sleep health, anxiety, and depression.

Objectives:

The parent project for this study is a systematic review that aims to understand if inconsistent social rhythms confer adverse risk to anxiety, depression, and sleep health. Using data from the articles from the review, this sub-analysis explored the differences in evidence availability for the outcomes.

Methods:

We ran a Cochran's Q test to establish if there are significant differences in the number of articles available for each outcome.

Results:

The analysis identified overall differences in outcome reporting (Cochran's $Q = 50.07$; $p < .001$). The analysis demonstrates disparities in the amount of evidence available for the three outcomes.

Discussion:

Our findings suggest that an abundance of evidence exists on the relationship between depression and social rhythms, but less is known about anxiety and sleep health. Given the public health burden of anxiety and poor sleep, additional research is needed on these two outcomes. The findings from this analysis and the parent study will inform the adaptation of social rhythm therapy into an intervention to promote sleep and mental health.

Title: Uneaten Does Not Mean Unnoticed: Food Waste and Methane Reduction

Lead Presenter: Katelyn Carter

Faculty Advisor & Co-Presenter: Ramses Sepulveda

Background:

Food waste is an underrecognized contributor to climate change and an important environmental health issue. When discarded food decomposes anaerobically in landfills, it generates methane, a potent short lived climate pollutant that accelerates climate related temperature and weather shifts. These environmental impacts disproportionately harm marginalized communities.

Objectives:

This project examines how household food waste reduction can decrease methane emissions and serve as a public health equity strategy.

Methods/Activities:

This is a literature review of methane generation from organic waste, indicators of global climate change, and health consequences of climate driven environmental exposures. It evaluates behavioral and systemic factors influencing food waste generation using environmental health, climate equity, and systemic injustice frameworks. Evidence was combined to assess how individual and household practices may reduce the volume of organic material entering landfills and lessen upstream demand on the food system.

Results/Outcomes/Products:

Reducing household food waste can meaningfully lower methane emissions by limiting organic landfill inputs. Practices such as preparing appropriate portion sizes, improving food storage, and using leftovers demonstrate measurable potential to reduce waste and mitigate emissions. These behaviors offer accessible opportunities for households to lessen multiple health risks.

Conclusion/Discussion/Significance:

Food waste reduction is both a climate mitigation strategy and a public health equity intervention. This aligns with existing literature linking waste reduction to lower methane emissions while adding emphasis on its relevance to environmental justice. Empowering households to adopt waste reducing behaviors can reduce environmental burdens and support broader environmental health and climate resilience goals.

Title: Is Clean Air Equally Shared? A Gini-Based PM2.5 Analysis**Lead Presenter:** Grace Chao**Faculty Advisor:** Chris Lim**Background:**

Air pollution inequality is an emerging concern in environmental justice and public health. While Gross Domestic Product (GDP) inequality has been extensively studied, the relationship between economic disparities and air pollution distribution has received less attention. This study explores the association between air pollution inequality, measured using PM2.5-based Gini coefficients, and economic inequality, measured by GDP per capita Gini coefficients, at the subnational level across countries worldwide.

Methods:

We computed PM2.5-based Gini coefficients using global remote-sensing annual PM2.5 data and GDP per capita Gini coefficients for multiple years across 170 countries. Economic and demographic factors, including GDP and population size, were controlled. Pearson correlation analysis assessed the association between air pollution and economic inequality. Linear mixed-effects models (LMMs) were then applied to evaluate the extent to which GDP per capita inequality predicts PM2.5 inequality while accounting for economic and demographic factors. The Akaike Information Criterion (AIC) and R^2 were used to assess model performance.

Results:

Pearson correlation analyses revealed a significant positive association ($p < 0.05$) between GDP per capita inequality and PM2.5-based inequality. The best-performing LMM suggested that GDP per capita Gini explained a substantial proportion of the variation in air pollution inequality after controlling for economic and demographic factors.

Conclusion:

Our findings indicate that economic inequality is often associated with greater air pollution exposure disparities, with higher GDP per capita inequality linked to more uneven PM2.5 distribution in many regions, underscoring the need for context-specific economic, environmental, and public health policies.

Title: Serum Protein Changes in Firefighters Responding to the LA Conflagrations**Lead Presenter:** Reagan Conner**Faculty Advisor:** Melissa Furlong**Background:**

The Palisades and Eaton fires started on January 7, 2025, spread rapidly due to Santa Ana winds, and burned >23,000 and 14,000 acres, respectively, prior to full containment on January 31. While residents of the affected areas were evacuated, >7,500 firefighters and other emergency personnel responded to the fires. Firefighters are at increased risk for multiple cancers, as determined by the International Agency for Research on Cancer, but the additional risks of cancer and other diseases associated with responding to urban conflagrations are expected to be greater.

Objective:

The study goal was to evaluate changes in serum proteins following firefighter exposure to the January 2025 Los Angeles area urban conflagrations.

Methods:

The serum proteome was evaluated in 42 firefighters enrolled in the Fire Fighter Cancer Cohort Study (FFCCS) with blood specimens collected in 2024 and in January and February of 2025, an average of 8.6 days after their most recent response to the urban conflagrations.

Results:

Sixty proteins changed significantly from before to after exposure. These proteins were associated with nucleotide synthesis and repair, oxidative stress response, energy metabolism, and other mechanisms. Pathway analysis identified changes in metabolism and oxidative stress, immune and inflammatory responses, cellular barrier integrity and trafficking, and growth/cancer signaling.

Conclusions:

Response to the Los Angeles area urban conflagration was associated with a change in the serum proteome of firefighters.

Title: A Qualitative Study on Greenspace and Health in Tucson

Lead Presenter: Ashley Danforth

Faculty Advisor: Maiya Block Ngaybe

Introduction:

Urban greenspaces can support health and climate resilience in hot, arid environments, but community priorities and perceived tradeoffs (e.g., water use, maintenance, access, and safety) shape how greenspaces are used and valued.

Methods:

Using a community-engaged approach through SCORCH at the University of Arizona, we conducted 14 semi-structured interviews and/or small-group discussions (size 1–6) with purposively sampled participants from heat-vulnerable populations and residents of mosquito-prone areas in Southern Arizona.

Results:

In total, 43 participants contributed; 4/14 sessions were conducted in Spanish. Sessions were audio recorded and analyzed using a rapid thematic approach. Key themes emphasized (1) heat mitigation and comfort (shade, trees, cooler microclimates, lighting), including needs of highly heat-vulnerable groups; (2) arid-region design tradeoffs (native vs. non-native vegetation, grass vs. artificial turf, and water use); (3) access, equity, and safety (location, accessibility, and safety concerns that shape use); and (4) feasibility and sustainability (maintenance and appearance, city investment and infrastructure, flood/environmental constraints, conservation benefits, and seasonal patterns of use). Participants also highlighted features that attract use (walking/biking paths, playgrounds) and tensions between private and public spaces.

Discussion:

Findings will be shared back in bilingual, plain-language, visually oriented products to inform equitable, actionable greenspace strategies and guide future photovoice-based dissemination. These community-identified priorities can help align public health and planning decisions with feasible design choices in arid-region contexts.

Title: Co-designing HEAL: Multi-sector Workshop to Align Greenspace Planning and Health

Lead Presenter: Ashley Danforth

Faculty Advisor: Shujuan Li

Introduction:

Scenario-based planning tools rarely quantify public health impacts of greenspace design, limiting cross-sector decisions in arid regions. We convened a multi-sector stakeholder workshop in Southern Arizona to compare professional understandings of greenspace–health pathways and to inform refinement of the Health Effects Assessment of Landscape (HEAL) decision-support tool.

Methods:

We held a qualitative, interdisciplinary workshop on September 18, 2025 with purposively sampled professionals spanning landscape architecture/planning, public health, policy, climate science, and education. Facilitated discussions occurred in disciplinary groups before and after a HEAL prototype presentation. Sessions were audio/video recorded, transcribed, and analyzed using thematic analysis with combined inductive and deductive coding.

Results:

Seventeen participants contributed diverse perspectives. “Greenspace” definitions were shaped by the Sonoran Desert context, emphasizing that “green” may be sage-brown and that terminology should encompass xeriscape and native plant palettes. Participants contrasted destination parks with integrated everyday greenery along streets and routes to services. Health was defined broadly—often including social determinants, resilience, and equity—while prioritizing heat illness risk, chronic disease prevention, and mental health, citing budget limits and jurisdictional complexity.

Participants emphasized maintenance planning, safety, and water constraints as determinants of use. They requested outputs interpretable to nontechnical decision makers, scenario comparison visuals, and a comment box for qualitative stories. Barriers included limited staff time, scarce evaluation budgets, and difficulty determining land jurisdiction across city, county, and tribal boundaries.

Conclusion:

Co-design insights indicate that HEAL should enable locally responsive definitions, transparent assumptions, and equity-focused trade-off analyses to improve adoption across sectors.

Title: Sonoran Unified Network of Sensors for Environmental Tracking (SUNSET)**Lead Presenter:** Mahdi Faraji**Co-Presenter:** Natalie Shepp**Faculty Advisor:** Chris Lim**Introduction:**

SUNSET is a multi-institutional collaboration led by the Pima County Department of Environmental Quality (PDEQ) and the MEZCOPH that deploys a school-based network of low-cost air quality sensors across Pima County to characterize community-scale pollution patterns.

Methods:

Sensor installations began in November 2023 and include 20 QuantaQ MODULAIR™ sensors measuring PM_{2.5}, CO, and O₃ at 1-minute temporal resolution. This study focuses on calibration and analysis of network data. Prior to deployment, sensors were collocated with U.S. EPA Federal Reference Method (FRM) monitors and integrated with satellite observations to develop a unified, multi-source dataset. A Random Forest machine learning model incorporating meteorological variables (temperature and relative humidity) was applied to improve agreement with reference measurements.

Results:

Calibration and temporal analysis of PM_{2.5}, O₃, and CO using Random Forest models improved agreement between low-cost sensors and external reference datasets. Calibration against EPA reference monitors yielded test-set R² values of 0.53 (PM_{2.5}), 0.76 (O₃), and 0.57 (CO), indicating moderate to strong performance, particularly for ozone. Calibration against satellite-based estimates produced test-set R² values of 0.59 (PM_{2.5}), 0.44 (O₃), and 0.30 (CO), reflecting moderate agreement consistent with known spatial and vertical representativeness differences. Calibrated data further revealed distinct diurnal and seasonal patterns associated with regional emission sources and meteorological variability.

Discussion:

These findings show that calibrated low-cost sensor networks can reliably capture community-scale air quality patterns across hourly, weekly, and seasonal timeframes. The SUNSET dataset supports public-facing visualization tools and community-focused air quality initiatives, enhancing data transparency and enabling localized environmental health assessments.

Title: Evaluating PFAS Report-Back Impact on Knowledge, Attitudes, and Behaviors

Lead Presenter: Tina Fingesi-Johnson

Faculty Advisor: Paloma Beamer

Background:

Communicating exposure results back to study participants is progressively being recognized as both an ethical responsibility and a potential environmental health intervention.

Objectives. We assessed participants' PFAS knowledge, attitudes, and behaviors following the report-back of individual exposure results.

Methods:

Participants from the AZ HEROES PFAS biomonitoring cohort completed surveys at baseline, post-report, and 3-month follow-up after receiving personalized serum PFAS results. We constructed Total Knowledge (TKI), Attitude (TAI), and Behavior (TBI) indices that ranged 0 to 10 points. Linear mixed-effects models were used to assess longitudinal changes, paired tests to evaluate individual behaviors, multiple linear regression to identify predictors of protective behaviors at follow-up.

Results:

Knowledge, attitudes, and self-reported protective behaviors increased significantly after report-back and remained high at follow-up ($p < 0.001$). TKI increased by approximately 1 point, TAI (~2.6 points), TBI (~2 points), with sustained increases at follow-up ($p < 0.001$). Participants reported reduced use of PFAS-associated products, including nonstick cookware, stain-resistant sprays, and certain dental floss brands ($p < 0.05$). At follow-up, stronger PFAS-related attitudes predicted increased protective behaviors ($\beta = 0.22$, 95% CI: 0.10–0.34; $p < 0.001$), whereas knowledge was not significantly associated ($\beta = 0.22$, 95% CI: –0.20 to 0.64; $p = 0.31$). Middle-aged and Hispanic participants reported lower protective behavior scores compared with older and non-Hispanic White participants, respectively (adjusted models, $p < 0.05$).

Conclusions:

The return of individualized PFAS results produced sustained improvements in knowledge, attitudes, and exposure-reducing behaviors. Individualized report-back is a scalable public health strategy to promote informed action to reduce exposure to PFAS and this framework can be utilized in broader exposure assessment studies.

Title: Human Adenovirus Risk-Assessment of Land Application of Biosolids in Southwestern US

Lead Presenter: Mehedi Hassan

Faculty Advisor: Amanda Wilson

Background:

In the US, Class B biosolids (sewage-solids) are acceptable for use in land application on sites used to grow nonedible crops. About 60% of the six-million dry metric tons of biosolids produced annually are used as fertilizer. Potential microbial contamination from biosolids is a concern due to the occurrence of pathogens in wastewater such as human adenovirus that can survive and persist after wastewater treatment and sewage sludge stabilization.

Objectives:

The study objective was to conduct a quantitative microbial risk assessment (QMRA) for human adenovirus exposure to farmers, residents, and children of different age groups living near biosolids land-application sites.

Methods:

Accidental ingestion was considered as the exposure pathway, with lognormal distributions of literature-reported concentrations of adenovirus, considering southwestern soil types. Ingestion rates were considered for farmers, as well as adults and children of different age-groups. An exponential dose-response model and 10,000 iterations of Monte Carlo simulation were used to consider variability in the model outcome of annual infection risk.

Results:

Farmers had the highest median annual infection risk of 2.49×10^{-5} , followed by children ages 6-11 years (2.29×10^{-5}) and 1-5 years (2.13×10^{-5}). Spearman rank correlation analysis showed that annual risk of infection was positively correlated with the initial concentration of adenovirus in biosolids and negatively correlated with the time elapsed after land applications.

Conclusion:

As we do not have a threshold value for annual risk of infection from adenovirus through biosolid land application, the next step of this study is to develop an acceptable risk level in this context.

Title: PFAS Exposure and ALS-Related microRNA in Firefighters**Lead Presenter:** Brooke Hawkes**Faculty Advisor:** Melissa Furlong**Background:**

Amyotrophic lateral sclerosis (ALS) is a fatal neurodegenerative disease with largely unknown causes in sporadic cases. Circulating microRNA (miRNA) expression differs between individuals with and without ALS. Firefighters may have elevated ALS risk due to occupational exposures, including increased serum per- and polyfluoroalkyl substances (PFAS).

Methods:

We evaluated associations between firefighter characteristics (serum PFAS, years of service, incumbent vs. recruit status) and ALS-related miRNA expression among U.S. firefighters. Blood miRNA expression was measured in 833 firefighters from 15 sites; 302 also had nine serum PFAS analytes quantified. Nineteen ALS-related miRNAs were identified using miRWalk Disease Ontology. Adjusted linear regression models estimated associations between exposures and miRNA expression, controlling for demographic and occupational covariates. False discovery rate (FDR) correction accounted for multiple testing.

Results:

Thirteen significant inverse associations ($p < 0.05$) were observed between PFAS and miRNA expression, including Sm-PFOS with let-7i-5p, let-7c-5p, and let-7e-5p; PFNA with let-7c-5p; and PFHxS with let-7i-5p. Six associations remained significant after FDR correction ($q < 0.20$). Five of these miRNAs are inversely associated with ALS in prior studies, suggesting higher PFAS exposure may shift expression toward ALS-related profiles.

Twelve miRNAs were associated with incumbent status (all FDR-significant); eight of nine with known ALS directionality were consistent with higher ALS risk among incumbents. Let-7e-5p was inversely associated with both PFOS isomers and incumbency.

Conclusions:

PFAS exposure and firefighting status were associated with ALS-related miRNA expression, suggesting potential molecular pathways linking occupational exposures to ALS risk. Further mechanistic and longitudinal studies are warranted.

Title: Racial and Ethnic Disparities in COVID-19 Outcomes

Lead Presenter: Ana Hernandez

Faculty Advisor: Zoe Cohen

Background:

The COVID-19 pandemic has disproportionately affected racial and ethnic minority populations in the United States, with higher rates of infection, hospitalization, and mortality compared to White Americans. These disparities reflect longstanding inequities shaped by social determinants of health, including access to healthcare, socioeconomic status, occupation, and living conditions.

Objectives:

This study aimed to examine the underlying factors contributing to racial and ethnic disparities in COVID-19 outcomes and to evaluate how structural inequities influenced disease burden during the pandemic.

Methods:

A comprehensive literature review was conducted analyzing peer-reviewed articles, public health reports, and epidemiologic data related to COVID-19 outcomes among racial and ethnic groups in the United States. The review synthesized evidence on immune system function, SARS-CoV-2 pathophysiology, pandemic progression, and the role of social determinants of health. Key domains assessed included healthcare access, occupational exposure, income and wealth, education, and neighborhood environments.

Results:

The literature consistently demonstrated that racial and ethnic minority populations experienced higher COVID-19 morbidity and mortality. Contributing factors included increased frontline occupational exposure, limited access to preventive and acute healthcare, higher prevalence of comorbid conditions, and systemic barriers rooted in structural racism.

Conclusion:

This review highlights that COVID-19 disparities are not biologically driven but are the result of entrenched social and structural inequities. The findings align with existing public health literature and underscore the need for systemic policy interventions, including expanded access to healthcare. Addressing these determinants is essential to reducing health inequities and improving preparedness for future public health emergencies.

Title: Overlap Among Community Health and Behavioral Health Roles in Arizona

Lead Presenter: Alicia Hernandez

Faculty Advisor: Halimatou Alaofè

Background:

Community health workers (CHWs) are frontline public health professionals facilitating healthcare access, promotion, and navigation. CHWs are often cross-trained or employed in behavioral health technician (BHT) and peer support specialist (PRSS) roles, contributing to unclear role boundaries and workforce overlap that affect job clarity and career pathways.

Objective:

This study explores how individuals trained as CHWs, BHTs, and PRSSs perceive and distinguish these roles. The objective is to understand perceived scope of practice overlap and its implications on the workforce development in Arizona.

Methods:

This qualitative study involved structured interviews with CHW trainees enrolled in the Arizona State University CHW Training Program (CHW-TP) who reported prior training or work experience as BHTs, peer recovery support specialists (PRSS), or behavioral health paraprofessionals (BHPP). Interviews were audio-recorded, transcribed, and analyzed using thematic analysis to identify shared and distinct role perceptions while minimizing researcher bias through systematic coding procedures.

Results:

Nine interviews were completed, with additional interviews ongoing. Participants were able to define the CHW role but reported difficulty distinguishing it from BHT and PSS roles. Identified areas of overlap included client engagement, community-based work, and shared core competencies. Training duration varied with most participants reporting learning skills on the job.

Conclusion:

Findings reveal inconsistent understanding and differentiation of CHW, BHT, and PRSS roles. Trainee and employee perspectives highlight the impact of unclear role expectations, variable training, and limited career pathways, underscoring the need for standardized training and clearer role guidelines to support workforce development and inform hiring practices across Arizona.

Title: Expanding Cervical Cancer Screening for Unhoused Through Mobile HPV Self-Collection

Lead Presenter: Dina Jacqueline Inzunza

Faculty Advisor: Anna Morenz

Background:

Cervical cancer (CC) is largely preventable through screening and HPV vaccination; however, unhoused individuals experience higher incidence and mortality than the housed U.S. population, partly due to low screening uptake, with fewer than half up to date on CC screening. HPV self-collection delivered via mobile health units (MHU) may expand screening access for this population.

Objectives:

To assess attitudes, perceptions, and implementation outcomes of HPV self-collection among unhoused individuals and inform implementation of equitable, low-barrier CC screening programs.

Methods:

Using a mixed-methods design, HPV self-collection and educational materials were pilot tested at two outreach events in January 2026. Semi-structured interviews were conducted (N = 19) after participants completed HPV self-collection inside an MHU. Guided by learner verification and response constructs, interviews evaluated educational materials and explored screening acceptability and feasibility. Participants also completed a validated implementation outcomes survey; Likert responses were categorized as low (<3), moderate (3.0–3.9), or high (≥ 4.0), and internal consistency was assessed using Cronbach's alpha.

Results:

Participants (mean age = 51) reported high acceptability (89.4%), appropriateness (89.5%), and feasibility (89.5%) of HPV self-collection. Internal consistency was excellent for acceptability (Cronbach's $\alpha = 0.85$) and good for appropriateness ($\alpha = 0.81$); feasibility demonstrated lower reliability ($\alpha = 0.46$), likely reflecting a ceiling effect due to uniformly high ratings. Conclusion: Preliminary findings suggest that mobile outreach-delivered HPV self-collection is an acceptable, appropriate, and feasible strategy to address CC screening gaps among unhoused populations. Ongoing qualitative analyses will further identify implementation facilitators and barriers, informing community-informed screening approaches.

Title: Assessing Statewide Resource Capacity for Collaborative Governance of Falls Prevention

Lead Presenter: Kayla Silva Maravilla

Faculty Advisor: Tawab Saljuqi

Background

Every 12 seconds, an older American is admitted to the emergency department for a fall. Every day, 74 of those will die from a fall. As the population ages, falls will continue to increase in rate and burden. Falls prevention programs have been shown to be an effective strategy to mitigate burden and are being prioritized nationwide. With increasing prevalence of falls prevention programs, collaboration between stakeholders to expand reach is critical.

Objectives

This assessment aimed to analyze capacity within the state of Arizona for in-depth collaboration between stakeholders in the area of falls prevention.

Methods

19 key stakeholders around the state from different sectors were recruited from existing falls prevention networks and interviewed in-depth to learn about their organization's role in Falls Prevention using a qualitative semi-structured interview questionnaire and 1 focus group discussion. Interviews elicit individual perceptions and involvement with fall prevention efforts. The focus group brings stakeholders together to discuss collaborative capacity and goals for a stronger network of care.

Results

Analysis revealed high interest in a collaborative system to address fall risk and prevention. Barriers include funding, high turnover rates in current collaborative leadership, a lack of shared data among providers to identify patients at risk, and a need for Spanish language prevention education tools.

Conclusions

Findings highlight strong stakeholder interest in building a statewide falls prevention network. Despite this interest, significant barriers remain. Addressing these barriers enhances alignment between health systems, community organizations, and public agencies to improve reach and sustainability of initiatives.

Title: Evaluating Arizona Falls Prevention Awareness Month, 2025

Lead Presenter: Kelly Lau

Faculty Advisor: Abdul Tawab Saljuqi

Background

Every year, 2.8 million U.S. adults are treated for falls, driving an estimated \$50 billion in annual emergency department costs. In Arizona, unintentional falls are the leading cause of injury-related mortality among adults aged 65 and older. To address this growing burden, the University of Arizona (UArizona), in collaboration with the Southern Chapter of the Arizona Falls Prevention Coalition (SCAFPC), established a statewide integrated falls prevention network and leads Falls Prevention Awareness Month activities each September. In 2025, UArizona and SCAFPC conducted an initial evaluation during these events to assess the landscape of falls prevention efforts and the outcomes of month-long outreach.

Methods

Cross-sectional survey data were collected at three September 2025 events (n=92; site samples: 37, 37, and 18). Surveys captured demographics, falls risk (STEADI), and falls prevention knowledge, attitudes, and practices. Descriptive statistics compared sites, and multiple linear regression tested associations between participant characteristics and falls risk.

Results

Participants were primarily female and mostly older than 70, with modest age differences by site. Most believed falls are preventable. Falls risk scores differed significantly across sites. Older age and having fallen in the past year were the strongest factors associated with higher falls risk.

Conclusion

The integrated network has strengthened statewide falls prevention efforts and created a foundation for ongoing evaluation and research. Next steps include follow-up contact to assess change over time and expanded analyses to refine predictors of falls risk.

Title: Fostering and Navigating Identity Among Indigenous College Students

Lead Presenter: Kyra Long

Faculty Advisor: Felina Cordova-Marks

Background:

Blood quantum laws initiated in the late 19th century continue to determine tribal enrollment status and reduce the power of Tribal Nations and Indigenous Peoples. A growing conflict of determining Indigenous Identity rose from blood quantum laws.

Objectives:

Increase understanding between Indigenous Identity and blood quantum laws perceived by Indigenous students. Widen research by understanding Indigenous Identity formed at an individual level and in urban settings.

Methods:

Employed Talking Circles focused on Indigenous identity's impact on healthcare usage and how Indigenous identity is fostered on campus and by blood quantum laws. Reviewed, analyzed, and interpreted data using Ground Theory and Tribal Critical Race Theory.

Results:

28 self-identifying Indigenous students participated in 4 Talking Circles. Four themes with additional subthemes emerged after analysis: 1) Fostering Identity at University, 2) Blood Quantum Laws and Identity, 3) Community and Culture, and 4) Authenticity and Validation.

Conclusions:

Highlights ways Indigenous students feel supported and challenged in fostering their Indigenous Identity on universities away from tribal homelands. Future research needs to explore this conflict and its impact on Indigenous students' personal health and wellbeing.

Title: Nighttime Calls and Ability to Fall Back Asleep of Firefighters**Lead Presenter:** Connor Lopez**Faculty Advisor:** Patricia Haynes**Background:**

On-call firefighters have profound sleep inconsistency. Difficulty returning to sleep after nighttime emergency calls may contribute to chronic sleep disturbance with implications for firefighter health and safety and public health.

Objectives:

This study examined the likelihood of firefighters with elevated sleep disturbance to fall back asleep within 30 minutes after returning from nighttime emergency calls.

Methods:

Participants were active-duty firefighters from the Sleep Assistance for Firefighters (SAFFIRE) Study. Eligible participants (N = 258) must have a PROMIS Sleep Disturbance 8b score greater than or equal to 55 to be included in the analysis. Ability to return to sleep was measured by self-reported likelihood of falling asleep within 30 minutes after responding to emergency calls at 12am, 2am, and 4am on a 5-point scale (1 – very unlikely to 5 – very likely).

Results:

More firefighters reported that they were “very unlikely” to fall back asleep within 30 minutes of returning from 4am calls (n = 107) compared to 2am (n = 67) and 12am (n = 70) calls.

Discussion:

Our study indicated that later nighttime emergency calls may reduce the ability of firefighters with elevated sleep disturbance to return to sleep. These findings align with prior shiftwork literature demonstrating that sleep disruptions occurring later in the night are associated with prolonged sleep latency and circadian misalignment. Future studies using objective measures, such as actigraphy, need to be conducted to support this outcome.

Title: Low Use of Menopausal Hormone Therapy Among Mexican-Origin Women

Lead Presenter: Bhuvi Mamtani

Faculty Advisor: Rogelio Robles-Morales

Background:

Menopausal hormone therapy (HT) is effective for managing menopausal symptoms but has historically been underutilized due to safety concerns and lack of education on the matter. Recently, the FDA initiated the removal of the strict “black box” warning from menopausal hormone therapy (MHT) products. This study focuses on HT use among predominantly Mexican-origin women, a population with limited data on menopausal care.

Objectives:

To assess the prevalence of menopausal hormone therapy use and explore potential gaps in menopausal care among Mexican-origin women in a community health setting as part of a secondary analysis of a community-based HPV self-sampling pilot study.

Methods/Activities:

Data were analyzed from 328 women aged 23–65 years participating in a health survey. Menopausal status and HT use were self-reported. Descriptive statistics summarized the prevalence. This subsample represents a primarily Mexican heritage population with varied U.S. residency durations.

Results/Outcomes/Products:

Among the 328 participants, 85 (25.9%) reported being menopausal, with a mean age of 54.5 years. Among menopausal participants, hormone therapy use was uncommon: 7 (8.2%) reported current or prior use, while 91.8% reported none. Overall, menopausal hormone therapy uptake was low in this community-based sample.

Conclusion/Discussion/Significance of this research:

Despite emerging evidence supporting the safety and benefits of HT, its use remains minimal among Mexican-origin women. These findings suggest persistent educational and cultural barriers to menopausal care in this underserved population. Targeted, culturally responsive educational and clinical interventions may help improve symptom management and quality of life, aligning with current scientific understanding and public health goals.

Title: Climate Change Perceptions and Water Security: Evidence from Tanzania

Lead Presenter: Victor Okpanachi

Faculty Advisor: Aminata Kilungo

Background:

Water scarcity, intensified by climate change, threatens progress toward Sustainable Development Goal 6. Aim: The study will investigate the complex relationship between household climate change knowledge, perceptions of water access, quality and security, lived realities, socioeconomic status, and their influence on adaptation practices in low-income communities.

Methods:

We conducted a cross-sectional survey of 364 households in Dar es Salaam, Tanzania. Structured questionnaires were used to evaluate the household's knowledge of climate change, water accessibility, perceptions of water quality and security, and adaptation strategies. Descriptive statistics, and multivariable logistic regression models were used to identify socioeconomic predictors of perceptions.

Results:

Although most households report access to improved water sources, only 59% have basic access—spending about 30 minutes or less on a round trip, including queuing. Another 8% experience limited access, taking over 30 minutes per trip. Among the households, gender inequality persists, as women and girls carried the greater (58%) burden of water collection. While 85% of the household's respondents were knowledgeable about climate change, 22% were unable to link it with water security, highlighting knowledge gaps. The level of educational attainment was the strongest predictor of climate–water perceptions (OR = 1.81, 95% CI: 1.25–2.62, $p = 0.002$).

Conclusion:

Household's climate resilience in Dar es Salaam is constrained by high water costs, gendered burdens, and awareness gaps. Expanding climate communication and education, addressing gender inequities, and investing in equitable water infrastructure are essential for achieving Sustainable Development Goal 6.

Title: CareBridge Arizona, an AI-Powered Community Health Kiosk for Rural Care**Lead Presenter:** Feruz Oripov**Faculty Advisor:** Shravan Araas**Background:**

Rural communities in Arizona face persistent barriers to healthcare access, including geographic isolation, hospital closures, clinician shortages, and long wait times. Although digital health tools and community health kiosks have expanded access to basic screenings and telehealth services, many existing systems remain fragmented and lack integrated diagnostics and clinical decision support. Addressing these gaps is essential to improving equitable access to healthcare for underserved rural populations.

Objectives:

This project aims to develop CareBridge Arizona, an AI-powered, community-embedded health kiosk designed to deliver integrated primary care support, including patient triage, diagnostics, and clinical decision assistance. The current phase focuses on developing a scalable and clinically grounded system architecture.

Methods:

CareBridge Arizona integrates patient triage, point-of-care diagnostics, clinical decision support, patient education, and pharmacist-supervised medication dispensing within a unified platform. The system architecture is orchestrated using LangGraph, combining medical knowledge graphs, retrieval-augmented generation, large language models, and graph neural network reasoning to generate evidence-grounded and personalized clinical recommendations. Human-in-the-loop oversight is incorporated to enhance safety, accountability, and regulatory alignment.

Results:

Phase 1 development has produced an initial system architecture and prototype integrating AI-driven diagnostic and reasoning modules within a community-accessible health kiosk platform.

Significance of this research:

CareBridge Arizona demonstrates the feasibility of integrating advanced AI capabilities into community health infrastructure to support accessible, scalable, and personalized healthcare delivery for rural populations. This work lays the foundation for future clinical evaluation and deployment to improve healthcare equity in underserved regions.

Title: The Effects of Circadian Acclimation on Electrocardiogram Parameters**Lead Presenter:** Milin Patel**Co-Presenter:** Kiyan Saissan**Faculty Advisor:** Salma Patel**Background:**

Jet lag is associated with transmeridian travel across at least two time zones, associated with sleep disturbance as well as daytime dysfunction. The presence of jet lag has been hypothesized to be associated with adverse cardiovascular outcomes however, objective data are not available.

Objectives:

The objectives of this study are to understand the impact of simulated jet lag on electrocardiogram parameters.

Methods:

After a baseline circadian rhythm assessment, participants underwent a simulated jet lag protocol followed by one of several circadian acclimatization interventions. Participants were selected from the University community. Continuous electrocardiographic monitoring was performed, and heart rate and QTc intervals were evaluated across laboratory phases.

Results:

Participants (N = 15; 86% male; mean age 28.4 ± 9.56 years) demonstrated significant alterations in heart rate and QTc intervals following simulated jet lag, with variability observed across acclimatization strategies. Bright light therapy was associated with more favorable trends in heart rate and QTc compared with other interventions, whereas combined therapies showed greater interindividual variability. Changes in circadian phase alignment were associated with electrophysiologic changes, though these associations were not uniform across individuals.

Conclusion:

The initial induction of jet lag seems to have detrimental effects on heart rate, however the body adjusts thereafter and bright light may be helpful to reduce the impact of jet lag on heart rate. There may be effects of jet lag and its treatment on QTc and QT variability though larger studies are needed to further explore this relationship.

Title: Fatigue in Coccidioidomycosis**Lead Presenter:** Jack Picton**Faculty Advisor:** Fariba Donovan**Background:**

Coccidioidomycosis (Valley fever) is an environmentally acquired fungal infection endemic to the desert Southwest. Coccidioides spores reside in arid soil and become airborne through dust storms and soil disturbance. Acute pulmonary infection is well recognized; however, many patients experience prolonged, debilitating fatigue that persists long after resolution of primary symptoms. This post-infectious fatigue substantially impacts quality of life across Arizona's population. Despite Valley Fever-related fatigue (VFRF) prevalence, its biological and psychosocial determinants remain poorly understood, and no targeted management strategies exist.

Objective:

To assess fatigue severity and examine its associations with demographics, clinical presentations, and disease-related factors among confirmed Valley Fever patients receiving care in Tucson, Arizona.

Methods:

Fatigue was assessed among patients with confirmed VF receiving care at Banner University Medical Center, Tucson, between 2020 and 2026. Data were obtained from the Valley Fever Center for Excellence (VFCE) biorepository, comprising 384 confirmed VF cases. Fatigue score was recorded in 204 patients utilizing the FACIT fatigue scale. Eligible participants were adults >18 years with confirmed VF. Cross-sectional analyses examined associations between fatigue, demographics, clinical presentations, duration of illness, length of Arizona residence, and antifungal use.

Results:

FACIT fatigue scores showed a weak positive correlation with age ($p = 0.12$, $p = 0.097$). Scores differed by sex at a trend level, with females reporting lower median FACIT scores than males (32 vs. 37; $p = 0.063$). FACIT scores did not differ across clinical VF presentations, duration of illness, or length of Arizona residence.

Conclusion:

Fatigue severity was not strongly correlated with patient demographics or VF clinical presentations. VFRF may reflect autonomic disturbance, structural dysfunction, or prolonged inflammatory response. Therefore, we propose a potential role for a whole person approach in improving VFRF.

Title: PFAS Exposure and Firefighting Associated With Papillary Thyroid Cancer Micrnas**Lead Presenter:** Cynthia Porter**Faculty Advisor:** Melissa Furlong**Background:**

Papillary thyroid cancer (PTC) is the most commonly diagnosed thyroid cancer. Prior research shows that expression of specific circulating blood microRNAs (miRNAs) differs between individuals with PTC and those without disease, suggesting biomarker relevance.

Objective:

To identify if firefighters experience an elevated risk of developing PTC due to occupational exposures, including per- and polyfluoroalkyl substances (PFAS).

Methods:

This study investigated associations between firefighter-related exposures (serum PFAS, years of firefighting experience, and incumbent versus recruit status) and PTC-relevant miRNA expression. MiRNA expression was quantified from blood collected from 833 firefighters across 15 sites, and 302 firefighters had nine PFAS analytes measured in serum. Thirty PTC-related miRNAs were identified using miRWalk's Disease Ontology. Adjusted linear regression models estimated associations between exposures and miRNA expression while controlling for occupational and demographic covariates. Multiple comparisons were assessed using a False Discovery Rate (FDR) threshold of $p < 0.20$.

Results:

Twenty statistically significant ($p < 0.05$) negative associations were observed between five serum PFAS analytes and 10 miRNAs. These included associations between Sb-PFOA and hsa-miR-212-3p; PFHxS and hsa-let-7a-5p, hsa-let-7d-5p, hsa-let-7f-5p; PFNA and hsa-let-7a-5p, hsa-let-7b-5p, hsa-let-7c-5p, and hsa-let-7d-5p; Sm-PFOS and hsa-let-7a-5p, hsa-let-7b-5p, hsa-let-7c-5p, hsa-let-7d-5p, hsa-let-7e-5p, and hsa-miR-760; and n-PFOS and hsa-let-7a-5p, hsa-let-7c-5p, hsa-let-7d-5p, hsa-let-7e-5p, and hsa-let-7f-5p. Twenty-four of 30 miRNAs were associated with incumbent status, and 22 remained significant after FDR correction. Hsa-miR-212-3p and let-7 family miRNAs were negatively associated with PFAS and incumbency.

Conclusion:

Associations between PFAS exposure, firefighting status, and PTC-related miRNAs suggest links between occupational exposures and PTC risk overall.

Title: Mapping Structural Barriers to Cancer Care for Native American Communities

Lead Presenter: Orli Sanyal

Faculty Advisor: Julie Armin

Background:

Native American populations in Arizona face persistent barriers to cancer care, including geographic isolation, long wait times, and limited culturally and linguistically responsive services. Because health care resources are concentrated in urban areas, rural residence poses significant challenges for individuals lacking economic resources, reliable transportation, or additional support.

Objectives:

This study aims to identify and quantify geographic and structural factors influencing access to cervical and breast cancer care for Native American communities in rural Arizona. We hypothesize that greater travel time, distance, and limited medical infrastructure are associated with reduced access to specialized cancer care.

Methods:

Publicly available geographic and health care datasets are used to quantify access-related factors using a conceptual model guided by the Behavioral Model for Vulnerable Populations and a socio-ecological framework through a data crosswalk. This maps relevant variables across datasets, allowing a multivariable analysis to examine how travel time, distance, and regional medical infrastructure predict access to cervical and breast cancer care.

Results:

Preliminary findings indicate that rural Native American communities experience substantially longer travel times and distances to specialized cancer care compared to urban populations, highlighting gaps in regional medical infrastructure.

Conclusion:

This study provides data-driven evidence linking geographic isolation and medical infrastructure to cancer care access disparities for Native American communities in Arizona. Findings align with existing rural health literature and extend prior work through integrated datasets from a conceptual crosswalk. Results may inform policies and programs aimed at reducing structural barriers and improving equitable cancer care access.

Title: Culturally Tailored Falls Prevention Intervention in Hispanic Older Adults

Lead Presenter: Azmat Sidhu

Faculty Advisor: Zhao Chen

Background:

Falls disproportionately affect Hispanic communities due to barriers in access and language. TaiChi and Qigong have demonstrated benefits for fall prevention.

Objectives:

This study assessed the feasibility and effectiveness of telehealth versus in-person delivery of a TaiChi program among older Hispanics in Southern Arizona.

Methods:

A hybrid implementation-effectiveness design was used with 20 Hispanic adults aged ≥ 60 . One senior center received in-person sessions, and the other telehealth for 8-weeks, three hourly sessions every week. Assessments at baseline, midpoint, and post-intervention included Functional Reach Test (FRT), Timed Up and Go (TUG), Frailty Index (FI), Falls Efficacy Scale-International (FES-I), Quality of Life (QoL), and CDC 4-Stage Balance Test. Analyses used mixed models and ANCOVA. Focus groups with coordinators and participants provided qualitative insights.

Results:

Participants' mean age was $77.8(\pm 6.8)$; 15 were female. Attrition occurred in both groups ($n=7$). Remaining participants demonstrated trends of improvement in both groups. TUG improved from $15.38(\pm 7.8)$ to $9.10(\pm 2.74)$ seconds for in-person group and $14.28(\pm 4.1)$ to $9.95(\pm 1.9)$ seconds in telehealth group. FI decreased slightly for in-person group (0.59 ± 0.07 to 0.57 ± 0.06) and substantially in the online group (0.61 ± 0.07 to 0.52 ± 0.08). FES scores declined, noticeably for telehealth group (from 27.58 ± 6.7 to 23.40 ± 4.2). FRT, QoL, balance outcomes trended upward in both groups. While statistical significance was limited by small sample, qualitative data emphasized perceived strength, confidence, and program feasibility.

Conclusion:

Both delivery modes showed promising improvements in mobility, balance, and confidence. Telehealth delivery was feasible and well received, supporting the need for larger trials to confirm effectiveness and scalability.

Title: Hidden In Plain Sight: PTSD Among Arab Immigrants and Refugees

Lead Presenter: Aiya Tawakkol

Co-Presenter: Zeyad Abbker

Faculty Advisor: Momen Alsayed

Background:

Arab immigrants and refugees in the United States experience high trauma exposure yet remain underrepresented in mental health surveillance due to racial misclassification and limited culturally responsive data systems. This gap restricts data-driven public health action addressing PTSD disparities. Arabic dialect diversity complicates symptom reporting, highlighting need for natural language processing tools that accurately interpret regional expressions within screening platforms.

Objectives:

This review aimed to synthesize PTSD-related evidence among Arab immigrants and refugees and identify data-informed strategies to improve access to culturally responsive mental health care.

Methods:

A PubMed literature search was conducted using trauma-, Arab/MENA-, migration-, and U.S.-related terms. Inclusion criteria included English-language, full-text articles published between 2000–2025 focusing on U.S.-based Arab immigrant or refugee populations. Of 43 identified studies, 9 met eligibility criteria.

Results:

Studies consistently reported high pre-migration trauma exposure and elevated post-migration stressors, including discrimination, poverty, language barriers, and social isolation. These factors were strongly associated with PTSD and comorbid depression and anxiety. Women and children demonstrated greater symptom burden, and intergenerational effects were observed. Barriers to care included stigma and limited access to Arabic-speaking providers. Digital and culturally adapted interventions, including tele-mental health programs, demonstrated improved engagement and symptom outcomes.

Conclusion/Significance of Research:

Findings emphasize the need to translate mental health data into action through improved ethnic data classification, technology-enabled screening, and culturally responsive digital care models. AI-supported risk screening and Arabic-language tele-mental health platforms with dialect-sensitive interfaces may improve early detection and expand equitable access to PTSD services among immigrant and refugee populations.

Title: Integrating Heat-Health Education into STEAM Learning in Arizona Schools**Lead Presenter:** Cheryl Valdez**Co-Presenter:** Harini Gandimathi**Faculty advisor:** Mona Arora**Background:**

Extreme heat is a major public health threat in Arizona. In 2022, the state recorded 1,030 heat-caused or heat-related deaths and 4,325 heat-related hospital and emergency room visits. Executive Order 2023-16 further formalized extreme heat planning and preparedness as a statewide priority. Youth are an important prevention audience because heat-safety education can promote protective behaviors and strengthen climate and health literacy.

Methods:

We evaluated a pilot STEAM-based (Science, Technology, Engineering, Arts, and Mathematics) heat-health curriculum delivered in two Arizona summer programs in Summer 2025: STEPS 2 STEM (n=17) and OLEH (n=13). Lessons lasted 1 to 2 hours and covered climate and health impacts, heat safety, and local heat data. Deidentified worksheet reflections were entered into Excel and thematically coded to assess student learning and guide curriculum refinement. Curriculum content was also mapped to 13 Arizona high school STEAM standards to support future classroom adoption.

Results:

Student reflections showed strong awareness of climate-health connections, especially around extreme heat, drought and water scarcity, and wildfire and air quality. However, reported protection strategies focused mainly on hydration, with fewer mentions of shade or air conditioning, cooling centers, or avoiding peak heat hours, suggesting a gap between awareness and actionable protection behaviors.

Conclusions:

Place-based learning approaches, such as heat mapping and local risk scenarios, may help translate climate-health awareness into practical protective habits, particularly in under-resourced communities with limited access to cooling. Next steps include developing teacher-ready materials and piloting a Youth Heat-Health Ambassador model.

Title: Nicotine Use Patterns and Sleep Disturbances in Firefighters**Lead Presenter:** Molly Wert**Faculty Advisor:** Patricia Haynes**Background:**

Firefighters experience high rates of sleep disturbance due to shift work. Nicotine use is also highly prevalent in this population and exceeds rates observed in the general adult population. Prior research links nicotine use among firefighters to poor sleep. Therefore, examining specific nicotine use behaviors may help identify modifiable contributors to poor sleep in this group.

Objectives:

To explore associations between nicotine use frequency, timing of nicotine cessation, and sleep disturbance among active-duty, shift-working firefighters.

Methods:

A cross-sectional analysis was conducted among active-duty, shift-working firefighters who use nicotine ($N = 73$). They completed a survey assessing nicotine use behaviors and sleep outcomes. Nicotine variables included self-reported frequency of use and time of nicotine cessation (time of day last used). Sleep disturbance was assessed using the PROMIS Sleep Disturbance 8b. Significant associations were evaluated using Pearson correlation analysis.

Results:

Daily nicotine use was significantly associated with later time of nicotine cessation ($r = -.39$, $p < .001$). Neither nicotine use frequency nor cessation timing was significantly associated with sleep disturbance. However, later nicotine cessation was significantly associated with two PROMIS sleep disturbance items - lower sleep satisfaction ($r = .27$, $p = .02$) and feeling less refreshed upon waking ($r = .26$, $p = .03$).

Discussion:

Among shift-working firefighters, nicotine use timing—rather than frequency—was associated with subjective sleep satisfaction. Targeting late-night nicotine use may represent a feasible behavioral strategy to support sleep health in this population.

Title: Fitbit-Measured Sleep Architecture Changes in Individuals with Cognitive Impairment**Lead Presenter:** Jingyue Wu**Faculty Advisor:** Yann Klimentidis**Background:**

Dementia and cognitive impairment are associated with disrupted sleep. Evidence suggests a bidirectional relationship in which altered sleep may contribute to and result from disease progression. Most studies rely on self-reported sleep, leaving long-term and sleep stage patterns unclear. Wearable data from the All of Us Research Program enables assessment of sleep architecture alongside longitudinal electronic health records (EHR).

Objectives:

This study compares seasonal and longitudinal sleep architecture between individuals with dementia/cognitive impairment and matched controls using long-term Fitbit wearable data.

Methods:

Adults ≥ 50 years with EHR diagnoses of dementia/cognitive impairment and Fitbit sleep data (≥ 10 nights/month) were included as cases. Controls were matched 1:4 on age group, sex, calendar month of Fitbit use, and number of valid sleep months. Total sleep time (TST) and minutes and percentages of light, deep, and REM sleep were examined. Linear mixed-effects models with random intercepts evaluated seasonality and longitudinal changes and tested sex effect modification.

Results:

Both groups showed higher TST and more light, deep, and REM sleep in winter than summer. Longitudinally, cases had less REM, deep sleep, TST, but more light sleep than controls (~9 fewer minutes of TST/night over four years). Female cases showed faster REM decline and worsening trajectories over time, while male cases and controls showed similar longitudinal patterns.

Conclusions:

Dementia and cognitive impairment are associated with altered sleep architecture, particularly REM and deep sleep loss, with sex-specific patterns. Findings extend self-report-based studies and support sleep stages as targets for monitoring and intervention in aging populations.

Title: Predictors of epigenetic age acceleration in women firefighters**Lead Presenter:** Audrey Yang**Faculty Advisor:** Melissa Furlong**Background:**

Epigenetic age estimates may provide insight into how the environment affects the biological aging process. Research on epigenetic age acceleration (EAA) patterns in women firefighters is limited.

Objectives:

We aimed to investigate occupational and behavioral predictors of EAA in women firefighters.

Methods:

Data were collected as part of the Fire Fighter Cancer Cohort Study (FFCCS) and included self-reported surveys and blood samples. Six epigenetic clock algorithms applied to DNA measurements were used to calculate epigenetic age. EAA was obtained by regressing these estimates on chronological age. We ran linear regression models for cross-sectional analyses and linear mixed effects regression models for longitudinal analyses. All models adjusted for chronological age, race, body mass index, firefighter department region, and microarray version.

Results:

This study included 351 academy and incumbent women firefighters with a mean chronological age of 34.9 years (SD=8.7). Incumbent firefighters exhibited increased EAA at baseline (PhenoAge) and increased change in EAA over time (GrimAge) compared to academy firefighters. At baseline, incumbent firefighters who worked more years as a career firefighter (Horvath, PhenoAge), had more hours of uninterrupted sleep (GrimAge), or had ever used smokeless tobacco (Horvath) had significantly decreased EAA. Those who had a shift schedule of 48 hours on/96 hours off (Skin & Blood), were exposed to smoke as a child (Horvath, PhenoAge), had ever smoked ≥ 100 cigarettes (GrimAge), or reported using an electric cigarette/vape (GrimAge) had significantly increased EAA.

Conclusion:

This study highlights the significance of studying EAA in an all-woman population.

Title: Associations Between Greenspaces and Cancer Outcomes in the U.S.:

The NIH-AARP Diet and Health Study

Lead Presenter: Jeonggyo Yoon**Faculty Advisor:** Chris Lim**Background:**

Greenspace exposure has been suggested to be associated with various health outcomes, but evidence regarding its association with cancer is still very scarce and inconsistent. Few longitudinal studies have incorporated time-varying measures of greenness, cancer subtypes, and comprehensive adjustment for confounders.

Objectives:

We investigated the long-term effects of greenspace exposure on cancer outcomes (mortality, incidence, and survivorship), using data from the large NIH-AARP Diet and Health Study in the U.S.

Methods:

We included 414,469 cancer-free participants enrolled in 1995–1996 and followed through 2011. Residential greenness was quantified using the Normalized Difference Vegetation Index (NDVI) from Landsat images with 30 m X 30 m spatial resolution and linked to participants at the census tract level. Cox proportional hazards models with time-varying exposures were used to capture changes in greenness over time, adjusting for demographic, socioeconomic, and behavioral factors (age, sex, race/ethnicity, education level, smoking history, physical activity level, and BMI). Survival time was calculated for each cancer outcome (mortality, incidence, and survivorship) for obesity-related cancers.

Results:

An interquartile range (IQR) increase in NDVI was associated with a lower HRs for all-types of cancer, esophagus, and stomach cancer, with hazard ratios of 0.99 (95% CI: 0.98–1.00), 0.88 (95% CI: 0.79–0.98), and 0.87 (95% CI: 0.78–0.96), respectively.

Conclusions:

We provided large-scale longitudinal evidence on whether long-term residential greenspace exposure is associated with cancer mortality, incidence, and survivorship across multiple cancer sites. Our findings are expected to inform urban planning and public health policies that seek to leverage greenspace as a potential component of cancer prevention and survivorship support in aging populations.

Title: Microbial Assessment of Water Bottle Contamination in Unhoused Populations**Lead Presenter:** Noah Rios**Faculty Advisor:** Kelly Reynolds**Background:**

Unhoused people frequently store drinking water in reusable bottles. Although source water may meet drinking water standards at distribution, stored water is vulnerable to secondary microbial contamination due to repeated reuse, limited access to sanitation, biofilm formation, and environmental exposure. Community partners expressed concern about the safety of reused water bottles but lacked data to guide practical interventions.

Objectives:

To assess the microbial quality of stored drinking water in reusable bottles used by unhoused individuals in Tucson, Arizona.

Methods:

In partnership with local outreach organizations, water samples ($n = 49$) were collected from reusable bottles at two community distribution sites in Tucson during November 2025. Samples were analyzed using the IDEXX Colilert Quanti-Tray/2000 system to quantify total coliforms and *Escherichia coli* as most probable number (MPN) per 100 mL. Descriptive statistics were calculated, and results were stratified by bottle type and distribution site.

Results:

Overall, 53.1% (26/49) of samples tested positive for total coliforms, with a median concentration of approximately 1 MPN/100 mL (IQR: 0–52; range: 0–2419.6). *E. coli* was detected in 4.1% (2/49) of interpretable samples at low concentrations (maximum 2 MPN/100 mL).

Conclusion:

Contamination patterns were similar across distribution sites, suggesting bottle use and storage practices as key contributors. Community-engaged microbial monitoring identified frequent general contamination and occasional fecal contamination in stored drinking water. Findings were shared with community partners to inform practical interventions, including bottle hygiene education, routine replacement strategies, and safer water storage practices for unhoused populations.



POSTER PRESENTERS



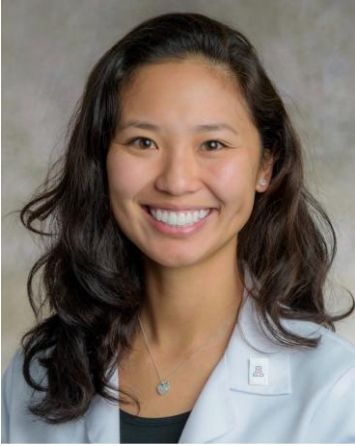
Harrison Brown is an MPH Student in Epidemiology and a 2024 graduate of the University of Arizona's Bachelor of Science in Public Health program (Quantitative Methods emphasis). His Honors thesis used NHANES data to examine the potential protective effects of a plant-based diet on cardiovascular disease. He has contributed to the BRACE team through cleaning and analysis of the National Weather Service heat advisory data and FEMA disaster data and supported PCHD's cooling centre assessment through survey data analysis. His research interests focus on the health impacts of environmental exposures, particularly heat and climate change, on vulnerable populations and chronic disease risk.



Aiya Tawakkol is a senior at the University of Arizona, majoring in Physiology and Medical Sciences with minors in Public Health and Biochemistry. Her research and advocacy focus on global health, refugee and immigrant health, and the social determinants of mental health among underserved populations. She is actively involved in community health initiatives and student leadership focused on supporting these communities. Aiya plans to pursue a career in medicine and public health, where she hopes to address health disparities affecting vulnerable populations worldwide.



Cynthia Porter is a doctoral student in the epidemiology program, studying environmental and occupational determinants of firefighter health. Her research investigates how exposures to contaminants such as per- and polyfluoroalkyl substances (PFAS) may influence molecular biomarkers, including microRNA expression and DNA methylation. Her work aims to improve understanding of biological pathways linking occupational exposures to cancer risk and to inform strategies that protect firefighter health.



Audrey Yang is an MD/PhD student who is passionate about improving health outcomes for disadvantaged populations. She hopes that her knowledge of environmental and occupational exposures will enable her to advance equity both in the community and in clinical practice.



Grace Chao is a PhD student in Environmental Health whose research focuses on environmental justice, air pollution, and climate-related health impacts. Using geospatial methods, her work examines how environmental exposures are distributed across communities to help inform more equitable environmental and public health policies.



Milin Patel is a senior majoring in Physiology and Medical Sciences and a minor in Theatre Arts. A proud native Tucsonan, Milin is the child of two Arizona Wildcats! He has contributed to research on circadian rhythms and jet lag, exploring the effects of sleep patterns on human physiology through a research project called the Jet Lag Study. After graduation, Milin will pursue a career as a physician and will matriculate to the College of Medicine – Tucson next year as a member of HEAP.



Nana Adwoa Akuffo Amoh-Asante is a first-year PhD student in Environmental Health Sciences at the University of Arizona. She holds a Master of Public Health in Environmental and Occupational Health from the University of Arizona and previously practiced as a physician in Ghana for nearly three years. Her research examines occupational exposures to cleaning and disinfection products among healthcare workers, particularly nurses, and strategies to mitigate respiratory viral transmission in school environments.



Tina Fingesi-Johnson is a PhD candidate in Environmental Health Sciences. She holds a Master's degree in Environmental Biology with a background in the assessment of indoor air quality and pollution. Her current research focuses on exposure science and assessment, health equity, PFAS biomonitoring and exposure communication, environmental risk assessment, including assessing behavioral and spatial predictors of exposure; and effectively reporting-back individual exposure results to participants.



Mahdi Faraji is a PhD student in Environmental Health Sciences at the University of Arizona's Mel and Enid Zuckerman College of Public Health. His research focuses on environmental exposure assessment through air quality monitoring, distributed sensor networks, and machine learning-driven analytical approaches. He contributes to the Sonoran Unified Network of Sensors for Environmental Tracking (SUNSET), a project that deploys low-cost sensors to characterize spatial and temporal patterns of air pollution and support public health research and decision-making.



Ahamed Ashraf is a Ph.D. student in Environmental Health Sciences at the University of Arizona. His research focuses on microbial risk assessment, with particular emphasis on Quantitative Microbial Risk Assessment (QMRA). His work aims to advance understanding of pathogen behavior, exposure risks, and the influence of environmental factors on public health. Through his research, he seeks to contribute to improved environmental health risk assessment and evidence-based decision-making.



Mehedi Hasan is a second-year PhD student in Environmental Health Sciences within the Department of Community, Environment & Policy at the University of Arizona. His research focuses on microbial risk assessment of biosolid land application and public risk perception across Arizona, integrating both qualitative and quantitative methods through a mixed-methods approach. Originally from Bangladesh, Mehedi earned his Bachelor and Master of Science degrees in Public Health and spent nearly five years conducting community-based environmental health research with low-income populations in South Asia.



Enock Adu Bonsu is a PhD student in Biostatistics at the University of Arizona and holds a master's degree in Statistics from Western Michigan University. His research focuses on the intersection of machine learning, health equity, and patient safety. He studies algorithmic bias in healthcare AI and develops quantitative methods to identify disparities in predictive models. His current work centers on the development of the Vulnerability Index, a framework designed to detect algorithmic bias before clinical deployment using large clinical datasets.



Jingyue Wu is a Ph.D. student in Epidemiology at the Mel and Enid Zuckerman College of Public Health at the University of Arizona, working with Dr. Yann Klimentidis. Her research focuses on using wearable device data to study sleep and physical activity patterns and their associations with chronic disease and cognitive health. She is particularly interested in using large population-based datasets to better understand behavioral and physiological risk factors for disease.



Celina Urquidez holds a Bachelor's degree in Nutritional Sciences and a Master of Public Health from the University of Arizona and is currently working toward her Doctor of Public Health (DrPH). She serves as the Education & Training Senior Coordinator at the Sonoran Center for Excellence in Disabilities, where she supports health initiatives and leads projects that provide continuing education for professionals in the disability field. Her work also focuses on student training, mentoring, and professional development to help build a more inclusive and prepared workforce.



Auditi Bhowmick is a Master of Public Health candidate in Biostatistics, graduating in Spring 2026. With a background in physiology and medical sciences, she began her graduate studies with limited experience in statistical analysis but has since developed strong analytical skills and a growing passion for research. Her work is motivated to advance women's health, with an interest in applying data-driven approaches to address health disparities. Auditi plans to carry this into her future career as a physician, where she hopes to integrate public health initiatives into clinical practice to improve patient outcomes.



Kelly Lau is a senior undergraduate pursuing a Bachelor of Science in Public Health with an emphasis in Quantitative Methods in Public Health. She has an interest in the intersection between health and daily living, which led her to join the Falls Prevention Program as an intern. At the Falls Prevention Program, she has assisted with the management and further analysis of data from several events, producing visualizations and other outputs to provide valuable insights into the program's ongoing research projects. After graduation, she intends to pursue a career in pharmacy.



Azmat Sidhu is a third year PhD student in Epidemiology who works in the Healthy Aging Lab. Her areas of interest include equitable representation of minorities in research and chronic conditions like cognitive decline affecting older adults. She is currently working as part of the Community Engagement, Recruitment and Retention team in the Precision Aging Network.



Katelyn Carter is a public health major with a minor in chemistry on track to start the accelerated master's program for industrial hygiene at the University of Arizona. She is currently completing an internship at Roche Tissue Diagnostics, where she is working on hazard communication and data presentation. Her academic interests center around making health information accessible at all levels for occupational workers. Outside of public health, she enjoys singing, travelling, and exploring academic opportunities through the W.A. Franke Honors College.



Ana Licia Hernandez is a medical student at the University of Arizona College of Medicine–Tucson (Class of 2029). She earned her Bachelor of Science in Physiology and Medical Sciences from the University of Arizona in 2022 after transferring from Pima Community College. Prior to medical school, she spent three gap years working as a case manager for individuals with substance use and mental health disorders and as an HIV education specialist, where she provided STI/HIV/Hepatitis C education, conducted mobile testing, and connected patients to care across Southern Arizona.



Mohammed Najeeb Naabo is a Master of Public Health candidate in Health Behavior Health Promotion at the University of Arizona, completing his degree this spring. With a unique blend of medical and public health training, he is passionate about improving clinical outcomes through health behavior change and health promotion. He is driven by a vision of a future where underserved populations worldwide have the opportunity to take charge of their health through health promotion and equitable access to care.



Leah Callovini is a sixth year PhD student in Health Behavior Health Promotion at the University of Arizona. Her research interests center in the development of behavioral interventions for late adolescents and adults to promote their mental, sleep, and physical health. She is particularly interested in social and circadian rhythmicity and those factors as intervention points for promoting health.



Munthir Almoslem is a Ph.D. candidate in Environmental Health Sciences at the University of Arizona. He has a background in environmental sciences from the University of Toronto. His research focuses on healthcare-associated infections (HAIs), surface contamination in clinical settings, and the effectiveness of terminal cleaning protocols. He is passionate about translating scientific findings into practical impact, combining fieldwork, data modeling, and behavioral research to develop solutions that enhance patient safety.



Jenifer Bova is pursuing a Master of Public Health with a focus in Epidemiology at the University of Arizona. With more than five years of experience as a Clinical Research Coordinator in the vision field, my work has centered on retina and ophthalmology, where I've supported studies from concept through analysis. My clinical research background blends hands on coordination with analytical mindset, allowing me to manage study logistics, recruit and retain participants, and ensure regulatory compliance across multidisciplinary team. I am passionate about translating clinical insight into epidemiologic methods that advance vision outcomes in our community.



Yá'át'ééh/Hello, **Kyra Long** is born for Tsenahabíłnii (Sleeping Rock People Clan) and Tódik'ózhí (Salt Water Clan). She is a Diné Asdzáán (Navajo Woman) from Gallup, New Mexico, which is a border town of the Navajo Nation. She is currently a first-generation undergrad majoring in Public Health with an emphasis in Health Promotion.



Dina Inzunza-Uysal is a 2nd year Master of Public Health student at the University of Arizona Mel and Enid Zuckerman College of Public Health. Her research focuses on cancer prevention and control, with an emphasis on addressing health disparities among underserved populations. She currently works as a Clinical Research Coordinator at the University of Arizona Cancer Center, where she is involved in community-engaged research aimed at expanding access to cervical cancer screening. Her broader interests include women's health, cancer survivorship, and community-based interventions to improve health equity.



Orli Sanyal is a senior majoring in Medicine and Molecular and Cellular Biology with minors in Spanish and Public Health. She is actively involved in interdisciplinary research focused on improving healthcare access, particularly for underserved and Native American communities. Through her work in both laboratory and community-based settings with the Undergraduate Biology Research Program and the Cancer Health Equity Lab under Dr. Julie Armin, PhD, she is passionate about integrating biological science with public health to address health disparities. Orli plans to pursue a career in medicine, with a focus on community-centered care and health equity.



Reagan Conner is a current student in the Environmental Health Sciences Doctoral program. She earned an MPH in Environmental and Occupational Health from the University of Arizona in 2024. Since 2022, she has been focused on firefighter occupational research with Dr. Burgess. She plans to continue her focus on firefighters through her dissertation.



Samantha McDonald is a Master of Public Health candidate in Applied Epidemiology at the University of Arizona, expected to graduate in Spring 2026. Through her Applied Practice Experience with Ventanillas de Salud (VDS) at the Mexican Consulate in Phoenix, she supports community health outreach by providing preventive screenings and developing patient education materials, while also analyzing screening data to improve access to services, and she volunteers at Tucson Medical Center. Samantha plans to pursue a career in medicine and contribute to urologic research focused on improving health equity.



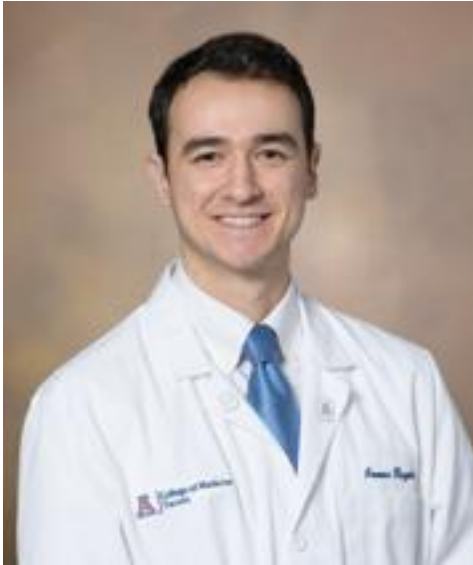
Noah Rios is a Master of Public Health (MPH) candidate in Environmental and Occupational Health at the University of Arizona. His work focuses on environmental exposures in underserved populations, with an emphasis on water quality and microbial risk. Noah is particularly interested in community-based research and practical interventions that address environmental health disparities.



Dora Le is a second-year MPH student at the University of Arizona, Phoenix campus, concentrating in Health Services Administration. She focuses on improving healthcare access and navigation for refugees and underserved populations, including individuals with disabilities. Dora has led community-based interventions and volunteer initiatives, partnering with organizations to reduce barriers to care. Her work informs program development and policy recommendations aimed at promoting health equity and culturally competent services.



Brooke Hawkes is a PhD student in Epidemiology at the Mel and Enid Zuckerman College of Public Health. She is currently a data analyst for the Asthma and Airway Disease Research Center, where she studies the relationship between biomarkers and respiratory diseases, such as asthma and COPD. With a minor in Computer Science, she has a strong interest in applying computational methods to disease prediction, prognosis, and omics analysis. Her previous research has covered a variety of topics, including immune response to COVID-19, antibiotic use in the US-Mexico border region, and occupational exposures and associated disease risk in firefighters.



James Rozelle is a graduating class of 2026 medical student at the UofA COM-T, preparing to enter the field of internal medicine, with a keen interest in understanding and improving healthcare delivery. Over the past 4 years he has worked under the supervision of Abdul Tawab Kawa Saljuqi, MD, DrPH, on several health literacy projects.



Jeffrey Greenfield is a rising 4th-year medical student at the University of Arizona College of Medicine - Tucson. He came to Arizona for undergrad to study physiology and special education, and plans on applying to pediatrics. Education and community engagement are two of my passions, and he believes they are important aspects of being a good physician, so he is very excited to be a part of this!



Feruz Oripov is pursuing a master's degree in software engineering at the University of Arizona. He currently works as a Graduate Research Assistant in Dr. Shravan Aras's team, contributing to research projects that explore how wearable sensor devices can be leveraged to address challenges in healthcare. Feruz joined the Center for Biomedical Informatics and Biostatistics (CB2) in August 2025. Prior to that, he worked as a student software developer at the BIO5 Institute. He is particularly interested in applying his software engineering expertise and industry experience to advance academic research in data-driven and health-focused applications.



Pedro Flores Gallardo is a PhD student in Environmental Health Sciences with a minor in Health Behavior and Health Promotion in the MEZCOPH at the UofA. He obtained his M.S in Chemistry from Ohio University and his B.A. in Chemistry from Minnesota State University Moorhead. His research interests are in exposure science, analytical chemistry methods, occupational health and safety, industrial hygiene, community-engaged research, and environmental justice. He works for the SWEHSC within the Implementation Resource for Translational and Human Exposure Research (IRTH). He is currently an ambassador for the university's first Data Management and Sharing Plan Ambassadors Program.



Connor Lopez is studying physiology and the medical sciences at the University of Arizona. He aspires to use his knowledge of research to propel his career as a future healthcare professional.



Ashley Danforth is in the final year of the Master of Landscape Architecture program at the College of Architecture, Planning and Landscape Architecture. As a graduate research assistant, she supports work on landscape performance and community health in arid regions. She serves in leadership roles, including the ASLA Student Advisory Committee and as Project Manager for a multi-year student-led grant advancing green stormwater infrastructure education and student engagement.



Kayla Silva Maravilla is a fourth-year undergraduate student at the University of Arizona studying Biology with an emphasis in biomedical science and a minor in Spanish. She is deeply committed to healthcare and community service and plans to combine academic knowledge with practical skills to make a meaningful impact in healthcare.



Cheryl Valdez is a Master of Public Health student in Global Health at the University of Arizona. Her interests include climate and health, food and migration, and health equity. Her work explores how climate-related challenges affect access to food, health, and safe places to live, especially for communities facing displacement, while advancing awareness and advocacy for climate refugees.



Jack (Lance) Picton is a Ph.D. candidate in the Environmental Health Sciences program at the University of Arizona, specializing in environmental microbiology and microbial risk assessment. He holds an MPH in Environmental and Occupational Health and a BS in Microbiology, both from the University of Arizona. He has served as a Research Associate at ESRAC in the Zuckerman College of Public Health and as a Clinical Data Analyst for the Valley Fever Center for Excellence (VFCE) in the College of Medicine. He also completed a graduate fellowship at the Johns Hopkins University School of Medicine.



Shunrang B. Chin is a Gates Millennium Scholar and MPH student studying Climate Change and Health at the University of Arizona. She grew up in Palau, where she spent several years working with the Ministry of Health & Human Services supporting COVID-19 response and emergency preparedness. She is currently interning with the SCORCH where she supports rural heat-resilience project across rural Arizona communities. Through listening sessions, the project aims to understand the unique heat risk experiences and challenges faced by rural and Tribal communities, foster dialogue among rural, Tribal, state, and other partners, and ensure those voices are integrated into Arizona's statewide heat plan for the 2026 heat season.



Jeonggyo Yoon is a PhD student in Environmental Health Sciences. Her research uncovers how the environmental exposures (greenspace and air pollution) people unknowingly face every day quietly drive their cancer risk, using geospatial analysis and statistical methods to identify which communities bear the greatest burden, and why.



Bhuvi Mamtani is an undergraduate at the University of Arizona pursuing a B.S. in Molecular and Cellular Biology with a minor in Public Health. Her work focuses on cancer research and public health, including studies on cervical cancer screening in underserved populations, with a commitment to advancing health equity through research and community engagement.



McKenna Schultz is an MS3 here at UA COMT, also working towards my MPH. She also completed my undergraduate BS at the University of Arizona, earning a dual degree in Biochemistry and Molecular and Cellular Biology with a minor in Mathematics in 2019. I earned my MS in Science of Healthcare Delivery from Arizona State University in 2021. She is particularly drawn to innovative strategies which improve access to high quality and high value care for vulnerable populations in Arizona. Additionally, she is passionate about opportunities to improve community health through One Health strategies, which allow for dynamic education, prevention, surveillance, and practice across health professions.



Jumah Alkhaibari is a third-year PhD student in the Environmental Health Sciences program. He holds a bachelor's degree in Medical Laboratory Technology (MLT) and a Master of Public Health (MPH), with hands-on experience at the King Hussein Cancer Center in Jordan and the Leon County Health Department in Florida. His research interests include environmental health, epidemiology, health disparities, and community well-being. He is currently working on a quantitative microbial risk assessment (QMRA) study in built environments. His passion is to be a researcher in food safety and hygienic practices.



Molly Wert is a senior undergraduate who has been fortunate to spend the last two years working with the SAFFIRE Study, where she developed a strong interest in improving health outcomes in high-risk populations. She plans to pursue a career as a Physician Assistant and is especially interested in preventive medicine and community-centered care.



Victor Okpanachi is a PhD student in Environmental Health Sciences at the University of Arizona, with a research focus on wastewater-based surveillance, water quality, and climate-related health risks. His research focuses on molecular assay optimization for high-sensitive environmental monitoring for detecting waterborne pathogens and emerging infectious diseases in vulnerable communities. He has also conducted extensive research on microbial contamination of water sources in Tanzania and climate change resilience in SSA.



Kevin Begay is a graduate student pursuing a Master of Public Health with a concentration in Epidemiology. He is currently a researcher with the Data Warriors Fellowship with the Department of Family and Community Medicine. His research interests include American Indian and Alaska Native populations, Chronic and Infectious Diseases, and the Social Determinants of Health.



Sanvi Lamba is a senior at the University of Arizona with majors Public Health and Physiology & Medical Sciences, and a minor in Spanish. As President of Clinical Affairs for the University of Arizona Flying Samaritans chapter, she has dedicated over three years to organizing and delivering free healthcare services in Agua Prieta, Mexico. Under her leadership, she began to lead the creation of a community health needs assessment to improve quality of care provided at clinic. Upon graduation, Sanvi plans to pursue an MPH and eventually become a physician to deliver more holistic, patient-centered care that considers both individual needs and the broader factors shaping health.



Elaine Kang is a junior Molecular and Cellular Biology major at the University of Arizona. She currently serves as President of Administration for the University of Arizona chapter of Flying Samaritans, where she focuses on ensuring operational stability to sustain and expand clinic services. Driven by these experiences, she is implementing a community health needs assessment to identify operational gaps and propose evidence-based improvements. Ultimately, Elaine aims to pursue a career as a primary care physician, developing long-term health initiatives for underserved populations.



Kiyan Saissan is a graduating senior majoring in physiology and medical sciences as well as biochemistry. Kiyan was born in Kansas but raised in Chandler, Arizona. His research focuses on Circadian Rhythm misalignment from jet lag and testing different treatment options to correct deviations in QTc intervals and heart rate. After graduation, Kiyan will apply to medical school while working as a research technician during his gap year.

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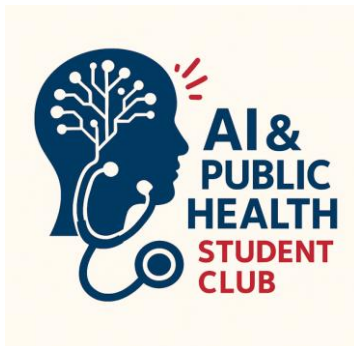
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A Note of Appreciation

We extend our heartfelt to all participants, judges, presenters, sponsors, and organizers for the 2026 MEZCOPH Poster Forum. Your dedication, innovation, and shared passion for advancing public health have made this event a resounding success.

Together, we continue to inspire and drive meaningful change in our communities.

Thank you for being a part of this journey!