



UTHealth[®] Houston
School of Public Health

Center for Pediatric
Population Health

Improving the health of children and adolescent populations
through evidence-based research

EXECUTIVE SUMMARY

2024

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Welcome to the Center for Pediatric Population Health, where our commitment to advancing the well-being of pediatric and adolescent populations drives every aspect of our work. Our overall strategy is built on four core pillars of value, which we share with UTHealth Houston School of Public Health:

Collaborate: We believe in the power of collaboration and partnerships to drive impactful research and interventions in both clinical and community settings. By bringing together diverse perspectives and expertise, we foster innovation and create solutions that address the complex challenges facing pediatric populations.

Lead: We lead the way in research discovery, generating evidence-based science and recommendations that inform clinical practice and community programming. Our rigorous research efforts aim to improve health outcomes for children and families, shaping the future of pediatric population health.

Transform: Through education, training, and mentorship, we empower the next generation of public health leaders. We are committed to equipping professionals with the knowledge and skills needed to effect positive change and cultivate a culture of "health without boundaries."

Diversify: In a rapidly evolving field, we recognize the importance of agility and innovation. We continuously diversify our research portfolio and adopt a nimble approach to address immediate scientific challenges, ensuring that our work remains relevant and impactful.

Our impact extends far beyond the walls of our institution. In Dallas, across Texas, and beyond, we are stewards of a commitment to children and population health. Our successful research programs, graduate training initiatives, clinical collaborations, and community contributions reflect our dedication to making a tangible difference in the lives of pediatric populations. Join us in our mission to create a healthier future for generations to come.

Yours in Health,

A handwritten signature in black ink, appearing to read "Sarah E. Messiah".

Sarah E. Messiah, PhD, MPH, FTOS
Professor and Director
Center for Pediatric Population Health

The Center

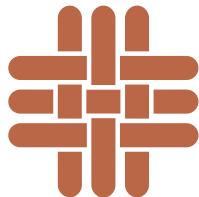
Founded in 2018, the Center for Pediatric Population Health is dedicated to improving the health of children and adolescents through evidence-based research. While the Center is physically located in Dallas, it has the capacity for regional and statewide reach through its connection to UTHealth Houston School of Public Health, one of the largest schools of public health in the nation, with campuses not only in Dallas but in five other major metropolitan cities. It is worth noting the rapid demographic transition currently taking place in the state of Texas, which now has two of the most diverse metro areas in the entire nation; Houston is ranked first and Dallas fifth. As such, there has never been a greater time or opportunity to serve our Texas pediatric populations and aspire to health without boundaries for all.

UTHealth Houston School of Public Health

UTHealth Houston School of Public Health has been protecting and transforming the health of people in Texas, across the nation, and around the world since 1967. With six campuses throughout the state, the School has established a strong reputation as a leader in public health.

Campuses

- Austin
- Brownsville
- Dallas
- El Paso
- Houston
- San Antonio

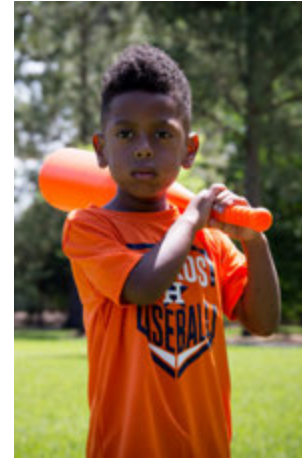


Each campus is affiliated with a major UT System university in its respective city.

The School has five divisions of study: (1) Biostatistics and Data Science; (2) Epidemiology; (3) Environmental and Occupational Health Sciences; (4) Health Promotion and Behavioral Sciences; and (5) Management, Policy, and Community Health. There are also seventeen research and practice centers within the school focusing on specialized research needs in the diverse areas of public health. The Center for Pediatric Population Health is one of the newest of these centers.

Mission

The purpose of the Center for Pediatric Population Health is to support multidisciplinary research teams to conduct studies and programs in collaboration with health care providers and community organizations to improve the health of child and adolescent populations. In addition, the Center will serve as a resource to translate scientific findings and knowledge into practical applications for public health practice, health care services, and health policies.



Vision

The Center for Pediatric Population Health will improve the health for children and adolescent populations through evidence-based research to inform programs for health promotion, disease prevention, and health care, all while addressing health disparities.

Values

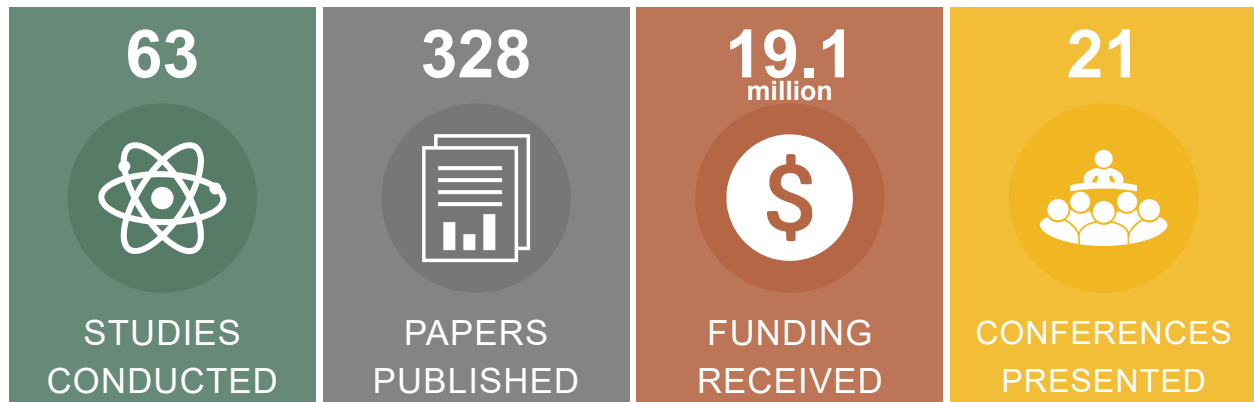
- Collaborate
- Transform
- Lead
- Diversify

What is Population Health



Population health is the study of relationships among various health determinants and/or health outcomes in large populations. Population health is positioned at the intersection of medicine/health care and public health, and includes the basic, clinical, social, environmental, and genetic sciences, enabling integrated and transdisciplinary research. As such, the Center is home to experts in a number of relevant disciplines including: epidemiology, exercise physiology, nutrition, behavioral health, biostatistics, business, community health, environmental science, economics, community health, genetics, education, implementation science, preventive medicine, anthropology, sociology, and psychology.

Metrics



January 2019 to June 2024

Areas of Research

- AYA and Cancer Survivorship
- Cancer Prevention
- Community-based Participatory
- Developmental and Behavioral Pediatrics
- Gastroenterology
- General Pediatrics
- Infectious Disease
- Injury Prevention
- Internal Medicine
- Nutrition and Fitness
- Orthopedics and Sports Medicine
- Patient-Clinician Relationship
- Pediatric Emergency Medicine
- Pediatric Surgery
- Pulmonology and Asthma
- Radiology
- School-based Telemedicine
- Social Determinants of Health
- Vaccine Hesitance

Collaborations

Collaboration is the key to progress. The Center aims is to promote and facilitate collaborations among researchers, clinicians, and community organizations, so that together, groundbreaking research may be done that can have local, national, and global impacts on pediatric population health. Major collaborators include the following:



Research Dissemination

Research conducted at the Center has been featured in numerous high-impact academic journals and media outlets.

Academic Journals



Media Outlets



Our People

The faculty and staff at the Center bring a wealth of real-world expertise and diverse perspectives focused on improving pediatric and adolescent health.



Faculty

The Center is home to faculty that are at the forefront of solving complex public health problems through groundbreaking research, world-class education, and community-engaged action.



Andrea C. Betts, PhD, MPH

Assistant Professor

Health Promotion & Behavioral Sciences

Dr. Betts' cancer control research endeavors to enhance healthcare accessibility and the overall well-being of marginalized communities, with a special focus on individuals who have survived cancer during their adolescent and young adult years (AYAs). Her primary interest lies in the creation and execution

of interventions grounded in empirical evidence, with the goal of enhancing the healthcare experiences and results for AYAs.



Alejandra Fernandez, PhD

Assistant Professor

Health Promotion & Behavioral Sciences

Dr. Fernandez's research focuses on the health of Hispanic adolescents and their families. Her work aims to enhance family functioning among Hispanic adolescents and their family members to prevent and reduce adverse health outcomes such as substance use, sexual risk behaviors, mental health issues, and obesity-related problems. Central to her research is the development and testing

of family-based interventions to improve these health outcomes.



Sarah E. Messiah, PhD, MPH

Professor & Director

Distinguished Chair of Pediatric Population Health
Epidemiology

Dr. Messiah is the inaugural director of the Center for Pediatric Population Health, a tenured Professor of Epidemiology, and the holder of the Distinguished Chair of Pediatric Population Health. She is a perinatal/pediatric and life course epidemiologist whose research focuses on (1) the epidemiological investigation of childhood obesity and cardiometabolic disease risk factors with emphasis on ethnic and racial disparities; and (2) the implementation of evidence-based practices into clinical and community-based settings to promote healthy weight throughout the life course. She has authored or edited two books, ten chapters, over 200 original research papers, and more than 250 scientific abstracts. Dr. Messiah has presented her research on national news outlets such as NBC News, Fox News, CNN, NPR, as well as at international conferences. Her work has received consistent funding from federal agencies (NIH, USDA, CDC, HSRA) and private organizations (Thrasher, Aetna). A significant focus of her career has been supporting the next generation of public health leaders, having directly mentored over 100 junior faculty, clinical and research post-doctoral fellows, and PhD and other graduate students.



Serwaa S. Omowale, PhD, LMSW, MPH

Assistant Professor

Management, Policy & Community Health

Dr. Omowale's research is centered on examining how employment functions as a social determinant of health and its influence on racial disparities observed in maternal health and birth outcomes. Additionally, she is dedicated to the creation of interventions that are culturally sensitive, aiming to mitigate negative pregnancy outcomes among Black women. Dr. Omowale employs a range of research approaches to craft interventions tailored to specific populations, ensuring cultural appropriateness. Her ultimate goal is to address and eliminate health disparities in areas such as maternal mortality, infant mortality, and preterm birth outcomes, ultimately striving for health equity.

**Jenil Patel, MBBS, MPH, PhD**

Assistant Professor
Epidemiology

Dr. Patel's research covers a diverse range of areas including pediatric and perinatal epidemiology, occupational health, health disparities, global health, and epidemiologic outbreak investigations. His work aims to address critical health issues across various populations and settings, contributing to a better understanding and improvement of public health. In addition to his research, Dr. Patel serves as the Director of the Pilot Projects Research Training Program at the Southwest Center for Occupational and Environmental Health, a National Institute for Occupational Safety and Health Education and Research Center (NIOSH-ERC). In this role, he oversees the development and implementation of research training programs designed to enhance the skills and knowledge of emerging public health professionals to become successful researchers in occupational and environmental health.

**Kevin C. Rix, Jr, PhD, MPH**

Assistant Professor
Health Promotion & Behavioral Sciences

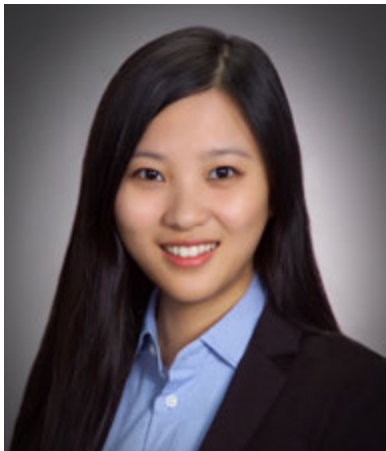
Dr. Rix's research primarily focuses on injury and violence prevention, the application of implementation science principles to these initiatives, and the field of injury epidemiology. His approach is deeply rooted in practical experience, having spent seven years managing an injury and violence prevention program at a level one trauma center in Austin, TX. During his tenure, he mentored numerous graduate students completing their practicum experiences in injury prevention, providing them with essential hands-on knowledge and guidance. In his research, Dr. Rix mainly explores the correlation between space-time factors and the risk of injury across various mechanisms. By analyzing how temporal and spatial elements influence injury occurrences, he aims to develop more effective prevention strategies. His work combines practical experience with scientific inquiry to contribute to a better understanding and reduction of injury risks in diverse populations.



Andrea Ramirez Varela, MD, PhD, MPH

Assistant Professor
Epidemiology

Dr. Varela is a physician-scientist working at the intersection of public health, physical activity epidemiology, and health policy research. Her research is focuses on several key areas (1) underserved populations in Latin America and other low and middle-income country settings, to study the prevalence, determinants and correlates of physical activity and healthy lifestyle in children and adults, and morbidity and mortality in children, childhood obesity and malnutrition; (2) establish, strengthen and sustain global surveillance systems of physical activity levels, research capacity, and physical activity policy, to contribute to effective and equitable global physical activity promotion efforts; and (3) using a broad syndemic approach to understand the relation between physical activity promotion, non-communicable disease prevention, and infectious disease crises (e.g., COVID-19 pandemic) and with this, find synergistic solutions to all.



Luyu Xie, PhD, PharmD

Assistant Professor
Epidemiology

Dr. Xie's ongoing research mainly focuses on (1) population-based, pharmacoepidemiological studies in asthma; (2) epidemiological research on the health outcome and behaviors of pediatric patients diagnosed with COVID-19; and (3) genetic risk factors detection using Mendelian Randomization. Dr. Xie is also collaborating with multiple research teams from the Parkland Center for Clinical Innovation, Departments of Internal Medicine and Obstetrics and Gynecology at The University of Texas Southwestern Medical Center. She has co-authored over 30 manuscripts in peer reviewed journals and has presented her research at various national and international meetings. Dr. Xie has received the Women in Science and Medicine Advisory Committee Travel Award for outstanding poster presentation at UT Southwestern. She is also the recipient of the Denton A. Cooley, MD, Transformation and Hope Scholarship and the J. Fred Annegers Memorial Scholarship.

Training and Mentorship

The Center is focused on training the next-generation of researchers and public health leaders.

Summer Scholars Program

The Summer Scholars in Pediatric Clinical Research (SSPCR) program is designed to provide stage-specific competencies for undergraduates in science knowledge, research skill development, professionalism, and communication. It is a 10-week faculty mentor-guided research training experience that is offered annually during the summer. With enrichment activities (e.g., didactic sessions, mentoring workshops, scientific and role model seminars, and ethics training) the program is expected to provide a comprehensive introductory exposure to epidemiological and public health research.



Summer 2024 will be the fifth year that the Center will be hosting this program. Previous scholars have gone on to present their research at national conferences and have been published in numerous peer-reviewed academic journals.

Graduate Research Associates

Graduate research associates (GRAs), typically MPH or PhD students, assist with various research studies at the Center. They are involved in data gathering, analysis, and verification for the multitude of studies that are conducted at the Center. Currently, GRAs are contributing to studies on infectious diseases, weight wellness, asthma, cancer, injury prevention, and many other research disciplines.

Postdoctoral Fellows

The Center hosts postdoctoral fellows who are completing their doctoral training and starting their academic and research careers. Many of them have applied for or received NIH funding to support their own investigational studies. Postdocs also contribute to the development and execution of Center research studies and provide mentorship to PhD candidates and other graduate students.

By the Numbers

Numerous scholars, trainees, and junior faculty have gained research and professional experience through the Center over the years.

20

SUMMER
SCHOLARS

DOCTORAL
STUDENTS

10

3

POSTDOCTORAL
FELLOWS

JUNIOR
FACULTY

12

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