

## Title: URBAN HEALTH EQUITY, EDUCATION AND RESEARCH COLLABORATIVE

- **Co-leaders of the UHEERC Collaborative**
  - Mark DeHaven, PhD and Michael Dulin, MD/PhD
- **Research Academies, Cores, Laboratories:** Academy for Population Health Innovation (**APHI**); Academy for Research on Community Health, Engagement, and Services (**ARCHES**); Academy for Clinical Research & Scholarship (**ACRS**); Race and Social Equity Academy (**RASE**); Biostatistics/Data Cores; Laboratories
- **Participating Departments/Schools/Institutes:** CHHS: Dept of Kinesiology; Dept of Public Health Sciences; School of Nursing; School of Social Work; CHHS/CLAS: Gerontology Program; CLAS: Dept of Political Science and Public Administration; Dept of Psychological Sciences; Dept of Geography and Earth Sciences; Dept of Global Studies; CCI: Dept of Bioinformatics and Genomics; Dept of Software and Information Systems; School of Data Science; COED: Dept of Middle, Secondary, and K-12 Education; Institute: Urban Institute/ISC
- **Target category:** 1) Existing and Emerging Excellence
- **Key words:** Health equity, health disparities, social determinants of health, health promotion; health data



UHEERC Sub-themes: place-based social determinants (Social), clinical care (Clinical), lifestyle and behavior (Behavioral), health care policy (Policy), social justice (Justice), and data science (Action Data)

## 2. UHEERC Executive Summary

The COVID-19 pandemic has placed a spotlight on the substantial inequities, racism, and health outcome disparities in the US population. Unfortunately, the inequities are not new; COVID-19 has only amplified them by showing how historical inequities result in cascading events leading to inequitable outcomes of all types. The **Urban Health Equity, Education, and Research Collaborative (UHEERC)** is conducting research directed at understanding and addressing the primary underlying causes of health inequities - the social determinants of health. UHEERC supports teams of health scientists who use action research methods, community-based participatory research (**CBPR**), and clinical research methods to improve health outcomes in high-risk clinical populations, implement community-based chronic disease prevention and management programs, advance health policy reform, and promote racial equity. With a solid track record of sustained funding, local and national engagement, and a critical mass of experienced and emerging investigators, the Collaborative is uniquely positioned to investigate these complex, pressing, and nationally important research areas.

The College of Health and Human Services (CHHS) began building the UHEERC research infrastructure in 2014, by establishing the first of four research academies. The academies are dedicated to improving urban health and well-being, and three of the four are directed by established National Institutes of Health (NIH) investigators. The Academy for Research on Community Health, Engagement, and Services (**ARCHES**) promotes CBPR through place-based partnerships and transdisciplinary research teams. The Academy for Population Health Innovation (**APHI**) is a unique partnership between the University and the Mecklenburg County health department, concentrating on health equity, HIV/AIDS and chronic disease prevention, and behavioral health integration. The Academy for Clinical Research and Scholarship (**ACRS**) establishes partnerships with clinical agencies to synergize research affecting patient health outcomes. The Academy for Race and Social Equity (**RASE**) fosters the scholarship of practice and research focused on advancing racial and social parity. A suite of applied, clinical and basic research laboratories, support health assessment, physical activity, biodynamics, and systems physiology research. A Biostatistics Core, Data Core, and a partnership with SDS and CCI support statistics, analytics, data management and tech innovations.

Since the passage of the Affordable Care Act (ACA) in 2010, health care has been undergoing a slow and steady, but dramatic shift away from just treating disease to promoting health and well-being. The dominant thinking today is that *zip code is the best predictor of a person's health*, since health outcomes are largely determined by where a person is born, lives, works, and ages. The resulting national focus on population health, place-based initiatives, community-based care, health behavior, policy change, anti-racism, and violence prevention are the foundation of the UHEERC system. The group has demonstrated the ability to engage and impact diverse local, regional and external individuals and organizations, through collaboration, team science and training. It promotes new partnerships among university researchers from a broad range of disciplines and research methodologies linking basic, clinical, and community research. It is attracting new and significant extramural funding; supporting a student to faculty research pipeline (with a focus on students from underrepresented groups); and is supporting economic development through commercialization. The UHEERC is an existing research platform with significant existing and emerging research capacity.

### 3. Evidence of Strength and Excellence

Tied to the University's mission, the UHEERC integrated research framework of academies, laboratories, and data science and tech resources has produced: 1) a supportive network of established and early-stage investigator teams; 2) a productive, well-funded, socially impactful research agenda of local, regional, and national relevance; 3) an extensive ecosystem of relationships (College, University, Charlotte community, and nationally); and 4) robust, inclusive PhD and postdoctoral opportunities.

**A. Network of established, mid- and early-stage investigator teams:** Approximately 50 faculty researchers at all levels actively participate on UHEERC transdisciplinary research teams. i. A group of established, diverse investigators, with national reputations and federal funding portfolios, direct the academies and provide oversight and mentoring to less established investigators. ARCHES (**DeHaven**) brings together teams of clinicians (**Suclupe** and **Richardson**), community (**Abel**) public health (**Sawhney**) and health promotion (**Bellar**) researchers, and student research engagement (**Johnson**); supports the UCITY Family Zone Place-based Initiative, Camino CommUniversity, and Community Action Research Scholars (CARS); and is developing linkages with the Urban Education Collaborative (**Lewis**). A PhD alum is director of research for Camino Worldwide and a multicultural postdoctoral fellow is a new assistant professor at Tulane University. APHI (**Dulin**) connects two physicians (**Dulin, Robinson**), community nursing (**Coffman**), public health (**Sawhney**) and community psychology (**Scott**) as well as faculty and students from CHHS, Geography and Earth Sciences, The Urban Institute, CCI, and SDS (**Chen**). Key APHI projects include: HIV prevention, Public Health and Social Services Data Integration, Tobacco Policy Implementation, and Implementation and Evaluation of Integrated Behavioral Health models. Seven PhD alums are all employed in their fields (CDC, BCBS NC, Atrium, etc). ii. Two new academies, RASE (**Hatcher**) and ACRS (**Crane**), provide guidance and support to clinical practice and community-engaged researchers. iii. Additionally, three senior faculty members, each with national reputations and federal funding portfolios, were recently recruited, bringing added expertise around physical activity (**Tudor-Locke**), behavioral health and suicide prevention (**Cramer**), and heart health (**Crane**). All are engaged with the UHEERC network (overseen by **Sell**). **Abel** received a mentored NIH KO1 that uses interactive technology-enhanced coaching to improve hypertension self-management for community dwelling Black women. Her advisory team includes **Crane, DeHaven** and **Paul**. **Mennicke** received a mentored, CDC K01 on violence prevention, and recently received an NIH R15 on bystander intervention. **Cramer** has included Mennicke and members of her team, along with **Gunn**, in his federally-funded programs on suicide prevention, sexual and gender minority health, and hate-motivated behavior. **Tudor-Locke** recently submitted an NIH NIA RO1 competing continuation proposal, and included **Crane, Dulin, Gunn** and **Moore-Harrison**. Her NIH-funded research program is supporting both doctoral students and postdocs. These examples showcase a primary strength of the UHEERC in providing a supportive research infrastructure for early stage investigators and synergistic opportunities for newly-recruited, established investigators to mentor faculty, train students, and expand new research program lines. UHEERC's enormous collaborative and transdisciplinary potential is further evidenced by six, smaller R1 Commission applications; topics range from chronic disease prevention and nursing innovations to analytics for intervention, and policy and spending.

**B. Funding success:** The substantial accomplishments of the UHEERC include a striking, **76%** increase in 5-yr extramural funding (**\$15,312,110 (166 awards)** (2016-2020)), compared to the the preceding 5-yr period (\$8,696,900 (124 awards) (2011-2015)). The UHEERC funding portfolio is a diverse mix of sources: examples include federal (NIH, CDC, HRSA, PCORI, DOJ), foundation (Robert Wood Johnson Foundation, Kate B. Reynolds, Newman's Own, Papa Johns), local (United Way, City of Charlotte, Mecklenburg County, Foundation for the Carolinas), and industry (Gilead).

**C. Extensive ecosystem of community, research, and civic relationships:** Charlotte, a microcosm of the nation, ranks last among U.S cities in economic mobility, and has a well documented history of social and health inequities based on race and income. UHEERC investigators are conducting applied research locally that is helping to solve complex issues of national importance. Four case studies are illustrative: **Racine** studies nutrition policy and environmental, economic factors and partners with Atrium Health, Cabarrus Health Alliance, and the Cabarrus Partnership for Children, and **Wallace and Coffman**. A PhD alum is a postdoctoral fellow at Johns Hopkins Bloomberg SOPH. **McCarter** is a juvenile justice forensic expert who serves on the board of the National Organization of Forensic Social Work, co-chairs the NC RED Subcommittee and is PI for the AAC&U funded Charlotte Racial Justice Consortium (UNC Charlotte, Johnson C. Smith, Queens University, Johnson and Wales, and Central Piedmont Community College). She recently received three, high impact, high visibility research awards, and collaborates with **Mennicke, Kazemi** and **Suclupe**. **Richardson** was appointed to the Andrea Harris Social, Economic, Environmental, and Health Equity Task Force by Governor Cooper, and is Director, Mental Health Research and Practice, Urban Education Collaborative (**Lewis**). She leads a team of 22 local, statewide, and national practitioners and researchers and is supported by NC's largest Medicaid Managed Care Organization, Cardinal Innovations. Lastly, **Thomas** is Director of Research, UNC Charlotte Urban Institute (UI), and Executive Director of the Institute for Social Capital (ISC). The UI and ISC data infrastructure and research activities are supported by the City of Charlotte, Mecklenburg County, the Foundation For The Carolinas, Bank of America, and the United Way. Their research spans all social determinants of health (e.g. housing, education, economic mobility, etc.); a recent PhD alum managed Thomas' important Housing First Charlotte-Mecklenburg study that will guide local housing and homelessness initiatives.

**D. Media and honors - Racine** (LAT), **Turner** (NYT); **Dulin** (HealthcareITNews), **Thomas** (Bloomberg); **DeHaven/Suclupe/McCarter** (NPR); **Tudor-Locke** (SiriusXM). Two recent honors: **Cramer** (2020 APHA Award for Excellence) and **Dulin** (2020 RWJF Health Policy Fellow at the National Academy of Medicine). See CVs for others.

**E. How additional resources can build or expand success -** Strategic resource use will build infrastructure as UHEERC evolves. Immediate needs include: staffing for a Research Participant Registry to facilitate diverse participant recruitment and increase community visibility, dedicated research space in the communities where teams are active, and doctoral and postdoctoral support. Intermediate needs: faculty lines/cross campus cluster hire to support PhD expansion programs in Kinesiology and Nursing. Long term needs are adjusting expectations and teaching loads for faculty pursuing research careers, and robust pilot awards and bridge funding (between federal grants).

#### **4. Alignment with Regional and National Priorities - health is an economic driver**

UHEERC's research agenda is driven in large part by UNC Charlotte's unique position as North Carolina's urban research university, its emphasis on community engagement, and its commitment to addressing the economic, educational, health, and social needs of the greater Charlotte region. The City of Charlotte was identified in a 2014 Harvard study as having the lowest level of economic opportunity of all large U.S. cities, contributing to systemic inequities among minority and low income residents. The designation has galvanized the local community in ways that align with regional, national, and international priorities focused on improving the social determinants of health.

**Local** - Charlotte's Leading on Opportunity Task Force Report (2016) developed a local opportunity action plan which corresponds to the types of research conducted by UHEERC teams (e.g. housing, criminal justice reform, mental and physical health, racial segregation, and providing coordinated holistic social services in vulnerable communities). In response, ARCHES co-developed the UCITY Family Zone (2016) for convening local organizations (e.g. Atrium Health, University City Partners, Mental Health America, Care Ring, Charlotte Community Health Clinic, Camino Community Center, Sanger Heart and Health, and 70+ social-service organizations) and developing an action research plan for service providers and researchers. APHI was established (2016) in partnership with Mecklenburg County Public Health to be the incubator for widespread public health innovations. The ACRS teams are supporting the UHEERC and health care organization interface for improving minority health outcomes and health equity, and RASE teams are working with organizations addressing all aspects of mental health including addictions, violence, suicide, racism, and gender inequity.

**Regional** - The NC Department of Health and Human Services is supporting a health equity agenda through "strategic interventions and investments in food, housing, and interpersonal safety, in partnership with local community groups." This agenda is supported by the Blue Cross Blue Shield NC Foundation which is moving beyond traditional health care, to address the "interplay and influence of social, environmental, structural, and economic factors contributing to health inequities." Numerous UHEERC program lines are investigating housing and built environment, food security, health behavior and chronic disease prevention, Medicaid reform, housing and criminal justice reform, suicide, and violence prevention. Similarly, the Kate B. Reynolds (KBR) Charitable Trust (one of North Carolina's largest foundations) supports traditional health care along with "improving health equity by eliminating food deserts, improving the built environment, enhancing transportation to health facilities, and addressing poor housing." KBR is currently supporting the UCITY Family Zone place-based initiative.

**Federal** - Healthy People 2020 provides the U.S. Department of Health and Human Services science-based, 10-year national objectives for improving the health of all Americans. It has directed the NIH, CDC, SAMHSA, HRSA and other federal funders to address the social determinants of health for creating the "social and physical environments that promote good health for all." This emphasis aligns with the World Health Organization (WHO), whose Commission on Social Determinants of Health has endorsed and supported health equity globally through action on the social determinants of health. Multiple UHEERC teams are supported by federal health science funding, conducting urban health focused investigations of critical importance to national policy makers, governing bodies, foundations, and health organizations at all levels.

## **5. Supporting Documents**

- A. Table of UHEERC faculty and short description of their contribution or expertise.
- B. Abbreviated Two-page CVs in NIH Format - UNC Charlotte affiliated faculty and researchers.

### UHEERC Supporting Document

Name	Title and Affiliations	Expertise and UHEERC Competencies ( <b>Legend: Behavioral</b> (lifestyle and health behavior), <b>Clinical</b> (patient care and human mechanistic studies), <b>Social</b> (social determinants of health), <b>Justice</b> (social justice and racism), <b>Policy</b> (health care policy and reform), <b>Action Data</b> (health information and analytics, big data, data integration),
<b>Abel, Willie</b>	Associate Professor of Nursing  Academies: ACRS, ARCHES	Abel’s research agenda is focused on studying minorities with CVD and its main risk factor, hypertension (HTN). Her research examines factors relevant to minority populations (such as socioeconomic status, trust in healthcare provider, depression, coping, racism, stigma, spiritual religious beliefs, etc.) that may influence poor health outcomes. As a biobehavioral researcher, she considers the interplay of biological, behavioral, and environmental contributors to health to better understand and target more active individual engagement in health care behaviors and self-care activities performed independently by individuals in collaboration with health care providers to foster better CV health. <b>UHEERC sub-theme: Behavioral, Clinical</b>
Arif, Ahmed	Professor of Public Health Sciences	My research focuses on identifying risk factors for occupational and non-occupational lung diseases. I have researched childhood asthma, work-related asthma, and pneumoconiosis - also called “dusty” lung diseases - using population-based surveys, epidemiologic study designs, and secondary data analysis. My current research projects include studying occupational risk factors of suicide, longitudinal changes in lung function among patients with rare and orphan diseases, and spatial epidemiology. <b>UHEERC sub-theme: Data</b>
<b>Bellar, David</b>	Professor, Chair of Kinesiology (administrative responsibilities for laboratories)  Academies: ARCHES	I was hired in 2018 and I am providing physical activity, behavioral health diabetes interventions through a community based research project with the Camino Community Foundation, supporting the CaminoVida program. This program provides a comprehensive behavioral health intervention for low income mostly Latinx clients with diabetes. Previously, I worked with other community organizations, such as Miles Perret Cancer Services, on community health initiatives. Currently, I have several research projects under development with corporate sponsors that are focused on personal health monitoring technologies that aim to improve community health. <b>UHEERC sub-themes: Behavioral, Clinical</b>

Brown, Cheryl	Associate Professor, Chair of Political Science/ Public Admin SDS  Data Policy  Academy: APHI	My past experiences of engagement scholarship as a citizen journalist, grant writer, community researcher, and program advisor/director on HIV/AIDS in Charlotte, NC began a focus on health disparities during the parallel development of my traditional scholarship on China. A National Science Foundation POWRE award (2000–2001) buttressed my China and East Asia policy research with a focus on social and ethical implications of emerging technologies leading to interdisciplinary publications and research on diverse cultures and technology acceptance, big data and public trust, and data privacy and ethics. My current research builds upon this earlier interdisciplinary work and its expansion to health technology in later years. My primary area of focus is technology use, health privacy, and health disparities. <b>UHEERC sub-themes: Data, Policy</b>
Brown, Dace (Candace) S.	Assistant Professor of Public Health Sciences, Gerontology  Academy: APHI	My long-term research interests involve the development of a multi-disciplinary behavioral model, specifically designed to increase the number of exercisers by examining how motivation affects physical activity through social, psychological, and neurological disciplines. I use a variety of quantitative and qualitative methods to examine motivation, barriers, and self-efficacy, and their relationship between health, age, and time to engage in physical activity. Much of my previous research has focused on motivations for engaging or not engaging in physical activity among aging minority populations, such as Black women and Veterans. I have also conducted cross-disciplinary research focused on successful aging and educational impacts among under-represented groups. <b>UHEERC sub-themes: Behavioral; Data</b>
Burfield, Allison	Associate Professor of Nursing  Academy: ACRS	My research focuses on improving care outcomes for the older adult. Through interdisciplinary focused work for the past 25 years, we have conducted research with the goal of promoting safe medication use in the older adult and developing clinical care interventions for the long-term care (LTC), acute, and community care settings. I have a broad clinical practice across the age spectrum in psychiatric nursing with specialization in gero-psych and additional training in pharmacotherapeutics. Our interdisciplinary research has examined psychotropic load reduction to safer medication use, the outcomes of psychoactive load and falls, costs associated with inappropriate psychoactive medication use, physician willingness to accept



		<p>recommendations for medication changes, and most recently best care practices for the assessment and management of chronic pain in the older adult. <b>UHEERC sub-themes: Behavioral, Clinical</b></p>
<b>Chen, Shi</b>	<p>Assistant Professor of Public Health Sciences, School of Data Science</p> <p>Academy: APHI</p>	<p>My research aims to merge the gap between theoretical advances in mathematical, statistical, computational techniques and more practical epidemiologically relevant questions. My interdisciplinary education background and research experiences have made me uniquely competent and confident to work seamlessly across different components, mentor graduate and/or health professional researchers, and maximize productivity. I work with scholars both from UNC Charlotte and across the world in the COVID-19 Multi-Model Outbreak Decision Support (MMODS) project, a collaborative effort in the Models of Infectious Disease Agent Study (MIDAS) supported by NIGMS, NIH. I have also led the effort developing deep-learning based predictive models in the MMODS project. <b>UHEERC sub-theme: Data</b></p>
<b>Coffman, Maren</b>	<p>Associate Professor of Nursing</p> <p>Academies: APHI, ARCHES</p>	<p>Early in my career, I lived in Venezuela for 18 months learning the customs, language, and lifeways of the people. This transformative experience led me to dedicate my career to the health care needs of vulnerable populations, which lies at the core of my research program. My background and experience allow me to apply my research expertise with populations broadly to improve care coordination, self-disease management, and program delivery. <b>UHEERC sub-theme: Behavioral</b></p>
Cornelius, Judy	<p>Associate Professor of Nursing</p> <p>Academy: ACRS</p>	<p>My research has focused largely on social determinants of health with HIV prevention. I have the expertise, leadership, training, expertise and motivation necessary to successfully carry out strategies and intervention research methods for a program grant with minority populations. As a post-doctoral fellow with the American Nurses Association, I conducted focus groups and explored the sexual communication needs of African American parents and their adolescent children. In my post-doctoral fellowship at the University of Pennsylvania, I focused on intervention research methods and the sexual communication needs of African American grandparents and their adolescent grandchildren. In my role as a visiting professor at the Center for AIDS Prevention Studies (CAPS) at the University of California at San Francisco, I expanded my</p>

		research to integrate technology with HIV prevention research with adolescents. In addition, I have examined the HIV prevention needs of African American transgender women and attitudes of health care providers toward the health care needs of LGBT individuals. <b>UHEERC sub-theme: Behavioral</b>
<b>Cramer, Rob</b>	Endowed Professor of Public Health Sciences  Academies: APHI, RASE	My research addresses three inter-related areas: (1) suicide prevention; (2) LGBTQ identity and health, and (3) discrimination and hate-motivated behavior. I utilize community-engaged research, survey and experimental methods; further, I am trained in advanced quantitative analytics such as latent variable modeling. <b>UHEERC sub-themes: Behavioral, Justice, Clinical, Social</b>
<b>Crane, Patricia</b>	Endowed Professor of Nursing  Academy: ACRS (Founding Director)	My research focuses on cardiovascular disease in aging and disparate populations using quantitative methods. I focus on symptoms, specifically fatigue, sleep disturbance, and depression, comorbidities and the correlates including cytokines (IL-6, TNF $\alpha$ , CRP-hs). I have had over 2.5 million in funding from NIH, Foundations, and HRSA. My current research is biobehavioral and the team is interprofessional and collaborative. <b>UHEERC sub-theme: Clinical</b>
<b>DeHaven, Mark</b>	Endowed Professor of Public Health Sciences.  Academy: ARCHES (Founding Director) UHEERC Co-Lead	I am a community-based participatory researcher (CBPR), who has been building community-based partnerships for improving wellbeing and quality of life in fragile communities in the United States and globally (South America, Mexico, Africa, and China) for close to three decades. Our team has been implementing community-based interventions in vulnerable communities, designed to improve health equity, control chronic disease, reduce health disparities, and improve quality of life. With support from National Institutes of Health (NIH – NHLBI, NCI, NICHD, and NIMHD), Centers for Disease Control and Prevention (CDC), American Cancer Society (ACS), American Heart Association, and numerous foundations, we work with community partners to develop place-based solutions for addressing systemic inequities. I have developed several federally funded training programs. As ARCHES director, I lead the UCITY Family Zone, Camino CommUniversity, and Community Action Research Scholars (CARS) program. <b>UHEERC sub-themes: Behavioral, Clinical, Social</b>

<p>Donovan, Luke</p>	<p>Assistant Professor of Kinesiology</p> <p>Laboratory: Biodynamics</p>	<p>I have a clinical background as an Athletic Trainer and a broad research training in Sports Medicine with a specific expertise in lower extremity rehabilitation and biomechanics following musculoskeletal injury. As an Athletic Trainer, I worked with numerous patients with musculoskeletal conditions by providing these patients the primary point-of-injury and rehabilitative care. I have extensive training examining and treating lower extremity biomechanics and muscle function in individuals who sustained lower extremity joint injuries. By merging my clinical experiences with my research expertise, I have developed novel and community accessible rehabilitation paradigms that have the potential to break the continuum of disability associated with lower extremity joint injuries. My strong understanding of neuromechanics, lower extremity biomechanics, rehabilitation, and ability to design accessible interventions will allow me to contribute. <b>UHEERC sub-themes: Behavioral, Clinical.</b></p>
<p><b>Dulin, Michael</b></p>	<p>Professor of Public Health Sciences RWJF Fellow, School of Data Science Academy: APHI (Founding Director) UHEERC Co-Lead</p>	<p>I have over 20 years of experience in research with a focus over the past 14 years on implementation science including: practice-based research, community-based participatory research, and use of information technology and analytics to improve care delivery. I previously founded and directed a practice-based research network that has had continuous federal funding for the past decade. My current position, directing an academic-public health collaborative (APHI), is focused on implementation and dissemination of evidence-based practices into the public health domain to positively impact community health. <b>UHEERC sub-themes: Behavioral, Clinical, Data, Justice, Policy, Social.</b></p>
<p>Fenwick, Abby Thomas</p>	<p>Assistant Professor of Kinesiology</p> <p>Laboratory: Biodynamics</p>	<p>My research has largely focused on the biomechanical and neuromuscular consequences of joint injury and how those relate to posttraumatic osteoarthritis development. I have extensive training in lower extremity biomechanics and muscle function in patients with knee and ankle injury, with particular emphasis on dynamic movements, strength, neural excitability, and muscle atrophy in patients after anterior cruciate ligament reconstruction. I have helped to develop, implement, and oversee data collection of numerous interventions to improve biomechanics and muscle strength in patients after joint injury. <b>UHEERC sub-theme: Clinical</b></p>
<p><b>Gunn, Laura</b></p>	<p>Associate Professor</p>	<p>As a biostatistics faculty for over 16 years, my work as a</p>

	<p>of Public Health Sciences, Biostatistics Core Director, School of Data Science</p> <p>Academies: APHI, ARCHES, ACRS</p>	<p>biostatistical expert is applied, interdisciplinary, and collaborative; and, my research interests are diverse across public health, healthcare, and medicine. I am proficient in and regularly use a wide range of analytical methods including, though not limited to, time series, repeated measures, survival analyses, propensity score matching, Bayesian/latent variable modeling, categorical analyses, multi-level modeling, nonparametric approaches, shape constrained models, count regression models, change-point problems, multivariate analyses, and meta-analyses. <b>UHEERC sub-theme: Data</b></p>
Guo, Yuqi	<p>Assistant Professor of Social Work, School of Data Sciences</p>	<p>My research and experience are in the area of cancer health disparities, access to health care, and telehealth technologies. I have expertise in studying preventive health behaviors, particularly for cancer screening. My integration of advanced technology and existing health behavior theories into intervention strategies provides an opportunity to investigate technology-driven intervention's potential to promote early detection of cancer. As a fellow of American Cancer Society Oncology Social Work Training grant, I received professional training to conduct rigorous research relevant to cancer care. I have successfully completed several projects on cancer prevention and telehealth technologies and produced multiple peer-reviewed publications from each project. Recently, I have led my research team developing novel machine learning models for cancer screening optimization that tracked the challenges introduced by the characteristics of lung cancer screening with LDCT and the screening selection problems that arise in clinical settings. Some critical directions in my research that are motivated from multiple disciplines include social work, public health, and informatics science in health data. <b>UHEERC sub-themes: Behavioral, Data</b></p>
<b>Hatcher, Schnavia</b>	<p>Professor of Social Work, School Work</p> <p>Academy: RASE (Founding Director)</p>	<p>I have been a social worker for approximately 20 years, serving as a licensed clinical practitioner, university professor, community-based researcher, and unit administrator. The majority of my scholarship has focused on issues of race, class, and social policy implications for the Black community specifically and the broader society generally. As a social and behavioral scientist, I have continued to focus on developing health promotion strategies for disenfranchised populations in social justice venues. Utilizing grant funds, my projects have examined health risk behaviors, e.g., substance abuse, suicide,</p>

		risky sexual activities, of youth and adults in jails and prisons; assessed interventions that facilitate consummate care and community integration for offenders; and researched individual, systemic, and processual characteristics that influence the cycle of detention. <b>UHEERC sub-themes: Behavioral, Clinical</b>
Howden, Reuben	Professor of Kinesiology  Laboratory: Human Physiology	Reducing HTN prevalence would have profound effects on human health and wellbeing. Unfortunately, standard HTN treatment strategies (pharmaceuticals and lifestyle modifications) have not been successful in the long-term. My work is focused on demonstrating the efficacy of a simple hand-grip exercise training program for the treatment and prevention of HTN, known as HGET. HGET is a very low cost, self-directed intervention that reliably produces clinically significant reductions in blood pressure. HGET has been endorsed by the American Heart Association and the American College of Cardiology. <b>UHEERC sub-themes: Clinical, Behavioral</b>
<b>Johnson, Tamara</b>	Adjunct Professor of Global Studies, Director, UNC Charlotte Engaged Scholarship  Academy: ARCHES	I collaborate with the ARCHES academy to implement UNC Charlotte's civic engagement strategy. My focus is designing programming that supports engaged scholarship and enriches the student experience through experiential and community-based learning, civic engagement, and international education. As adjunct faculty in the Department of Global Studies, I teach courses on globalization and global cities, as well as food justice in South Africa (where I was a Peace Corps volunteer and a Fulbright scholar). I received my doctorate in geography from UNC at Chapel Hill in 2011. <b>UHEERC sub-theme: Social</b>
Jordan, Kathy	Clinical Associate Professor of Nursing  Academy: ACRS	I have a deep passion for caring for the underserved and vulnerable populations, particularly children and adolescents. Specifically, I have done a large amount of work in the specialized field of child maltreatment, including direct patient care, education at the local and national levels, evidence-based research, and advocacy. I have also developed and led an interdisciplinary child maltreatment team in an acute care setting and have been awarded several research grants in this specialized area. <b>UHEERC sub-theme: Clinical</b>
<b>Kazemi, Donna</b>	Professor of Nursing	I have the expertise, in the assessment and prevention of substance abuse among youths, young adults and vulnerable

	Academy: ACRS	<p>populations. I have specific training in the adherence in the use of brief motivational intervention (BMI) to treat substance use problems. I laid the groundwork for the proposed research by developing an enhanced and expanded interventions informed by theoretical constructs (real-time, BMI) in conjunction with developing cutting edge technology (mHealth) to prevent substance abuse among vulnerable populations. My most recent research with current BMI program participants supports the value of mobile application to enhancing the appeal and reach of the BMI intervention to college students.</p> <p><b>UHEERC sub-themes: Behavioral, Data</b></p>
Lee, Othelia	Professor of Social Work	<p>My professional experience with people with disabilities and older adults fostered my research interest in exploring how people cope with difficult life events and how they use personal and social resources to enhance their health and well-being. My early publications focused on exploring health promotional factors for older adults with sensory impairments. More recently, I am also designing a pilot study to test the efficacy of socially-assisted robots for older adults with cognitive impairment.</p> <p><b>UHEERC sub-themes: Behavioral, Data</b></p>
<b>Lewis, Chance</b>	<p>Distinguished Professor, College of Education</p> <p>Director, Urban Education Collaborative</p> <p>Academy: ARCHES</p>	<p>I have worked extensively to build capacity for schools in urban educational environments to reach their full potential by training educators to be specifically prepared for these unique schooling contexts. I have developed innovative models for males of color teacher recruitment and have become one of the leading voices in urban education, with funding from the U.S. Department of Education, National Science Foundation, Spencer Foundation and various state and local government agencies to improve access, equity and achievement in urban schools. In my current role, I am the Founding Director (since 2011) of The Urban Education Collaborative at UNC Charlotte which is publishing the next generation of research on what works in urban schools. I am presently exploring potential partnership opportunities for linking the Urban Education Collaborative to the UCITY Family Zone, through the activities and programs of the Academy for Research on Community Health, Engagement, and Services (ARCHES).</p> <p><b>UHEERC sub-themes: Social, Behavioral</b></p>
<b>McCarter,</b>	Associate Professor	My focus and specialty is Forensic Social Work with

<p><b>Susan</b></p>	<p>of Social Work  Academies: RASE, ARCHES</p>	<p>adolescents, specifically focused on race/ethnicity and human services involvement, juvenile justice, child welfare, education, and health. My research and practice are in forensic social work with adolescents who receive human services. My work has strengthened the social work profession's awareness of and commitment to addressing racial and ethnic disparities in juvenile justice - most notably by my research (17 peer-reviewed publications, 14 book chapters, 16 technical reports, 38 peer-reviewed presentations, 83 invited presentations/keynotes, and over \$250K in research funding including selection as a Truth, Racial Healing and Transformation Campus Center by the AAC&amp;U), teaching (research, diversity, forensic social work), and service related to national leadership in racial equity, significant community engagement, and statewide and key national appointments and policymaking roles to improve outcomes for justice-involved youth and their families. <b>UHEERC sub-themes: Justice, Policy, Social, Data</b></p>
<p><b>Mennicke, Annelise</b></p>	<p>Assistant Professor of Social Work</p>	<p>My research focuses on reducing risky behaviors among college students by empowering bystanders to act when they witness concerning interpersonal violence or problematic alcohol use. The ultimate goal is to reduce the prevalence of binge drinking and IPV so that students can be healthier and more successful academically. I have a range of experiences working with health [promotion activities on college campuses. As a Co-PI on a Rape Prevention Education grant at Florida State University, I worked closely with multiple campus partners to adopt, implement, and evaluate evidence-based prevention and intervention programs for IPV for emerging adults on a college campus. I was a fellow on a Centers for Disease Control and Prevention-funded project examining the effectiveness of bystander intervention programs on college campuses, in which I was paired with and trained by national bystander experts. <b>UHEERC sub-themes: Behavioral</b></p>
<p>Montoro-Rodriguez, Julian</p>	<p>Professor of Social Work, Sociology, Gerontology</p>	<p>My research interest is aimed to understand family caregiving across the life course with the goal of testing theoretically based interventions designed to help family caregivers to reduce stress, depression, burden and increase the quality of life of older adults and their families in North Carolina. I have been co-investigator on several community intervention projects designed to help family caregivers. Our work examines</p>

		<p>structural and cultural factors that lead to optimal adaptation for diverse older adults. In particular, we are interested in applying knowledge to improve supportive programs for Latino caregivers, by testing the impact of psycho-educational intervention programs for dementia family caregivers. I apply conceptual frameworks to develop psycho-educational programs to support caregivers across the Life Course. I am proficient in quantitative and qualitative methods and use a range of multivariate analyses and SEM models to address social and psychological determinants of health and successful aging. <b>UHEERC sub-theme: Behavioral</b></p>
<p><b>Moore-Harrison, Trudy</b></p>	<p>Assistant Clinical Professor of Kinesiology</p> <p>Laboratory: Health Risk Assessment</p>	<p>I am with the Health Risk Assessment laboratory as an Exercise Physiologist and the Director of the Health Risk Assessment Program. My research focuses on physical activity and health disparities. I have implemented and led numerous community-based and evidenced-based physical activity programs for individuals. I have recruited and collected data using various strategies and methods. I have administered numerous blood pressure, heart rate, pulse oximetry, oxygen uptake and anthropometric assessments. Additionally, I have experience in assessing cardio-respiratory fitness and examining ambulatory activity in different populations. <b>UHEERC sub-theme: Clinical</b></p>
<p>Okoro, Florence</p>	<p>Assistant Professor of Nursing</p> <p>Academy: ACRS</p>	<p>I am an expert in self-management support for African Americans with chronic illness like diabetes and cardiovascular diseases. My research is looking at improving adherence to risk reduction strategies against cardiovascular diseases through a web-based education intervention in African Americans with type 2 diabetes. <b>UHEERC sub-themes: Behavioral, Clinical</b></p>
<p>Park, Albert</p>	<p>Assistant Professor of Software and Information Systems, School of Data Science</p>	<p>My training in computer science focuses on information visualization. I have broad research experience in health informatics, with specific training and expertise in processing large amounts of consumer-generated online communication (e.g., social media content) that relates to health-related issues. I process this unstructured text via a number of different computational methods, such as natural language processing, machine learning, and visualization. I apply informatics to gain knowledge in a number of different health domains, including substance addiction (e.g., cannabis), mental health (e.g., suicide, major depression, bipolar depression, schizophrenia), public health (e.g., disease surveillance), and various types of cancers. <b>UHEERC sub-theme: Data</b></p>



Paul, Rajib	Associate Professor of Public Health Sciences, School of Data Science	I specialize in research methods and analysis, with a focus on Bayesian Methods, Biostatistics, Infectious Diseases, Maternal and Child Health, Social Epidemiology, and Spatial and Spatio-temporal Statistics. <b>UHEERC sub-theme: Data</b>
<b>Racine, Elizabeth</b>	Professor of Public Health Sciences, School of Data Science	I am a public health nutrition researcher. I study the factors that contribute to healthy eating among a variety of populations; specifically, those participating in federal food assistance programs. I also utilize food sales data to better understand food choice. <b>UHEERC sub-themes: Behavioral, Data, Policy</b>
<b>Richardson, Sonya</b>	Assistant Professor of Social Work  Academy: ARCHES	My interests include investigating and identifying risk factors and interventions aimed to eliminate suicide-related behaviors among Black adolescents, particularly in urban areas. Additionally, I seek to understand contextual factors influencing mental health outcomes and interventions to improve optimal health for diverse populations. I received doctoral education and training in curriculum and instruction with a specialization in urban education and concurrently completed a certificate in quantitative analysis. <b>UHEERC sub-theme: Behavioral</b>
<b>Robinson, Patrick</b>	Research Professor  Academy: APhi	I have the technical expertise, leadership, training, and motivation necessary to carry out successfully my roles in the UHEERC. I have a strong background and training in infectious disease, clinical trials work and in public health. My entire career has been devoted to collaborative research, including many multicentered studies and in translating hypotheses into well-designed trials to test these hypotheses. Much of my career has been devoted to HIV therapeutics, so that I have a thorough understanding of the medical and public health aspects of HIV and challenges of HIV therapeutics. <b>UHEERC sub- themes: Behavioral, Clinical</b>
<b>Rowan, Diana</b>	Professor of Social Work  Academy: RASE	Through my role as a Professor of Social Work in the College of Health and Human Services at UNC Charlotte, I am an experienced behavioral health researcher, and have been federally funded. I was the PI on a 5-year (2012-2016) project funded by a \$1, 070,000 federal grant from the Centers for Disease Control and Prevention. The grant is part of the Minority AIDS Research Initiative (MARI) which selects 8 early to mid-stage behavioral HIV/AIDS researchers every 4 years to

		<p>participate in a 5-year mentorship program with scientists at the CDC. The study is entitled, “Accessing young Black men who have sex with men and young Black transwomen who have sex with men for HIV prevention through social networking. Because of the intensive mentoring I received through the CDC MARI program, I serve as a research mentor in the College of Health and Human Services at UNC Charlotte. In the CDC MARI study described above, as PI I successfully recruited and retained a CAB composed of 10 members of the focus community of young Black MSM and transwomen in the region. Additionally, my research team worked with 10 stakeholders in the region, to include personnel from the health department, researchers from Johnson C. Smith University (neighboring HBCU in Charlotte, N.C.), and staff from local AIDS service organizations. <b>UHEERC sub-themes: Behavioral, Justice</b></p>
<p><b>Scott, Victoria</b></p>	<p>Assistant Professor of Psychological Sciences</p> <p>Academy: APhi</p>	<p>I am an applied, interdisciplinary social scientist with background and formal training in community psychology, clinical psychology, and business administration. My research focuses on advancing the health and well-being of individuals and their communities through systems-level (organizational and community). Spanning three interconnected domains pertaining to the process, partnerships, and support involved in systems-level improvement, I study and develop tools and methods that help stakeholders successfully and sustainably implement multifaceted interventions in complex settings. Over the last five years, I have worked with a host of interdisciplinary scholars and clinical professionals on 10 research studies (serving as PI/Co-PI on seven studies). This has included leading (PI) the evaluation of a local place-based initiative to increase economic mobility through multi-sector partnerships. The impact of my contributions was recognized by the Society for Community Research and Action (SCRA) through the 2015 <i>Early Career Award</i> and the 2015 <i>Don Klein Publications Award</i>. In 2017, our evaluation-research team was honored with the <i>American Evaluation Association Outstanding Evaluation Award</i> for our evaluation of a national health capacity-building initiative funded by the Robert Wood Johnson Foundation and led by the Institute for Healthcare Improvement. <b>UHEERC sub-theme: Behavioral</b></p>
<p><b>Sawhney,</b></p>	<p>Associate Professor</p>	<p>Research interests primarily focus on reducing disease burden</p>

<p><b>Monika</b></p>	<p>of Public Sciences  Academies: APHI, ARCHES</p>	<p>from Neglected Tropical Diseases and its association with non-communicable diseases and its interaction with communicable diseases more so across low- and low-middle income countries. Dr. Sawhney also worked as a consultant for UNICEF, WHO, and John Snow Inc. in program implementation and evaluation projects. Working in Ethiopia with WHO and CDC, she managed the measles immunization campaign, coordinated POLIO surveillance assignments, and also worked with the ministry to help strengthen their health system by focusing on designing and implementing training programs for their health staff working at different levels. <b>UHEERC sub-themes: Behavioral, Social, Data</b></p>
<p><b>Sell, Susan</b></p>	<p>Professor of Bioinformatics and Genomics, CHHS Associate Dean for Research and Graduate Studies  Academies: ACRS, APHI, ARCHES, RASE</p>	<p>I am an NIH-funded diabetes and obesity researcher with 20+ years of senior-level administrative experience. My research interests focus on the social, epigenomic and genomic determinants of health and their interactions. As the CHHS Associate Dean for Research and Graduate Studies (ADRGs), I have administrative oversight responsibility of UHEERC. With input from a 6-member, CHHS Research Council, and the four academy directors, I guide research and education support while facilitating synergies and relationship building. UHEERC members train doctoral scholars in six interdisciplinary doctoral programs, often involving co-supervision (our UNC Charlotte Ignite planning grant for federal doctoral training support is pending). <b>UHEERC sub-theme: Data</b></p>
<p><b>Suclupe, Roger</b></p>	<p>Clinical Assistant Professor of Social Work  Academy: ARCHES</p>	<p>My research areas of interest include the intersection of Latinx communities and health/mental wellness, Latinx communities and access to services, community based participatory research, grief and loss, child/adolescent/adult mental wellness, cultural awareness and inclusion in social work practice, creating and increasing social capital through social mobility, and creating healthy and thriving communities. My expertise in the clinical field includes working individuals who have experienced complex trauma (physical abuse, sexual abuse and neglect), families who have adopted, vulnerable populations in the school system, Latinx communities, immigration policy, sports as a tool for health and mental wellness, children and families involved in higher level of care (psychiatric residential treatment), grief groups (children, adolescents and parents) and statewide clinical program marketing. <b>UHEERC sub-themes: Behavioral, Clinical</b></p>

<p>Thill, Jean-Claude</p>	<p>Distinguished Professor of Public Policy, School of Data Science  Academy: APHI</p>	<p>My expertise is spatial planning, geography, sensitized communities on the importance of the spatial perspective, and the interconnectedness of the socio-economic physical realms in urban environments and their surroundings. I have over 30 years of research experience in evidence-based social sciences, which has involved collaborations with multiple scientists from various backgrounds in social sciences, natural sciences, health sciences, information sciences, and engineering. My graduate training is in geography and spatial planning, which has provided me with the expertise and training necessary to successfully carry out various interdisciplinary research projects such as this one. My research is evidence- and data-based, incorporating computer-based technologies, statistical and simulation modeling where warranted by the nature of the research problem. This research has led to over 150 publications in international and peer-reviewed periodicals as well as in books. I have mentored over 28 doctoral students (20 have graduated so far), dozens of masters students, as well as a number of foreign visiting scholars (presently 2). <b>UHEERC sub-themes: Data, Policy</b></p>
<p><b>Thomas, Lori</b></p>	<p>Associate Professor of Social Work, Urban Institute, Research and Faculty Engagement; Institute for Social Capital, Executive Director</p>	<p>I am a macro social work scholar focused programmatic and systemic responses to homelessness and housing instability across the life course. My research is grounded in over 15 years of practice experience in affordable housing, community development, and homelessness, including developing the first housing first permanent supportive housing program in Virginia. I use mixed methods including using linked administrative data and qualitative data to understand stakeholder experiences and homeless service system dynamics. I also currently direct the Institute for Social Capital, a university-based nonprofit organization, that integrates administrative data for community and university research purposes. <b>UHEERC sub-themes: Data, Social</b></p>
<p>Thompson, Michael</p>	<p>Associate Professor of Public Health Sciences, School of Data Science, APHI Acting Director  Academy: APHI</p>	<p>I am the Acting Director of the Academy for Population Health Innovation (APHI), a partnership between the University of North Carolina at Charlotte and Mecklenburg County Public Health. I have over 20 years' experience in actively developing, leading, and seeing accredited public health and health administration programs domestically and internationally as well as conducting applied research and evaluation projects that improve population health and advance the professional</p>

		<p>practice of public health. My professional practice focuses on competency-based workforce development and assessment as well as community-driven programmatic interventions utilizing a systems perspective. Past efforts include supporting public health and health administration program development in Armenia, Saudi Arabia, Pakistan, and Lebanon, among other locations. My research interests span competency-based education; accreditation; community assessment; program evaluation; chronic disease; health disparities; community-based research; translational research; international/global health; health services research; survey design; and quality of care. <b>UHEERC sub-themes: Data, Policy</b></p>
<p>Troutman-Jordan, Meredith</p>	<p>Associate Professor of Nursing  Academy: ACRS</p>	<p>My research has included quasi-experimental investigation of psychoeducational groups to enhance creativity in older adults in order to promote successful aging; focus group research to explore meaning of successful aging in various racial groups; investigation of health outcomes of the Eat Better, Move More nutrition and physical activity intervention; and mixed methods research to understand successful aging, wellbeing, and serotranscendence in older adults with chronic health conditions. I have experience with community-based research, and facilitating psychoeducational and exercise groups with older adults. I have conducted multiple studies in community sites, including senior centers and assisted living facilities, as well as facilitated student community service and clinical experiences at senior centers and assisted living facilities. <b>UHEERC sub-theme: Clinical</b></p>
<p><b>Tudor-Locke, Catrine</b></p>	<p>CHHS Dean and Professor of Kinesiology  Laboratory: Walking Behavior</p>	<p>I am a walking behavior researcher and a recognized world leader in objective physical activity assessment and promotion, specifically focused accelerometer-determined or pedometer. With funding from many private foundations and public agencies (including current funding from NIH NIA), I have established an internationally recognized research program on the promotion of walking throughout the lifespan and the development of objective measures of physical activity using wearable technology. <b>UHEERC sub-theme: Behavioral</b></p>
<p>Turner, Mike</p>	<p>Associate Professor of Kinesiology  Laboratory: Systems Physiology</p>	<p>I study the genetic influence on the age-related decline in physical activity and how these declines in exercise impact cardiac structure/function over the past 20 years. The age-related physical activity and cardiac changes observed in humans is known to participate in the development of</p>

		<p>congestive heart failure, myocardial infarction, and a host of additional cardiovascular complications. The reduction in cardiac function ultimately reduces one's functional capacity to perform daily activities of living. <b>UHEERC sub-themes: Behavioral, Clinical, Data</b></p>
Turner, Tricia	<p>Associate Professor of Kinesiology Laboratories: Biodynamics; Systems Physiology</p>	<p>I have been conducting research primarily in the area of ankle sprains, chronic ankle instability and the long term consequences of joint injury including osteoarthritis development. This research has been done in both human and animal models, with acute ankle injury, chronic ankle injury and ankle osteoarthritis. <b>UHEERC sub-themes: Behavioral, Clinical</b></p>
<b>Wallace, Lauren</b>	<p>Assistant Professor of Public Health Sciences  Academy: APhi</p>	<p>My research has largely focused on the impact of public policies and social determinants of health on health-related outcomes and health disparities, including racial, ethnic, and socioeconomic disparities in infant mortality, access to nutrition resources, and rates of chronic diseases. In order to identify barriers and facilitators to implementing the Special Nutrition Assistance Program for Women, Infant, and Children (WIC) federal nutrition assistance program in a discount variety store chain, and increase access to healthy food for low income families, a qualitative study was carried out in collaboration with a discount variety store chain to examine the impact of WIC implementation on healthy food sales (funded by the Robert Wood Johnson Foundation Policy 4 Action program (RWJ P4A)). Trained as an interdisciplinary researcher, and in my role as an assistant professor in Public Health Sciences, I have a particular interest in supporting research teams that investigate health equity challenges. Academic interests include health disparities, health equity, and social justice. <b>UHEERC sub-themes: Social, Behavioral, Policy, Justice, Action Data</b></p>
Zarwell, Meagan	<p>Assistant Professor of Public Health Sciences  Academy: APhi</p>	<p>I have expertise in applied medical anthropology and public health research. I actively collaborate with researchers and practitioners in Mecklenburg County (MeckCo), one of the prioritized geographic areas for the federal initiative to End the HIV Epidemic (EHE) in the US by 2030. My research indicates that network strategies may be critical to reduce HIV disparities among gender and sexual minority populations. My research focuses on social determinants of health, clinical care practices, and lifestyles and behaviors that influence HIV outcomes for</p>

		gender and sexual minority individuals. <b>UHEERC sub-themes: Behavioral, Justice, Social</b>
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