EPA-NIMHD Centers of Excellence on Environment and Health Disparities Research

Centers and Principal Investigators Short Profiles

Working to Solve Environmental Health Disparities

Program Staff

US EPA

Devon Payne-Sturges, DrPH
National Center for Environmental Research, Office of Research and Development
Telephone: (703) 347-8055
payne-sturges.devon@epa.gov

Rich Callan, MPH
National Center for Environmental Research, Office of Research and Development
Telephone: (703) 347-8051
callan.richard@epa.gov

NIH

Nishadi Rajapakse, PhD, MHS
Division of Extramural Training and Science, NIMHD
Telephone: 301-496-4338
chandima.rajapakse@nih.gov

Irene Dankwa-Mullan, MD, MPH
Division of Scientific Programs, NIMHD
Telephone: 301-594-8758
dankwamullani@nih.gov

For More Information

EPA Environment, Health and Society
www.epa.gov/ncer/ehs
EPA Health Research
www.epa.gov/research/healthscience

NIMHD
www.nimhd.nih.gov

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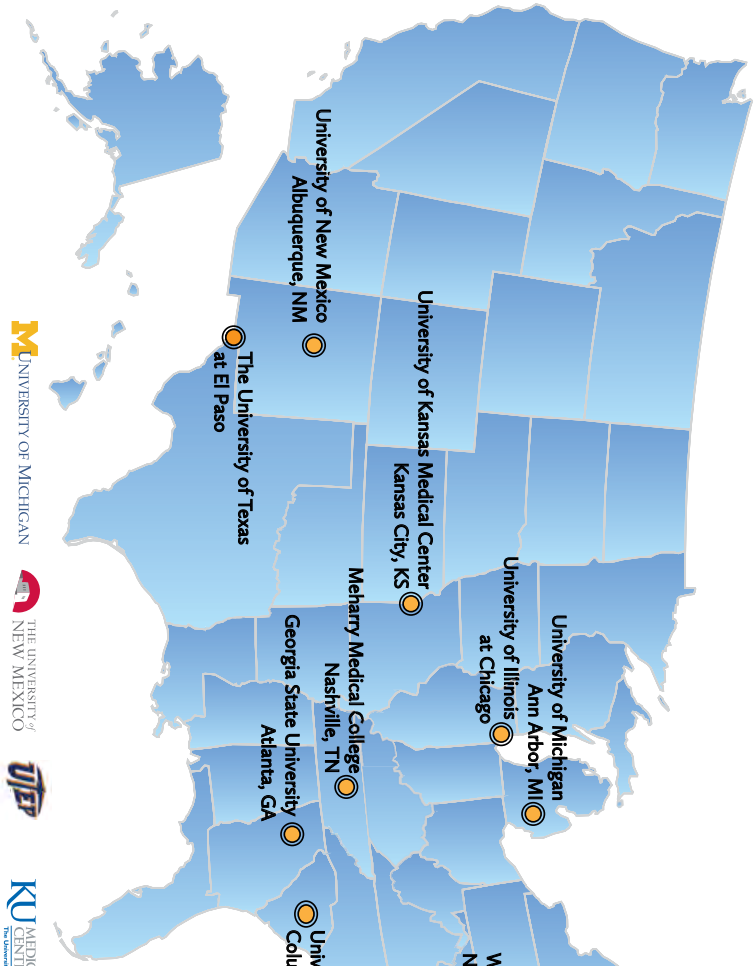
EPA-NIMHD Centers of Excellence on Environment and Health Disparities Research



EPA United States Environmental Protection Agency

NIMHD National Institute on Minority Health and Health Disparities

COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

Columbia University

Environmental Health Disparities in the Northern Manhattan Center of Excellence in Minority Health and Health Disparities

Research Questions Include

- What are the respective contributions of Health Disparity Environmental Factors (HDEF) in health outcomes such as cardiovascular conditions and mental health?
- How do HDEFs at the national, state, city, neighborhood and individual levels modify responses to community-based interventions?

José Luchsinger

Environmental Focus	Multilevel social and environmental risk and protective factors
Local Community	New York City

Abstract

This Center is establishing a Contextual Health Disparities Core in the Northern Manhattan Center of Excellence in Minority Health and Health Disparities at Columbia University, in partnership with the Center for Study of Social Inequalities and Health. Research focuses on the multilevel determinants of cardiovascular conditions (diabetes, hypertension) and mental health (cognition, depression) in urban minorities. Social and environmental factors interact with individual-level factors to determine health outcomes, and we are collecting measures of Health Disparity Environmental Factors (HDEF) in 4 ongoing studies, including a prospective cohort study and 3 RCTs. We expect to obtain information about how HDEF modify the association between cardiovascular and mental health outcomes, to design and implement community-based interventions.

Dr. José Luchsinger is Associate Professor of Medicine and Epidemiology at New York Presbyterian Hospital/Columbia University Medical Center.

Weill Cornell Medical College

Weill Cornell Medical College

Environmental Health Disparities Core

Research Questions Include

- How can we increase community awareness of priority environmental health issues?
- How can we strengthen community capacity to address environmental health disparities?
- How can we increase community trust and participation in environmental health research?

Carla Boutin-Foster

Environmental Focus	Community-led culturally tailored environmental health outreach
Local Community	New York City

Abstract

The Center of Excellence in Disparities Research and Community Engagement (CEDREC) Environmental Health Disparities Research Core is a community-academic collaboration to advance and accelerate the development of trans-disciplinary environmental health disparities research and strengthen community capacity to address environmental health issues through education, research and policy. The Environmental Health Core brings together a multidisciplinary team of community and academic experts, and is guided by both a city-wide Community Steering Committee and a multi-disciplinary, inter-university Scientific Steering Committee. The Core will: develop a set of community-led culturally tailored EH outreach initiatives; increase community awareness of priority environmental health issues; strengthen community capacity to address EH disparities; and increase community trust and participation in CEDREC EHDR Core research.

Dr. Carla Boutin-Foster is Associate Professor of Medicine at Weill Cornell. Her research activities focus on identifying the psychological and social determinants of health outcomes in cardiovascular disease and the social epidemiology of health disparities in cardiovascular disease.

University of Texas

Environmental Health Disparities Research

Research Questions Include

- What are the individual- and neighborhood-level contributions to disparities in children's lung health?
- How do patient characteristics modify the relationship between air pollution and respiratory and cardiovascular hospitalizations?

Elias Provencio-Vasquez

Environmental Focus	Air pollution, respiratory and cardiovascular health outcomes
Local Community	El Paso, Texas

Abstract

This Core is envisioned to: advance knowledge of interrelationships between environmental and social determinants of health disparities, particularly within heterogeneous Hispanic populations, through a commitment to transdisciplinary research; and utilize this knowledge to influence policy change, public health practice and community-based interventions to reduce disparities.

There are three Specific Aims: (1) Conduct research to evaluate complex interactions between social, built and natural environmental systems, while clarifying which aspects of Mexican-origin/Hispanic status are most important, as determinants of environmental health disparities; (2) Build research and training capacities to examine and address environmental health disparities; (3) Facilitate the translation of environmental health disparities research into policy, public health practice, and community-based engagement.

Dr. Elias Provencio-Vasquez is dean of the School of Nursing at The University of Texas at El Paso. He is a pioneer in creating innovative nursing approaches for mothers with substance use disorders and their children.

Meharry Medical College

Environmental Context of Health Disparities

Research Questions Include

- How can we grow our understanding of relationships between the environment and health disparities?
- How can we understand the geographic, environmental and temporal dimensions of health disparities at a county and sub-county level?

Paul Juarez

Environmental Focus	Built, social and policy environments
Local Community	Alabama, Arkansas, Georgia, Indiana, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia

Abstract

The overall goal of this project is to expand the capacity of health services researchers and other biomedical scientists to use a trans-disciplinary systems approach to study the environmental context of health disparities. To achieve this goal, we are expanding our current research center to: (1) incorporate data on the physical, built, social and policy environments that will supplement currently funded health disparities research; (2) use High Throughput Analyses (HTA) and geo/spatial and temporal analyses to examine the relationships between health disparities and environmental factors; and (3) provide training in public participatory geographic information systems (PPGIS) and interactive mapping that supports community participation in the research process and in the translation, implementation and evaluation of targeted public health interventions.

Dr. Paul Juarez is Professor of Preventive Medicine at the University of Tennessee Health Science Center and was previously Professor and Vice Chair, Department of Family and Community Medicine, Meharry Medical College.

Georgia State University

Environmental Health Disparities Core

Michael Eriksen

Research Questions Include

- What is the syndemic burden on populations experiencing health disparities in urban Atlanta? (Syndemic refers to the aggregation and interaction of two or more diseases in a population which tend to develop under conditions of health disparity.)
- How can we strengthen and expand research and mitigation activities focused on the community's environmental health priorities?

Environmental Focus	Air and water pollutants in urban, natural, physical and built environments
Local Community	Atlanta, Georgia

Abstract

The focus of this Center is understanding the syndemic burden on populations experiencing health disparities in urban Atlanta and integrating environmental health disparities and environmental injustices into our understanding of the syndemic burden. Objectives include: (1) Develop a coalition of organizations, agencies and institutions focused on environmental health, environmental justice and disparities in the Atlanta area. (2) Work to build capacity to evaluate and mitigate environmental health risks specific to urban natural, physical, and built environments. (3) Develop a comprehensive analysis of syndemic effects and burdens within current Center projects. (4) Strengthen and expand research and mitigation activities focused on the environmental health priorities of our community partners.

Dr. Michael Eriksen is Dean of the Institute of Public Health and Director of the Partnership for Urban Health Research at Georgia State University.

University of South Carolina

Analysis and Action on the Environmental Determinants of Health and Health Disparities

Saundra Glover

Research Questions Include

- How can we support descriptive, exploratory, hypothesis generating, and hypothesis testing investigations that have the potential to inform the development, implementation, and evaluation of targeted interventions, programs and policies to protect the public's health from environmental risks?

Environmental Focus	Built, social and policy environments
Local Community	Eleven southeastern states

Abstract

The Environmental Health Disparities Core (EHDC) focuses on: (1) the six areas of health disparities that contribute disproportionately to premature death and morbidity found among poor and racial/ethnic minorities (cancer, cardio/metabolic disease, HIV/AIDS, infant mortality/MCH, intentional/unintentional injury, and mental health/substance abuse) in the eleven southeastern states (Alabama, Arkansas, Georgia, Indiana, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia). This project uses a trans-disciplinary/ecological or systems approach that moves beyond the EPHT exposure–disease paradigm to one that includes the effects of the built, social and policy environments. An environmental health disparities relational data base and web portal is being developed that integrates data on health outcomes, the natural and physical environment, built environment social environment with interactive, user-friendly, data analysis tools (GIS).

Dr. Saundra Glover is Professor, Associate Dean for Health Disparities and Social Justice and Associate Director, SC Rural Health Research Center and Director, Institute for Partnerships to Eliminate Health Disparities at the University of South Carolina.

THE UNIVERSITY of NEW MEXICO

University of New Mexico

New Mexico Center for Advancement of Research, Engagement, & Science on Health Disparities

Robert Williams

Research Questions Include

- How can we reduce health disparities among Hispanics and Native Americans?
- What interventions and solutions can we discover to socioeconomic, natural, chemical and built environment issues contributing to health disparities among Native American and Hispanic Communities in New Mexico?

Environmental Focus	Socioeconomic issues, the natural, chemical and built environment
Local Community	Native American and Hispanic Communities in New Mexico

Abstract

The scope of NM CARES HD (New Mexico Center for Advancement of Research, Engagement, & Science on Health Disparities) Center has been expanded to inform research, health care and policy decisions that reduce EH disparities in New Mexico (NM) and advance EH equity knowledge and interventions that are not only scientifically-based, but also culturally-centered and community-partnered. Research is focused on reducing health disparities among two of the most underserved populations in the United States: Hispanics and Native Americans. The Core is advancing the scientific base of knowledge about interventions and solutions to socioeconomic, natural, chemical, and built environment issues contributing to the health disparities faced by Native Americans and Hispanic communities in NM and is working to ensure these results are used to inform policy, clinical, social and behavioral interventions to reduce disparities.

Dr. Robert Williams is the Principal Investigator/Director of the New Mexico Center for the Advancement of Research, Engagement & Science on Health Disparities.

UIC UNIVERSITY OF ILLINOIS AT CHICAGO

University of Illinois at Chicago

Improving Environmental Health Disparities: A Fundamental Cause Approach

Elizabeth Calhoun

Research Questions Include

- What are the potential mechanisms to explain racial differences in exposure to environmental hazards, access to care and in health outcomes?
- What are the effects of racial residential segregation on exposure to environmental hazards and other health-related factors?
- What are the trends in distribution of environmental and health disparities over time?

Environmental Focus	Environmental hazards, physical and social environment
Local Community	Cook County, Illinois

Abstract

This Center Core is exploring mechanisms explaining racial differences in exposure to environmental hazards, in access to care, and in health outcomes. Researchers are compiling neighborhood-level data on environmental hazards and access to care in Cook County and plan to link them to other social determinants data using 3 approaches examining: (1) Effects of racial residential segregation on physical and social environment (presence of environmental hazards and access to health care facilities); (2) Incidence and late-stage diagnosis of breast, cervical, and lung cancer in relation to environmental risk factors; (3) Changes in environmental conditions on health outcomes and the effects of changes in racial composition and socioeconomic status between 2000 and 2010 (relocation of racial/ethnic minorities who moved from inner-city Chicago to suburban Cook County).

Dr. Elizabeth Calhoun is Professor of Health Policy and Administration in the School of Public Health at the University of Illinois at Chicago.

University of Kansas Medical Center

Central Plains Center for American Indian Community Health (CAICH)

Christine Daley

Research Questions Include

- What is the state of housing conditions in the Native American community?
- How can community members be linked to programs that will help them solve the problems?
- What is the extent of American Indian exposure to environmental tobacco smoke and how can we address this health concern?

Environmental Focus	Housing problems, environmental tobacco smoke
Local Community	Native Americans in the Central Plains

Abstract

American Indians (AI) suffer some of the greatest health disparities in the U.S. Many conditions, including asthma, obesity and diabetes, are prevalent among this population and are influenced by the environment. In addition, AI have high rates of severe physical housing problems and the highest rates of smoking of any ethnic group in the U.S. This Center is using community-based participatory research (CBPR) methods to understand how to address health disparities faced by this population. The Environmental Health Subcore is addressing the critical issue of poor housing conditions in the AI community, identifying the problems and linking community members to programs to help alleviate the problems. We are also providing significant environmental health education. We are looking to understand AI exposure to environmental tobacco smoke and how we can address this important health concern.

Dr. Christine Daley is Associate Professor in the Department of Family Medicine at the University of Kansas Medical Center in Kansas City and Director of the center for American Indian Community Health at KUMC.

University of Michigan

Center for Integrative Approaches to Health Disparities, Environment Assessment Core

Ana Diez-Roux

Research Questions Include

- How do neighborhood race/ethnicity and socioeconomic composition affect cardiovascular disease-related outcomes?
- To what extent can we improve measures of specific neighborhood features such as access to healthy foods, recreational facilities and built environment data and draw causal links to cardiovascular disease?

Environmental Focus	Food access, built environment
Local Community	Ann Arbor, Michigan

Abstract

The goal of the Center for Integrative Approaches to Health Disparities (CIAHD) at the University of Michigan is to investigate the multilevel determinants of health disparities in cardiovascular risk by integrating social and biologic factors. We have added an environmental assessment core in order to enhance the environmental measures available in the Jackson Heart Study (JHS) and the Multi-Ethnic Study of Atherosclerosis (MESA). The specific aims are: (1) To enhance the neighborhood-level data available in MESA by adding novel data on food price and various built environment measures that can be better used to study the impact of neighborhoods on changes cardiovascular risk; (2) To create comparable time-varying measures of access to healthy foods, recreational facilities and other price and built environment data for JHS; (3) To promote analyses of neighborhood effects on cardiovascular risk that take advantage of the new environmental data in MESA and JHS.

Dr. Ana Diez-Roux is Professor and Chair of the Department of Epidemiology at the University of Michigan School of Public Health and Director of the Center for Integrative Approaches to Health Disparities.