

SMART SURFACES

GEORGIA PUBLIC HEALTH ASSOCIATION

PROJECT OVERVIEW

The Georgia Public Health Association's (GPHA) Smart Surfaces Coalition work addresses extreme heat as a critical public health and equity issue in metro Atlanta by combining community-engaged research, policy advocacy, and cross-sector partnerships. Through focus groups in heat-vulnerable communities, GPHA elevated resident experiences with energy insecurity and heat-related health risks, while also advancing solutions such as cool roofs and other smart surfaces. This work informed local policy action, strengthened community capacity, and helped position extreme heat and energy burden as urgent priorities for public health practice and climate resilience.

HIGHLIGHTS AND ACCOMPLISHMENTS

In partnership with Mercer University's College of Health Professions and local faith-based organizations, GPHA supported a mixed-methods study to assess how climate change impacts health, household energy security, and community resilience in heat-vulnerable neighborhoods. The study included eight focus groups and surveys with 62 participants from metro Atlanta churches, centering the lived experiences of residents most affected by extreme heat and rising energy costs

Findings from the focus groups revealed that nearly 60% of participants experienced at least one form of energy insecurity, including economic, physical, or behavioral challenges. Participants described rationing air conditioner use during the summer due to high utility costs, using ovens or stoves for heat in winter, and living in homes that were uncomfortably hot or cold during extreme weather events. Many households included older adults and individuals with chronic conditions, particularly cardiovascular, respiratory, and metabolic illnesses, making them especially vulnerable to heat-related health risks

Community members demonstrated clear awareness of the health impacts of extreme heat, citing risks such as heat exhaustion, dehydration, worsened asthma, and complications related to hypertension. Participants also emphasized that affordability constraints often forced difficult trade-offs between comfort, health, and utility costs. Importantly, focus group discussions highlighted strong interest in smart surface solutions, including cool roofs and solar panels, as strategies to reduce indoor heat, lower energy bills, and improve long-term resilience. Participants consistently called for better communication, trusted messengers (such as churches), and community-based education to improve access to energy assistance and climate resources

SMART SURFACE POLICIES

In parallel with this community-engaged research, GPHA played a pivotal role in advancing the City of Atlanta's new Cool Roof Ordinance, testifying before the Atlanta Utilities Committee and Human Services Committee to support amendments to the city's building code establishing higher roofing reflectance standards. This ordinance is projected to reduce peak summer temperatures by an average of 2.4°F citywide and by more than 6°F in some neighborhoods, while saving an estimated \$310 million in energy costs—directly addressing many of the challenges raised by focus group participants.

GPHA continues to build momentum through partnerships with institutions such as Allen Temple AME Church, Georgia Clinicians for Climate Action, and Morehouse School of Medicine's Center for Excellence on Climate and Environmental Health. Through research dissemination, policy advocacy, and education, GPHA is elevating extreme heat and energy insecurity as urgent public health issues and laying the groundwork for equitable, community-informed climate solutions across Georgia.