
Local Public Health Departments at the Intersection of Climate Change, Health Equity, and Public Health Laws and Policies

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Abstract: Public health laws and policies are uniquely able to mitigate the adverse and inequitable health impacts of climate change. This article summarizes some key considerations in developing such laws and policies and a variety of approaches local public health departments are using to increase climate resilience and health equity.

Climate change impacts almost every sector of public health, ranging from geographic expansion of mosquito and vector-borne illness to mental health, chronic disease, and more. Federal, state, and local public health laws and policies can help mitigate inequitable public health harms resulting from climate change and local public health strategies can help protect health in the face of climate change.

Public Health Law and Policy in the Context of Climate Change

Climate crisis equals public health crisis. But what role does public health law and policy have in abating the

health risks of climate change? Numerous laws and policies can impact health outcomes in the face of climate change, ranging from emergency preparedness laws to worker protections and housing policy. The climate crisis is an opportunity to retool those laws and policies to focus on health equity and community co-designed solutions tailored to local resilience goals and conditions needed to withstand climate change.

Climate resilience laws and policies that fail to intentionally address equity and meaningful community collaboration are more difficult to implement, less effective, and can exacerbate inequities and cause further harm.¹ When considering laws and policies to address the health impacts of climate change, communities should also consider laws — like community benefits ordinances and tenant protections — that limit negative outcomes, such as displacement and gentrification.

While some of these laws and policies may be cross-sector, a public health law lens can help ensure community perspectives drive climate resilience strategies and maximize health equity benefits.²

Local Public Health Departments and Programs Respond to Climate Change

Public health departments have varying capacity to address climate change through either climate specific programs or programmatic areas affected by climate

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change, like emergency preparedness. The following examples illustrate how public health departments and a community-based program use public health practices, including laws and policies, to mitigate harm.

Harris County Public Health

Harris County, Texas is the third most populous county in the United States with more than 4.7 million people spread over 1,778 square miles. It is also one of the most diverse counties in the country — 44% of residents are Hispanic/Latino, 20% are African American alone, 27% are white alone, and 7% are Asian American alone. According to FEMA's National Risk Index, Harris County experiences one of the highest sea level rises and the second highest risk for natural hazards related to climate change in the nation, making it particularly at risk for severe flooding.³

The mission of Harris County Public Health (HCPH) is to protect health, prevent disease and injury, and promote health and well-being for everyone in Harris County by advancing equity, building partnerships, and establishing culturally responsive systems. HCPH is dedicated to addressing the public health impacts resulting from climate change, particularly for those most vulnerable. For example, HCPH has provided syndromic surveillance data on heat illnesses for the National Weather Service to test thresholds for issuing Heat Advisories and Excessive Heat Warnings. Additionally, HCPH has started an internal cross-sector collaborative climate workgroup. To kick off this workgroup, HCPH utilized CDC's Building Resilience Against Climate Effects (BRACE) framework to develop heat and air quality vulnerability maps for residents to identify communities most at risk based on geographic risk of exposure, sensitivity, and adaptive capacity to heat and air pollution. The goal of the workgroup is to address the vulnerabilities the county's communities experience and enhance community resilience.

The vulnerabilities residents experience are not uniformly distributed. Particularly because of the history of redlining, low-income, African American, and Hispanic communities are more at risk from climate change.⁴ It is predicted that air pollution will worsen because of climate change and, with Harris County being home to one of the largest industrial complexes in the world, air pollution is a concern.⁵ Regarding policies, the lack of zoning in Houston, Harris County is an environmental justice issue that results in industrial encroachment on communities, making them vulnerable to health impacts from excessive air pollution coming from facilities such as concrete batch

and crushing plants. Recently, The Texas Regulatory Consistency Act (Texas HB 2127), which expansively preempts many local regulations that impact businesses and employees, became law, and may put public health at risk by limiting local control over concrete batch plant permitting and heat illness mitigation such as water breaks for outdoor workers. The City of Houston, joined by the cities of San Antonio and El Paso, challenged the law on a number of constitutional grounds, alleging that the law is unconstitutionally vague, contrary to the constitutional powers of home rule cities to enact their own laws and ordinances, and an unconstitutional repeal of constitutional home rule.⁶ The district court agreed, declaring that the Texas Regulatory Consistency Act is unconstitutional.⁷ The State of Texas has appealed that ruling and issued a statement that the appeal stays the effect of the district court ruling.⁸ Public health concerns should be examined while considering the appeal and implementation of this law.

Tacoma-Pierce County Health Department

“It's not rocket science, it was political science that created these vulnerable communities, and it's going to take science and resources and policy to correct that.”⁹

– Robert Bullard

Physical and human geography shape the way that we experience global climate shifts, demanding tailored responses at the local level. Our nation's shared legacies of spatial and racial oppression, disinvestment, and environmental abuse have created a sticky path dependency: pervasive inequities transect with increasing climate events, resulting in cumulative exposure to vulnerable populations.¹⁰

For example, in Tacoma, Washington, neighborhoods which were intentionally segregated through the practice of redlining now have less greenspace and more paved surfaces. These “urban heat islands” can be as much as 14 degrees hotter during extreme heat events.¹¹ The Tacoma-Pierce County Health Department's research team is currently analyzing the relationship between emergency room visits and sustained heat and humidity to inform extreme heat response.

The Communities of Focus (CoF) program strategically addresses spatial inequity. CoF are geographies where data shows health disparities across multiple indicators. Strategies are focused in four areas: increase investments in the community; establish new and strengthen existing partnerships; improve the Health Department's customer service to residents

and partners, and increase opportunities for civic engagement, a central tenet of environmental justice.

The Tacoma-Pierce County Board of Health also works to protect the community through policy. In 2016, the Board of Health passed a resolution to promote the use of Health Impact Assessments in conjunction with planning actions — such as issuing building permits for major construction or adopting long-range planning policies — under the State Environmental Policy Act (SEPA). The Board also passed a resolution directing staff to apply environmental justice and climate considerations to the screening criteria for SEPA review.

Many local jurisdictions lack the state-level legal

authority. This allows for each jurisdiction to create ordinances and laws that best serve the needs of their population.

In terms of climate change, not all the jurisdictions will be impacted equally. Those that include more vulnerable populations may find it more difficult to prepare and respond during a flooding event or have less access to green spaces to mitigate heat events. Within these parameters, FCPH is working to address climate change in meaningful and equitable ways throughout the region and relies on partnerships with both governmental agencies and non-profits to expand efforts and engage communities. For example, Franklin County recently partnered with the City of Colum-

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framework to follow a similar policy pathway. However, all government agencies have the option to apply a health equity framework¹² to hazard mitigation and response. The Federal Justice40 Initiative has created a goal that 40% of certain investments flow to vulnerable populations and overburdened communities. Agencies that align themselves with these goals will have a competitive edge in attracting federal resources to their communities and be positioned for compliance with the potential overhaul of nearly 500 federal programs.¹³

Franklin County Public Health Department

Franklin County Public Health (FCPH) serves 14 cities, 9 villages and 17 townships within Franklin County, Ohio, while Columbus Public Health serves the cities of Columbus and Worthington. As public health and governmental agencies work to address the impacts of climate change, the various projects, policies and initiatives are still typically held within jurisdictional boundaries. However, the impacts of climate change are not.

FCPH's work addressing climate change focuses on identifying inequities and engaging and empowering communities and local leaders to prepare for the changing climate and its impacts. The jurisdictions FCPH serves each have differing methods of governance, with different regulatory policies and levels of

bus on a countywide, in depth tree canopy study and report, which has recently been released. The study and report captured the entirety of the county's tree canopy and will create tailored fact sheets for each neighborhood and jurisdiction to identify areas of opportunity for tree planting.

Similarly, FCPH partnered with the City of Columbus on a National Oceanic and Atmospheric Administration (NOAA) and Climate Adaptation Planning and Analytics (CAPA) Urban Heat Island mapping study to highlight areas in the region where urban heat islands are more pronounced and negatively impact populations. In partnership with the Mid-Ohio Regional Planning Commission, FCPH is working on an EPA funded grant to study air quality throughout the region, focusing on vulnerable populations and ZIP codes, in order to determine and identify drivers and causes of air quality differences. With this data, communities and local governments can create and tailor interventions and suggested best practices specifically targeted to their jurisdiction to improve the health of both their community and the region as a whole.

While individual local health departments or governmental organizations may not have resources to tackle large scale climate projects on their own, it is imperative they partner and collaborate to work towards the good of the region as a whole. There are

almost limitless opportunities for initiatives and projects and with multitudes of organizations working in the space, there are ample chances to partner and expand the work for the greatest impact.

Los Angeles' Greener Grassroots™ Initiative

In line with the efforts of the aforementioned public health departments to address climate change through tailored local strategies, the Greener Grassroots™ Initiative in Los Angeles tackles climate-related health impacts in American Indian/Alaska Native communities, which are at disproportionately high risk for adverse health effects of climate change. Hosted by the non-profit community-based organization United American Indian Involvement, Greener Grassroots is a pilot program designed to train Community Health Workers (CHWs) in addressing this risk by leveraging a standardized curriculum development framework.

Focused on training CHWs, Greener Grassroots leverages their unique position of trust within the community, understanding of local needs through lived experience, and ability to communicate effectively with residents to carry out culturally responsive and community-driven climate resilience strategies. The program has trained and mobilized CHWs in conducting community risk assessments, mapping community assets, providing referrals and education to community members, and facilitating the change and implementation of public health policies. More specifically regarding the latter, CHWs received training in ways to utilize their deep understanding of their communities to act as advocates and representatives in policy discussions, bringing forth the specific needs and concerns of their communities to ensure that policies are tailored to address these issues effectively. CHWs were also trained in gathering essential data about climate change impacts on health from the grassroots level — data that can provide policymakers with accurate, up-to-date information to inform local laws and policies.

The Greener Grassroots initiative demonstrates CHWs' potential to enhance the successful implementation of community- and policy-driven strategies addressing climate change effects on health. The aforementioned local health department programs and others in different states present potential opportunities to incorporate CHWs in their climate change mitigation efforts — e.g., as community data collectors for heat and air quality vulnerability maps used in Harris County, Texas; supporting efforts to address spatial inequality and environmental justice in Tacoma-Pierce County, Washington; and community engagement and education efforts in Franklin County,

Ohio, to tailor climate-related interventions to specific local needs.

Conclusion

While climate change is a global problem, public health law and policy solutions can address local needs and climate threats. These strategies must respond to community needs, center community-derived goals, address health inequities, and promote climate resilience.

Notes

Massoud Agahi and Cameron Salehi were both paid for their work on the *Greener Grassroots™* initiative.

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