
Scalable, Coordinated Strategies Leveraging Community Health Workers in Addressing the Adverse and Inequitable Health Effects of Climate Change

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Abstract: Effective climate change resilience in local communities must center each community's unique challenges and essential role in developing climate resilience strategies. This article will discuss recent developments by the federal government that align with a community-centered approach, and how Community Health Workers can influence the outcomes.

Laws and policies drive many systemic public health outcomes across the social determinants of health, from access to health care, to emergency preparedness, to laws establishing procedures for public participation in government decision making. But laws and policies can bake in inequitable health outcomes if health equity and community needs are not central to their drafting. As lawmakers craft laws to mitigate the health impacts of climate change, a public health law lens can help ensure equitable policies and outcomes.

Our laws have not equally assured health for all individuals — and climate change will intensify those inequities. Structural discrimination, such as racism,

sexism, and ageism, are embedded into the political, budgetary and legal tools contributing to health outcomes.¹ For example, formerly redlined areas — identified in the 1930s–40s as undesirable for mortgage lending and insurance based partly on race — face higher flood risks and can be 12.6 degrees hotter than non-redlined neighborhoods.² This racist policy limited home ownership opportunities and resulted in disinvestment in affected neighborhoods — leading to more impervious surfaces, fewer green spaces, inadequate housing, and infrastructure more susceptible to climate change.

Climate change and health equity laws are multi-purpose tools that, if structured properly, can begin to reverse the health inequities built into our systems, mitigate climate change, and increase community resilience. For example, laws and policies can prioritize community involvement in emergency preparedness and recovery efforts or expand green infrastructure while also limiting climate displacement and gentrification.

Communities will experience the health impacts of climate change differently both throughout the nation and within a city, making community-designed climate adaptation strategies essential for climate resilience.³ At the same time, federal efforts, such as Justice40 and the Federal Plan for Equitable Long-Term Recovery and Resilience (ELTRR) are aligning to support inclusive policies addressing equity and climate

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change resilience. Local agencies can and should make themselves aware of the breadth of the Federal Justice40 Initiative. Executive Order 14008 was signed into law in January of 2021, and directs nearly 20 federal agencies to advance environmental justice in the policy-making, budgeting, and rulemaking processes. Unprecedented levels of funding are being deployed already through the Inflation Reduction Act, Bipartisan Infrastructure Law, and American Rescue Plan. Initial criteria for Justice40 programs include climate change, clean energy and energy efficiency, clean transit, affordable and sustainable housing, training and workforce development, remediation and reduction of legacy pollution, and the development of critical clean water and wastewater infrastructure. To date, 500 federal programs have made it a goal to direct 40% of resources to overburdened communities and ensure fair and meaningful involvement for communities

The pandemic experience revealed a fundamental flaw in the U.S. public health system — the very communities at the highest risk faced barriers to participation in developing and implementing policies to reduce harm within the community. Health equity could not be achieved until the most at-risk communities were included in deliberate pathways to provide culturally appropriate mechanisms of communication, data collection, and implementation and evaluation of policies and interventions. Essential to achieving health equity, CHWs were able to break barriers and foster pathways to participation.

The lessons learned have informed the ELTRR — a “multi-sector approach ... pairing coordinated federal action with non-government actions ... [to address] the deep disparities in health, well-being, and economic opportunity that were laid bare during the COVID-19 pandemic.”⁶ The ELTRR recognizes the

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who have been traditionally excluded in decision-making processes.⁴

In this article we present a community-centered and coordinated approach to addressing adverse health effects of climate change, leveraging the lived experience of Community Health Workers (CHWs) as liaisons in affected populations who interface with and help integrate local efforts within a unified system. Various components of this framework are discussed separately, highlighting the role of CHWs — an essential workforce of frontline public health workers who utilize trust and knowledge of the community to bridge the public health and social services systems with at-risk members of their communities.⁵

A Unified Framework for Climate Change Risk Mitigation and Resilience

The COVID-19 pandemic required urgent implementation of mitigation policies that had the best likelihood of success locally and regionally. The COVID-19 response provides lessons about the management of a global threat to public health that can be used to help mitigate and adapt to another global public health challenge: climate change.

essential role of communities “to engage in equitable, self-driven discussions of needs and solutions” and via “community-centered collaboration within and outside of government to ensure an equitable and thriving future.”⁷ The ELTRR also recognizes CHWs’ role in climate change and health equity as an illustrative example of such effort.⁸

Elements of a General Framework to Guide, Unify, and Coordinate Local Climate Change Resilience Efforts

The inclusion of key stakeholders from the grassroots level is an overarching objective in any standardized framework, such as ELTRR, that is used to mitigate and adapt to climate change. CHWs can help achieve this objective when they are active participants in this process. The following six elements — presented by Massoud Agahi and Cameron Salehi and based on their work on CHW workforce development — outline the steps in this process where CHWs are uniquely positioned to influence:⁹

1. Community risk assessment
2. Community asset mapping

3. The proposal and implementation of intervention programs
4. Coordination with local and wider agencies
5. Evaluation of intervention
6. Dissemination of best practices

Recognized as “multi-solvers” in the ELTRR, CHWs can play a key role as promoters and enablers of a process that ensures local buy-in and integration of local solutions on a systems level.¹⁰ However, this requires adequate training of CHWs using a curriculum design informed by ELTRR principles which allow for integration and coordination of local efforts (see below).

A Standardized CHW Climate Change Curriculum

Development and utilization of an adaptable education model for CHWs, using a standardized, evidence-based approach to curriculum design, is necessary for shared action and coordinated efforts in climate change risk mitigation. The curriculum should provide training in essential climate-related skills and competencies to prepare the various components of the healthcare workforce to function in unison and follow best practices for climate change risk mitigation while adapting to the specific needs of local communities. Jagals et al. propose six curriculum domains to guide climate change risk mitigation training of the various sectors of the workforce:¹¹

- Domain 1: *Climate, Environmental Change, and Associated Health Sciences*
- Domain 2: *Upstream Drivers of Climate and Other Environmental Changes*
- Domain 3: *Evidence, Projections, and Assessments*
- Domain 4: *Iterative Risk Management*
- Domain 5: *Mitigation, Adaptation, and Health Co-Benefits*
- Domain 6: *Collective Strategies — Harnessing International/Regional/Local Agreements and Frameworks*

These domains align with the ELTRR principles for coordination of mitigation efforts and address the entire spectrum from the provision of foundational knowledge about climate and environmental change and associated health sciences, to methods of engaging in risk management, to collective strategies on a large scale. This standardized curriculum framework also enables CHWs to help address local policy needs by equipping them to be effective advocates in policy discussions, focusing on their communities’ specific needs for targeted policy solutions and collecting vital

grassroots data on the health effects of climate change, thereby supplying policymakers with precise, current information for shaping local laws and policies. Collectively, these curriculum domains serve as a guide for a curriculum that highlights and utilizes CHWs’ unique set of functional and educational characteristics.

Incorporating Law and Policy Using the “Five Essential Public Health Law Services Framework”

The ELTRR facilitates coordination and dissemination of best practices in the same way the Five Essential Public Health Law Services Framework described by Burris, et al., provides a set of guidelines for the use of law and policy with a focus on equity and inclusivity.¹² The Five Essential Public Health Law Services Framework incorporates expertise to support legal policy development; expertise in the design of legal policy solutions; collaboration in building political will and partnerships across community stakeholders; support for implementation, enforcement, and defense of legal solutions; and monitoring of policy adoption across jurisdictions and evaluation of impacts.¹³ An equity focus in implementing the framework prioritizes community expertise in each step. CHWs can play a role in ensuring this equity focus and community participation.

The Strategic Roles of CHWs in Community-Centric Climate Change Risk Mitigation and Resilience

CHWs are in a unique position to facilitate the processes outlined above. Due to their close ties to the communities they serve, CHWs are instrumental in identifying and relaying information about the community’s health and social concerns, including those relating to local climate and environmental effects and relevant risk factors. CHWs can also play a significant role in asset mapping of resources already available to utilize in risk mitigation. Moreover, they can be trained to participate in, coordinate, or spearhead climate-related community interventions, such as education and policy advocacy, through direct, meaningful community engagement. By gathering and sharing information, engaging with the community, and relaying the community’s voice, CHWs can aid efforts in coordination and partnership building between stakeholders from local to global levels. Their roles in information gathering and quantitative and qualitative community data collection also position them to effectively contribute to climate-related program evaluation processes.

Given their relevant lived experience as members of the communities they serve, CHWs are well-positioned to improve the effectiveness of public health policies and interventions. Local Public Health Departments

can also incorporate CHWs in their climate change mitigation efforts to tailor climate-related interventions to specific local needs — e.g., as community data collectors for heat and air quality vulnerability maps; supporting efforts to address spatial inequality and environmental justice; and community engagement and education efforts.

Massoud Agahi and Cameron Salehi's work on the *Greener Grassroots*TM initiative, a pilot program to address climate change in local communities, utilizes the standardized curriculum domains proposed by Jagals et al. Hosted by the non-profit community-based organization United American Indian Involvement, this program aims to train CHWs in mitigating the disproportionate health effects of climate change in urban American Indian/Alaska Native (AI/AN) communities in Southern California. *Greener Grassroots* focuses on leveraging CHWs' trusted status in the community, firsthand insights into local needs, and adept communication skills with residents to implement strategies for climate resilience that are both culturally sensitive and community-centric, aligning with ELTRR principles. The program has equipped CHWs to assist in conducting risk assessments in the community, identify key local resources, offer education and referrals to community members, aid in the reform and execution of public health policies, and coordinate with local organizations and care teams to address the health needs of AI/AN communities in response to climate and environmental change. CHWs participating in the program will also support the subsequent *Greener Grassroots* evaluation process in late 2024 by aiding in qualitative and quantitative community data collection and disseminating lessons learned and best practices through local and wider channels.

Conclusion

Addressing the health impacts of climate change can feel overwhelming, but public health principles and public health law strategies can help reduce localized risks and promote health equity. Community-derived policies and programs and well-trained CHWs are essential to achieving community resilience goals and health equity. A structured curriculum and a clear understanding of the unique roles of CHWs can help ensure equitable engagement among and across communities.

Notes

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

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