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Enhancing Extreme Weather Preparedness Through Community Health Workers

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The World Health Organization considers climate change to be among the [greatest threats to global public health](https://www.who.int/news-room/commentaries/detail/we-must-fight-one-of-the-world-s-biggest-health-threats-climate-change#:~:text=In%20the%20face%20of%20one,and%20affected%2033%20million%20overall) in the 21st century. Leading health authorities urge the health care sector to directly address the impacts of climate change on public health infrastructure and community well-being. The United States is already experiencing significant and pervasive impacts from climate-related extreme weather events: In 2024 alone, the costs of climate and weather disasters in the US totaled [\\$182.7 billion in damages](https://www.climate.gov/news-features/blogs/beyond-data/2024-active-year-us-billion-dollar-weather-and-climate-disasters). Based on the [latest climate projections](https://www.climatecentral.org/climate-matters/2025-in-review), these extreme weather events will become more [frequent and severe](https://www.bbc.com/news/articles/cy4dgp1p3p10). Low-income, racial and ethnic minority populations, and other underresourced communities are [more likely to work or live](https://toolkit.climate.gov/sites/default/files/2025-07/NCA5_2023_FullReport.pdf) in places that are vulnerable to extreme weather events. These communities are more likely to face [structural barriers](https://pmc.ncbi.nlm.nih.gov/articles/PMC9363288/?hstc=201281073.381db6feof737fbdccf24aaodc35a33.1772975980708.177478278309.3.1775292610391.3&_hssc=201281073.1.1775292610391&_hsfp=ace16cef66061fd72d)

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the impacts of extreme weather events and other climate threats. Projected increases in the frequency, severity, breadth, and combined impacts of climate-related disasters and extreme weather events will [further magnify existing health disparities](https://www.epa.gov/system/files/documents/2021-09/climate-vulnerability_september-2021_508.pdf) [<https://www.epa.gov/system/files/documents/2021-09/climate-vulnerability_september-2021_508.pdf>](https://www.epa.gov/system/files/documents/2021-09/climate-vulnerability_september-2021_508.pdf).

Community health workers (CHWs) are uniquely suited to help underresourced communities navigate structural barriers and mitigate the health impacts of climate-related extreme weather events, as they are already doing in several [low- and middle-income countries](https://www.sciencedirect.com/science/article/pii/S0033350624003123) [<https://www.sciencedirect.com/science/article/pii/S0033350624003123>](https://www.sciencedirect.com/science/article/pii/S0033350624003123). We propose that CHWs in the US should be actively engaged and professionally supported to address climate preparedness and advance community health. Through workforce and health care capacity building efforts, CHWs can become frontline agents of climate preparedness and health equity for individuals and communities most vulnerable to intensifying extreme weather events.

Leveraging CHWs' Unique Roles

Community health workers are [trusted members of communities who help bridge the gaps](https://www.nhlbi.nih.gov/education/heart-truth/CHW/Role?_hstc=201281073.381db6feof737fbdcccf24aa0dc35a33.1772975980708.177478278309.3.1775292610391.3&_hscc=201281073.1.1775292610391&_hsfp=ace16cef66061fd72da66f937ea9230a) [<https://www.nhlbi.nih.gov/education/heart-truth/CHW/Role?_hstc=201281073.381db6feof737fbdcccf24aa0dc35a33.1772975980708.177478278309.3.1775292610391.3&_hscc=201281073.1.1775292610391&_hsfp=ace16cef66061fd72da66f937ea9230a>](https://www.nhlbi.nih.gov/education/heart-truth/CHW/Role?_hstc=201281073.381db6feof737fbdcccf24aa0dc35a33.1772975980708.177478278309.3.1775292610391.3&_hscc=201281073.1.1775292610391&_hsfp=ace16cef66061fd72da66f937ea9230a) between the communities they serve and the health care system. To become a CHW [community health workers](https://www.bls.gov/ooh/community-and-social-service/community-health-workers.htm) [<https://www.bls.gov/ooh/community-and-social-service/community-health-workers.htm>](https://www.bls.gov/ooh/community-and-social-service/community-health-workers.htm), individuals typically complete thorough on-the-job training and, in certain states, are encouraged or required to [receive professional certification](https://www.astho.org/topic/brief/community-health-worker-certification/) [<https://www.astho.org/topic/brief/community-health-worker-certification/>](https://www.astho.org/topic/brief/community-health-worker-certification/). CHWs are connected to the communities they serve through [shared sociocultural backgrounds and trusted community ties](https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2011.300386) [<https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2011.300386>](https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2011.300386). According to labor data, the US employs approximately [35 CHWs per 100,000 individuals](https://chwcentral.org/wp-content/uploads/lombardi-et-al-2024-understanding-available-data-sources-to-estimate-the-size-and-distribution-of-community-health.pdf) [<https://chwcentral.org/wp-content/uploads/lombardi-et-al-2024-understanding-available-data-sources-to-estimate-the-size-and-distribution-of-community-health.pdf>](https://chwcentral.org/wp-content/uploads/lombardi-et-al-2024-understanding-available-data-sources-to-estimate-the-size-and-distribution-of-community-health.pdf); by 2030, the demand for CHWs is projected to [increase by 12 percent](https://nachw.org/wp-content/uploads/2021/05/community-health-workers-2016-2030.pdf) [<https://nachw.org/wp-content/uploads/2021/05/community-health-workers-2016-2030.pdf>](https://nachw.org/wp-content/uploads/2021/05/community-health-workers-2016-2030.pdf), particularly in [rural](https://bhw.hrsa.gov/sites/default/files/bureau-) [<https://bhw.hrsa.gov/sites/default/files/bureau-](https://bhw.hrsa.gov/sites/default/files/bureau-)

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<https://www.hhs.gov/sites/default/files/bureau-health-workforce/data-research/State-of-US-Health-Care-Workforce-2025.pdf> where access to clinic-based care is particularly challenging. Working in both clinical and community settings, [CHWs strengthen trust-building connections](#) <https://journals.sagepub.com/doi/10.1177/1363459309360795> between underresourced communities and health care systems, and help community members address barriers to health care engagement.

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Research has shown that [CHW-led initiatives across multiple health conditions](#) <https://www.annualreviews.org/docserver/fulltext/publhealth/44/1/annurev-publhealth-071521-031648.pdf?expires=1765496834&id=id&accname=guest&checksum=694956E53D7964214FC2B5E7DF5CF483> are associated with improved health care access and outcomes, enhanced patient experiences of care, and high levels of return on investment. Moreover, the integration of CHWs in the management of chronic health conditions has resulted in [reductions in care use and health care costs](#) <https://link.springer.com/article/10.1007/s11606-016-3922-9>. CHWs have previously been effectively engaged in improving preventive health outcomes for [patients with cancer](#) https://pmc.ncbi.nlm.nih.gov/articles/PMC5586005/?hstc=201281073.381db6feof737fbdcccf24aa0dc35a33.1772975980708.177478278309.3.1775292610391.3&_hssc=201281073.1.1775292610391&_hsfp=ace16cef66061fd72da66f937ea9230a, [diabetes](#), [hypertension](#), and [HIV](#) https://pmc.ncbi.nlm.nih.gov/articles/PMC4785041/?hstc=201281073.381db6feof737fbdcccf24aa0dc35a33.1772975980708.177478278309.3.1775292610391.3&_hssc=201281073.1.1775292610391&_hsfp=ace16cef66061fd72da66f937ea9230a. However, as with other practitioners working in underresourced health care settings, CHWs are not adequately equipped to promote climate preparedness: A [nationwide survey of frontline health clinics](#) <https://www.americares.org/what-we-do/community-health/climate-resilient-health-clinics/> found that 77 percent of health practitioners lacked the necessary knowledge

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infrastructure, staff, and patients for extreme weather events), and less than 20 percent of respondents felt well-equipped to handle extreme weather emergencies. For these reasons, we advocate for greater engagement of CHWs in climate preparedness in three main ways.

Culturally Responsive Education

CHWs can provide culturally responsive education on extreme weather events and approaches to prepare for them. Members of underresourced communities [may lack adequate awareness](#) [https://www.cell.com/one-earth/abstract/S2590-3322\(25\)00425-7](https://www.cell.com/one-earth/abstract/S2590-3322(25)00425-7) of how they are [differentially vulnerable to extreme weather events](#) https://www.samhsa.gov/sites/default/files/dtac/srb-low-ses_2.pdf and how they can protect themselves from these hazards. CHWs are trained in “meeting people where they are” by communicating health information in ways that are [trust-building, culturally and contextually appropriate](#) <https://www.sciencedirect.com/science/article/pii/S0033350624003123>. For example, CHWs engaged to develop communications campaigns for flu vaccination uptake [effectively adapted vaccine-related information](#) <https://journals.sagepub.com/doi/full/10.1177/21501327211055627> for their audience. Across [low- and middle-income countries](#) <https://chwcentral.org/wp-content/uploads/Examining-the-role-of-community-health-workers-amid-extreme-weather-events-in-low-and-middle-income-countries-a-scoping-review.pdf>, CHWs have played active roles in responding to extreme weather emergencies by educating community members about the health impacts of extreme weather events and supporting their access to appropriate health care services during these hazardous periods. Using longstanding community connections to deploy culturally relevant communication strategies can be an effective way to share important health information. In this way, [CHWs can tailor existing emergency preparedness](#) <https://healthresponsealliance.org/the-role-of-community-health-workers-in-emergency-response> [guidelines](https://healthresponsealliance.org/the-role-of-community-health-workers-in-emergency-response) <https://healthresponsealliance.org/the-role-of-community-health-workers-in-emergency-response> to specific populations, such as individuals with a non-English language preference.

Individualized Coaching

CHWs can offer individualized coaching and decision-making support on climate preparedness that are aligned with patients’ health care contexts and preferences. A substantial portion of underresourced community members are likely to have [multiple](#)

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<https://www.nature.com/articles/s44304-025-00123-1#:~:text=Abstract,needed%20to%20address%20these%20limitations>, such as cardiovascular disease and chronic kidney disease, that increase their vulnerability to extreme weather events. During extreme weather events, these individuals are more likely to have limited access, capacities, and resources needed to effectively [manage their multiple comorbidities](https://www.nature.com/articles/s44304-025-00123-1#:~:text=Abstract,needed%20to%20address%20these%20limitations) [from recommended medication regimens to adequate protection from extreme temperatures](https://www.nature.com/articles/s44304-025-00123-1#:~:text=Abstract,needed%20to%20address%20these%20limitations) [adequate protection from extreme temperatures](https://www.nature.com/articles/s44304-025-00123-1#:~:text=Abstract,needed%20to%20address%20these%20limitations) [contextually appropriate coaching, shared decision making, and other interpersonal strategies](https://www.nature.com/articles/s44304-025-00123-1#:~:text=Abstract,needed%20to%20address%20these%20limitations) [to promote patient-centered care](https://www.nature.com/articles/s44304-025-00123-1#:~:text=Abstract,needed%20to%20address%20these%20limitations). CHWs have improved outcomes for patients with cardiovascular disease [and hypertension](https://www.nature.com/articles/s44304-025-00123-1#:~:text=Abstract,needed%20to%20address%20these%20limitations) [for populations vulnerable to those diseases by providing a tailored treatment approach that is shown to be more effective and cost-effective than standard treatments](https://www.nature.com/articles/s44304-025-00123-1#:~:text=Abstract,needed%20to%20address%20these%20limitations). To promote extreme weather preparedness, [educational resources](https://www.mass.gov/info-details/education-on-social-determinants-of-climate-related-health-outcomes) [could be developed to strengthen the capacities of CHWs in helping individuals create and implement personalized “action plans” to effectively prepare for, respond to, and recover from extreme weather events](https://www.mass.gov/info-details/education-on-social-determinants-of-climate-related-health-outcomes).

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CHWs can connect patients with community resources and social services that can support patients' climate preparedness. Community members may not be aware of nor use wide-ranging resources and social services available to support their preparation for, response to, and mitigation of extreme weather events. Many states are increasing their adoption of heat adaptation plans and cooling centers, but [community uptake of these initiatives has been relatively low](#) https://pmc.ncbi.nlm.nih.gov/articles/PMC9378433/?hstc=201281073.381db6feof737fbdcccf24aa0dc35a33.1772975980708.1774782783093.1775292610391.3&_hsstc=201281073.1.1775292610391&_hsfp=ace16cef66061fd72da66f937ea9230a#:~:text=17%2C19,effectiveness%20and%20guide%20appropriate%20implementation. Bridging community and health care systems, CHWs can work closely with individuals to build awareness of these resources and connect individuals to contextually appropriate resources. A [recent survey of the CHW workforce in Michigan](#) <https://michwa.org/wp-content/uploads/2024/09/2024-CHW-Employer-Report-FINAL.pdf> found that one of the most common roles for CHWs across all organizational settings was in care coordination and system navigation. This demonstrates that CHWs are experienced in identifying community resources and ensuring that community members are effectively connected to them. Additionally, many CHWs also have [background experience staffing emergency shelters and other community centers](#) <https://chwcentral.org/wp-content/uploads/CHWs-Serving-People-Experiencing-Homelessness.pdf>, and can enhance the capacity of facilities to respond to socioeconomic and cultural needs. CHWs can advocate on behalf of underresourced communities to health care leaders to expand and contextualize relevant climate preparedness resources to meet the specific needs of communities they serve.

Additional Efforts Are Needed To Engage CHWs In Climate Preparedness

We recommend that key health policy makers at multiple levels invest in advancing health care training and professionalization resources that serve to elevate the role of CHWs in climate preparedness efforts. The National Association of Community Health Workers has advocated in their policy goals [the need to further integrate CHW perspectives in health policy decision making](#) <https://nachw.org/wp-content/uploads/2023/06/NACHW-National-Policy-Platform-2021-1.pdf> and recognize the crucial role they can play in driving and applying policies to [advance health equity](#) https://nachw.org/wp-content/uploads/2023/06/CHW_racialequity.pdf. Furthermore, CHW organizations are already considering the potential roles of CHWs in advancing climate preparedness efforts in health care such as promoting [extreme](#)

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Specifically, the primary step toward increasing CHW engagement is supporting workforce development and training to address the health impacts of extreme weather events and climate preparedness. More CHW-specific resources, such as a core curriculum on climate-related hazards, preparedness strategies, and health outcomes, must be co-created in active partnership with CHWs. This curriculum can be delivered by post-secondary institutions, embedded in [registered apprenticeships](https://www.apprenticeship.gov/apprenticeship-occupations/listings?occupationCode=21-1094.00) [or](https://www.apprenticeship.gov/apprenticeship-occupations/listings?occupationCode=21-1094.00) offered as a part of [continuing education programs](https://nachw.org/generalresources/networks-and-training-programs/) [.](https://nachw.org/generalresources/networks-and-training-programs/) Several CHW organizations [are already providing trainings on climate preparedness](https://www.mass.gov/info-details/education-on-social-determinants-of-climate-related-health-outcomes) [,](https://www.familiasenaccion.org/climate-chw-trainings) but additional efforts are needed to expand and tailor training resources, guidance, and protocols across CHW care contexts in the US.

Critically, these training efforts should be paired with [adequate compensation for CHWs](https://nachw.org/wp-content/uploads/2023/06/NACHW-National-Policy-Platform-2021-1.pdf) [through](https://nachw.org/wp-content/uploads/2023/06/NACHW-National-Policy-Platform-2021-1.pdf) the integration of CHW payment into Medicare, Medicaid, the State Children's Health Insurance Program, and tribal health programs, and through additional support for CHW associations to disseminate these trainings to their members. State, federal, and tribal governments and private insurers could develop value-based care payment models to include CHW care, such as piloting CHW-led initiatives through [Section 1115 Demonstration Waivers](https://coveragetoolkit.org/medicaid/medicaid-coverage-2/medicaid-1115-demonstration-waivers/#:~:text=Waiver%20State%20Examples-,What%20is%20a%20Section%201115%20Demonstration%20Waiver?,to%20specific%20services%20or%20populations.) [.](https://coveragetoolkit.org/medicaid/medicaid-coverage-2/medicaid-1115-demonstration-waivers/#:~:text=Waiver%20State%20Examples-,What%20is%20a%20Section%201115%20Demonstration%20Waiver?,to%20specific%20services%20or%20populations.)

Additionally, there is no formal guidance on how to leverage the strengths of CHWs in climate preparedness efforts in health care settings. Key decision makers, such as public health and health care administrators, legislators, and professional organizations, should also advance policies, legislation, and incentives to integrate CHWs into broader climate preparedness initiatives in the health care sector. These [initiatives](https://www.kff.org/medicaid/state-policies-for-expanding-medicaid-coverage-of-community-health-worker-chw-services/) [could](https://www.kff.org/medicaid/state-policies-for-expanding-medicaid-coverage-of-community-health-worker-chw-services/) include establishing financial incentives for organizations that incorporate CHWs into extreme weather preparedness strategies,

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preparedness and integrating these CHW-focused initiatives into existing health care quality metrics. CHWs should be engaged as key partners in the development and deployment of these initiatives at local, state, and national levels.

Climate preparedness efforts could be strengthened by engaging the CHW workforce and incorporating their frontline perspectives in health care and policy decision making. Prioritizing the role of CHWs in these efforts is a culturally aligned, patient-centered, and cost-saving approach to preparing for and responding to the impacts of extreme weather events. Health care sector leaders should meaningfully incorporate this underused workforce in climate preparedness efforts to advance the visions of public health.

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