Talk to Your Patients about Populations at Higher Risk of Climate Impacts

Climate change will affect everyone; however, there are some individuals and communities that will be disproportionately burdened. Disproportionate impact to climate change is influenced by factors such as preexisting health conditions, age, sex, race or ethnicity, income, and access to resources.¹ Health-related burdens are experienced more acutely by communities that have been under-resourced and overburdened.¹ Review this information and share with your patients.

Takeaways for Healthcare Providers, Hospitals, and Clinics

- **Strengthen Partnerships** in communities that are at higher risk of climate change-related harms: Engage communities, workplaces, and local organizations to identify unmet needs and priorities, increase access to healthcare resources, and invest in activities that will help the community.^{44, 45}
- **Make Information Accessible:** Ensure health information and resources are made available through various means (e.g. at pediatric offices, schools, and community centers). Ensure information is available in various languages and formats.^{46, 47}
- **Perform Patient Outreach:** Identify trusted messengers and community organizations to reach out to patients disproportionally impacted by climate driven disasters. Use electronic medical record data, mobile health programs, home visits, or other methods to reduce morbidity and mortality.³









Climate Change Medical Factsheets Footnotes

Accessible link: <u>https://www.cdc.gov/climate-health/index.html</u>

- Hayden, M. H., Schramm, P. J., Beard, C. B., Bell, J. E., Bernstein, A. S., Bieniek-Tobasco, A., Cooley, N., Diuk-Wasser, M., Dorsey, M. K., Ebi, K. L., Ernst, K. C., Gorris, M. E., Howe, P. D., Khan, A. S., Lefthand-Begay, C., Maldonado, J., Saha, S., Shafiei, F., Vaidyanathan, A., & Wilhelmi, O. v. (2023). Human health. In A. R. Crimmins, C. W. Avery, D. R. Easterling, K. E. Kunkel, B. C. Stewart, & T. K. Maycock (Eds.), Fifth National Climate Assessment. U.S. Global Change Research Program. https://doi.org/10.7930/NCA5.2023.CH15
- 2. Melnychuk, E., Sallade, T. D., & Kraus, C. K. (2022). Hospitals as disaster victims: Lessons not learned? Journal of the American College of Emergency Physicians Open, 3(1), e12632. https://doi.org/10.1002/emp2.12632
- 3. CDC. (2018, April 4). Reaching At-Risk Populations in an Emergency. https://emergency.cdc.gov/workbook/index.asp
- 4. FEMA. (2024). National Risk Index Map. https://hazards.fema.gov/nri/map
- 5. National Wildlife Federation. (2011). Facing the Storm: Indian Tribes, Climate-Induced Weather Extremes, and the Future for Indian Country. https://www.nwf.org/Educational-Resources/Reports/2011/08-03-2011-Facing-the-Storm
- CDC. (2024, May 15). Safety Messages for Pregnant, Postpartum, and Breastfeeding Women During Natural Disasters and Severe Weather. https://www.cdc.gov/reproductive-health/emergency-preparation-response/safety-messages.html?CDC_AAref_Val=https://www.cdc.gov/ reproductivehealth/features/disaster-planning-parents/index.html
- 7. Nejad, S. S., Jannati, N., Sarabi, R. E., & Bahaadinbeigy, K. (2020). Use of telemedicine and e-health in disasters: a systematic review. https://api.semanticscholar.org/CorpusID:229022509
- Fraze, T. K., Brewster, A. L., Lewis, V. A., Beidler, L. B., Murray, G. F., & Colla, C. H. (2019). Prevalence of Screening for Food Insecurity, Housing Instability, Utility Needs, Transportation Needs, and Interpersonal Violence by US Physician Practices and Hospitals. JAMA Network Open, 2. https://api.semanticscholar.org/CorpusID:202673428
- Lester, C. A., Mott, D. A., & Chui, M. A. (2016). The Influence of a Community Pharmacy Automatic Prescription Refill Program on Medicare Part D Adherence Metrics. Journal of Managed Care & Specialty Pharmacy, 22(7), 801–807. https://doi.org/10.18553/jmcp.2016.22.7.801
- 10. CDC. (2024, February 6). Preparing for Floods. https://www.cdc.gov/floods/safety/index.html
- 11. FEMA. (2004). Food and Water in an Emergency. https://www.fema.gov/pdf/library/f&web.pdf
- 12. Climate ADAPT. (2018). Establishment of early warning systems. https://climate-adapt.eea.europa.eu/en/metadata/adaptation-options/ establishment-of-early-warning-systems
- 13. World Meteorological Organization. (2022). Early Warnings for All: Executive Action Plan 2023-2027. https://library.wmo.int/records/item/ 58209-early-warnings-for-all
- 14. CDC. (2023, March 29). Epilepsy & Disaster Preparedness. https://archive.cdc.gov/#/details?q=https://www.cdc.gov/epilepsy/emergency/ index.ht&start=0&rows=10&url=https://www.cdc.gov/epilepsy/emergency/index.htm
- 15. CDC. (2024, April 18). Improve Acess. https://www.cdc.gov/prepare-your-health/create-community/improve-access.html
- 16. CDC. (2024, May 15). Laboratory Information for Specimen Submissions. https://www.cdc.gov/vector-borne-diseases/php/laboratories/ ?CDC_AAref_Val=https://www.cdc.gov/ncezid/dvbd/specimensub/index.html
- 17. CDC. (2019, December 17). NCEZID: Vector-borne Diseases (spread by bites from mosquitoes, ticks, or fleas). https://archive.cdc.gov/#/ details?url=https://www.cdc.gov/ncezid/what-we-do/our-topics/vector-borne-diseases.html
- CDC. (2024, May 15). Lyme Disease- Clinical Resources. https://www.cdc.gov/lyme/hcp/communication-resources/?CDC_AAref_Val=https:// www.cdc.gov/lyme/healthcare/index.html
- Ballman, E. S., Leahy, J. E., Sponarski, C. C., Galli, M. G., & Gardner, A. M. (2023). A citizen science approach to investigate the distribution, abundance, and pathogen infection of vector ticks through active surveillance. Ticks and Tick-Borne Diseases, 14 3, 102144. https://api.semanticscholar.org/CorpusID:257441727
- C.R. Connelly, Justin A. Gerding, Susan M. Jennings, Andrew Ruiz, Roberto Barrera, Sue Partridge, & ben Beard. (2020, July 17). Continuation of Mosquito Surveillance and Control During Public Health Emergencies and Natural Disasters. https://www.cdc.gov/mmwr/volumes/69/wr/ mm6928a6.htm?s_cid=mm6928a6_w
- 21. Maine Tracking Network. (2024). Tickborne Diseases. https://data.mainepublichealth.gov/tracking/tickborne



- 22. EPA. (2024, October 16). Success in Mosquito Control: An Integrated Approach. https://www.epa.gov/mosquitocontrol/success-mosquito-control-integrated-approach
- 23. CDC. (2024, February 8). What to Do to Protect Yourself From Animals After a Disaster. https://www.cdc.gov/natural-disasters/response/whatto-do-protect-yourself-from-animals-after-a-disaster.html?CDC_AAref_Val=https://www.cdc.gov/disasters/animalhazards/facts.html
- Payton, E. A., Pinson, A. O., Asefa, T., Condon, L. E., Dupigny-Giroux, L.-A. L., Harding, B. L., Kiang, J., Lee, D. H., McAfee, S. A., Pflug, J. M., Rangwala, I., Tanana, H. J., & Wright, D. B. (2023). Water. In A. R. Crimmins, C. W. Avery, D. R. Easterling, K. E. Kunkel, B. C. Stewart, & T. K. Maycock (Eds.), Fifth National Climate Assessment. U.S. Global Change Research Program. https://doi.org/10.7930/NCA5.2023.CH4
- CDC, & AWWA. (2019). Emergency Water Supply Planning Guide for Hospitals and Healthcare Facilities. https://www.cdc.gov/water-emergency/media/pdfs/2024/07/emergency-water-supply-planning-guide-2019-508.pdf
- 26. CDC. (2024, May 22). About Waterborne Disease Surveillance. https://www.cdc.gov/healthy-water-data/about/?CDC_AAref_Val=https://www.cdc.gov/healthywater/surveillance/nors.html
- CDC. (2024, May 6). Clinical Signs and Symptoms Caused by Freshwater Harmful Algal Blooms. https://www.cdc.gov/harmful-algal-blooms/hcp/clinicalsigns/symptoms-freshwater-harmful-algal-blooms.html?CDC_AAref_Val=https://www.cdc.gov/habs/specific-groups/healthcare_providers.html
- 28. CDC. (2022). Facts about Cyanobacterial Blooms for Poison Center Professionals. https://www.cdc.gov/harmful-algal-blooms/media/pdfs/ 332669A_FS_CyanobacterialBlooms_508.pdf
- 29. Minnesota Department of Health. (2022, October 20). Causes and Symptoms of Waterborne Illness. https://www.health.state.mn.us/diseases/waterborne/basics.html
- 30. CDC. (2024, November 9). How to Make Water Safe in an Emergency. https://www.cdc.gov/water-emergency/about/?CDC_AAref_Val=https:// www.cdc.gov/healthywater/emergency/making-water-safe.html
- FDA. (2023, November 20). Food Safety in a Disaster or Emergency. https://www.foodsafety.gov/keep-food-safe/food-safety-in-disaster-or-emergency#:~:text =A%20disaster%20can%20disrupt%20the%20food%20supply%2C%20so,who%20are%20on%20special%20diets%20Meet%20pets%E2%80%99%20 needs
- 32. CDC. (2024, April 29). People at Increased Risk for Food Poisoning. https://www.cdc.gov/food-safety/risk-factors/index.html
- 33. FDA. (2024, March 5). Safe Food Handling. https://www.fda.gov/food/buy-store-serve-safe-food/safe-food-handling
- FDA. (2022, May 25). Foodborne Illness Continuing Medical Education Program. https://www.fda.gov/food/healthcare-professionals/foodborne-illness-continuing-medical-education-program
- White, D. D., Elias, E. H., Thomas, K. A., Bradatan, C. E., Brunson, M. W., Chischilly, A. M., Enquist, C. A. F., Fisher, L. R., Froehlich, H. E., Koebele, E. A., Méndez, M., Ostoja, S. M., Steele, C., & Vanos, J. K. (2023). Southwest. In A. R. Crimmins, C. W. Avery, D. R. Easterling, K. E. Kunkel, B. C. Stewart, & T. K. Maycock (Eds.), Fifth National Climate Assessment. U.S. Global Change Research Program. https://doi.org/10.7930/NCA5.2023.CH28
- 36. FDA. (2017). Four Steps to Handling and Preparing Food Safely. https://www.fda.gov/media/107837/download?attachment
- Bolster, C. H., Mitchell, R., Kitts, A., Campbell, A., Cosh, M., Farrigan, T. L., Franzluebbers, A. J., Hoover, D. L., Jin, V. L., Peck, D. E., Schmer, M. R., & Smith, M. D. (2023). Agriculture, food systems, and rural communities. In A. R. Crimmins, C. W. Avery, D. R. Easterling, K. E. Kunkel, B. C. Stewart, & T. K. Maycock (Eds.), Fifth National Climate Assessment. U.S. Global Change Research Program. https://doi.org/10.7930/NCA5.2023.CH11
- Jonovich, S. J., & Alpert-Gillis, L. J. (2014). Impact of pediatric mental health screening on clinical discussion and referral for services. Clinical Pediatrics, 53(4), 364–371. https://doi.org/10.1177/0009922813511146
- North, C. S., & Pfefferbaum, B. (2013). Mental Health Response to Community Disasters: A Systematic Review. JAMA, 310(5), 507–518. https://doi.org/ 10.1001/jama.2013.107799
- 40. Bhui, K., Warfa, N., Edonya, P., McKenzie, K., & Bhugra, D. (2007). Cultural competence in mental health care: a review of model evaluations. BMC Health Services Research, 7(1), 15. https://doi.org/10.1186/1472-6963-7-15
- 41. CDC. (2018, March 19). Emergency Responders: Tips for taking care of yourself. https://emergency.cdc.gov/coping/responders.asp
- 42. CDC. (2019, November 13). Taking Care of Your Emotional Health. https://emergency.cdc.gov/coping/selfcare.asp
- Dodgen, D., Donato, D., Kelly, N., la Greca, A., Morganstein, J., Reser, J., Ruzek, J., Schweitzer, S., Shimamoto, M. M., Thigpen Tart, K., & Ursano, R. (2016). Ch. 8: Mental Health and Well-Being. The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment. https://doi.org/10.7930/J0TX3C9H
- 44. Patel, L., Conlon, K. C., Sorensen, C., McEachin, S., Nadeau, K., Kakkad, K., & Kizer, K. W. (2022). Climate Change and Extreme Heat Events: How Health Systems Should Prepare. NEJM Catalyst, 3(7), CAT.21.0454. https://doi.org/10.1056/CAT.21.0454
- 45. Loban, E., Scott, C., Lewis, V., Law, S., & Haggerty, J. L. (2021). Improving primary health care through partnerships: Key insights from a cross case analysis of multi stakeholder partnerships in two Canadian provinces. Health Science Reports, 4. https://api.semanticscholar.org/CorpusID:238527266
- Boudreaux, M., Chu, J., & Lipton, B. J. (2023). School-Based Health Centers, Access to Care, and Income-Based Disparities. JAMA Network Open, 6(9), e2334532-e2334532. https://doi.org/10.1001/jamanetworkopen.2023.34532
- Rayburn, W. F., Armstrong, J., & Fairchild, D. (2024). Women Accessing Care at a National Network of Retail Health Clinics. Journal of Women's Health, 33(6), 774–777. https://doi.org/10.1089/jwh.2023.0933