April 10th Extreme Heat & Wildfire Smoke Resources/Research

1. [Sorensen CJ, Fried LP. Defining Roles and Responsibilities of the Health Workforce to Respond to the Climate Crisis. *JAMA Netw Open.* 2024;7(3):e241435. doi:10.1001/jamanetworkopen.2024.1435](https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2816682)

This article is a special communication from JAMA detailing the roles and responsibilities of clinicians and public health professionals to prevent and respond to climate crisis. Table 1 provides an overview of core responsibilities in primary, secondary and tertiary prevention for public health professionals, clinical professionals and shared responsibilities. This can provide a framework through which we can create guidelines for clinical and public health professionals.

1. [PhysicianActionGuide.pdf (climatehealthconnect.org)](https://climatehealthconnect.org/wp-content/uploads/2016/09/PhysicianActionGuide.pdf)

This physician action guide is a short guide to what physicians can personally do, what they can do in the way they deliver care to patients, what they can do at the organizational level and how they can get involved at the community level and policy level.

1. Philipsborn, R. P., Cowenhoven, J., Bole, A., Balk, S. J., & Bernstein, A. (2021). A pediatrician's guide to climate change-informed primary care. Current problems in pediatric and adolescent health care, 51(6), 101027. https://doi.org/10.1016/j.cppeds.2021.101027[A pediatrician's guide to climate change-informed primary care - ScienceDirect](https://www.sciencedirect.com/science/article/pii/S1538544221000821?via%3Dihub)

This is article provides a practical approach for connecting climate change with health in primary care pediatrics, including recommendations from the AAP policy statement on climate change and child’s health. The article provides a table that includes practical recommendations for integrating climate change into the flow of pediatric primary care visits, including triage and screening questions, history and health promotion, disease management plans and special considerations, and anticipatory guidance and injury prevention.

1. Sorensen, C., & Hess, J. (2022). Treatment and Prevention of Heat-Related Illness. The New England journal of medicine, 387(15), 1404–1413. <https://doi.org/10.1056/NEJMcp2210623>

[Treatment and Prevention of Heat-Related Illness | New England Journal of Medicine (nejm.org)](https://www.nejm.org/doi/full/10.1056/NEJMcp2210623#:~:text=Heat-related%20illness%20is%20preventable.%20Clinicians%20have%20a%20role,and%20symptoms%2C%20and%20recommending%20strategies%20for%20reducing%20risk.) (table 3 particularly helpful)

This article features a case study that highlights a common clinical problem with extreme heat. Then the authors prevent various strategies with supporting evidence, review formal guidelines and end with clinical recommendations. Table 3 with prevention strategies for the general population and specific groups is particularly helpful.

1. Andersen ZJ, Vicedo-Cabrera AM, Hoffmann B, Melén E. Climate change and respiratory disease: clinical guidance for healthcare professionals. Breathe (Sheff). 2023 Jun;19(2):220222. doi: 10.1183/20734735.0222-2022. Epub 2023 Jul 11. PMID: 37492343; PMCID: PMC10365076. [Climate change and respiratory disease: clinical guidance for healthcare professionals - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10365076/)

This review aims to 1) define climate change and describe major related environmental factors that pose a threat to patients with respiratory conditions 2) provide an overview of the epidemiological evidence on climate change and respiratory diseases. 3) explain how climate change interacts with air pollution and other related environmental hazards to pose additional challenges for patients. 4) outline recommendations to protect the health of patients with respiratory conditions from climate-related environmental hazards in clinical practice and 5) outline recommendations to clinicians and patients with respiratory conditions on how to contribute to mitigating climate change

1. Jay, O., Capon, A., Berry, P., Broderick, C., de Dear, R., Havenith, G., Honda, Y., Kovats, R. S., Ma, W., Malik, A., Morris, N. B., Nybo, L., Seneviratne, S. I., Vanos, J., & Ebi, K. L. (2021). Reducing the health effects of hot weather and heat extremes: from personal cooling strategies to green cities. Lancet (London, England), 398(10301), 709–724. <https://doi.org/10.1016/S0140-6736(21)01209-5> [Reducing the health effects of hot weather and heat extremes: from personal cooling strategies to green cities](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(21)01209-5.pdf#:~:text=A%20working%20air%20conditioning%20unit%20in%20a%20home,for%20air%20conditioning%20adoption%20is%20improved%20thermal%20comfort.)

This series paper focuses on the impact of relying on air conditioning further marginalizes communities most vulnerable to heat – they summarize the benefits and limitations of each cooling strategy, recommend interventions for settings like aged care, workplaces, sports and more. They also highlight well communicated heat action plans with surveillance and monitoring is essential to reduce adverse health consequences.

1. Cianconi, P., Betrò, S., & Janiri, L. (2020). The Impact of Climate Change on Mental Health: A Systematic Descriptive Review. Frontiers in psychiatry, 11, 74. https://doi.org/10.3389/fpsyt.2020.00074[The Impact of Climate Change on Mental Health: A Systematic Descriptive Review - PubMed (nih.gov)](https://pubmed.ncbi.nlm.nih.gov/32210846/)

This systematic review sought to determine the association between classical psychiatric disorders like anxiety, schizophrenia, mood disorder and depression, suicide, aggressive behaviors, and others related to climate change and extreme weather. They analyzed a total of 97 articles covering extreme weather events and effects on psychiatric illness. They found people with mental health concerns were more likely to pass away from a heat wave, during pregnancy in second and third trimester exposure to heat waves showed lower average birth weight and increase of incidence of preterm birth, and people with compounding inequities experience higher rates of negative health outcomes. They also found an increase in heat-related violence in hotter cities compared to cooler cities. When it comes to wildfires, people living in proximity to forests experience depression and anxiety, and after a wildfire report of PTSD, depression, and detachment have been reported, with children being particularly affected.

1. [Climate Change and Extreme Heat Events: How Health Systems Should Prepare | NEJM Catalyst](https://catalyst.nejm.org/doi/full/10.1056/CAT.21.0454)

This article reviews health effects of extreme heat events and provide examples of what health systems can do to promote climate readiness and heat resiliency. Figure 2 is especially helpful detailing some bulleted examples of the climate resilience toolkit with some examples of how organizations can be implemented for the healthcare sector in the setting of extreme heat events.

1. [Building Health Care Sector Resilience | U.S. Climate Resilience Toolkit](https://toolkit.climate.gov/topics/human-health/building-climate-resilience-health-sector)

This toolkit created by HHS provides a guide to highlight emerging best practices for developing sustainable and climate-resilient health care facilities including a compilation of extreme weather threats and ways in which organizations respond to those threats around the country. The toolkit aims to help healthcare facilities and organizations reduce future vulnerabilities and losses, improve functioning over a broad range of health care facilities. The 5 core elements are the following: 1) Climate Risks and Community Vulnerability Assessment, 2) Land Use, Building Design and Regulatory frameworks, 3) Infrastructure Protection and Resilience, 4) Essential Clinical care Service Delivery Planning, 5) Environmental protection and strengthening of ecosystems.