Health Impacts of Extreme Heat & Wildfire Smoke
Guideline Checklist
Health Plans
Level 3

DR. ROBERT BREE COLLABORATIVE

The current state of the issue

Exposure to extreme heat, or summertime temperatures that are much hotter and/or humid than average,0F0F[i] is a serious threat to population health and well-being. 2024 was the warmest year on record, with global temperatures 2.30 degrees Fahrenheit (1.28 degrees Celsius) above the National Aeronautics and Space administration's (NASA) 20th century baseline.1F1F[ii] The number and length of heat waves has increased significantly since the 1960s.2F2F[iii] These trends are projected to continue and worsen in the coming decades, exposing more people to the harmful consequences of heat. Higher air temperatures increase wildfire likelihood, posing a serious threat to human health, ecosystems, and infrastructure. Wildfire smoke exposure increases all-cause mortality, impacts respiratory health, and may co-occur and interact with heat exposure to impact cardiorespiratory morbidity and mortality.6F6F[iv]7F7F[v]8F8F[vi]9F9F[vii]

Incentives & Investments

- ☐ **Incent delivery systems** to reduce the number of health-related illnesses and exacerbations of chronic conditions occurring during warmer months

Resources

- The Bree Report is meant to supplement these resources.
- Full Bree Report: https://www.qualityhealth.org/bree/wp-content/uploads/sites/8/2025/01/Draft-Guidelines-EHWS-24-0131-Final.pdf
- CHILL'D OUT Questionnaire: https://www.qualityhealth.org/bree/wp-content/uploads/sites/8/2025/02/CHILLD-Out-Questionnaire-H.pdf
- How to use the Heat Risk Tool and Air Quality Index: https://www.qualityhealth.org/bree/wp-content/uploads/sites/8/2025/02/How-to-use-the-HeatRisk-Tool-and-Air-Quality-Index-_-Heat-Health-_-CDC.pdf
- WA DOH Portable Air Cleanser: https://doh.wa.gov/community-and-environment/air-quality/indoor-air/portable-air-cleaners
- WA Air Quality Map: https://enviwa.ecology.wa.gov/mobile/

Read the full Bree Report on Health Impacts of Extreme Heat and Wildfire Smoke for online by scanning the QR code:

Connect with the Bree Collaborative at bree@qualityhealth.org

References:[i] Centers for Disease Control and Prevention. (n.d.). Extreme heat and your health. Retrieved from https://www.ready.gov/heat [ii] National Aeronautics and Space Administration (NASA). (n.d.). Temperatures rising: NASA confirms 2024 warmest year on record. Retrieved from https://www.nasa.gov/news-release/temperatures-rising-nasa-confirms-2024-warmest-year-on-record/ [iii] National Oceanic and Atmospheric Administration. (2021). Heat wave: A major summer killer. Retrieved from Severe Weather Awareness - Heat Waves [iv] Liu, Y., & Sinsky, E. (2020). Mortality associated with wildfire smoke exposure in Washington State, 2006–2017: A case-crossover study. Environmental Health. Retrieved from https://link.springer.com/article/10.1186/s12940-020-00682-5 [v] Gan, R. W., Ford, B., Lassman, W., Pfister, G., Vaidyanathan, A., Fischer, E., Volckens, J., Pierce, J. R., & Magzamen, S. (2017). Comparison of wildfire smoke estimation methods and associations with cardiopulmonary-related hospital admissions. GeoHealth, 1(3), 122–136. https://doi.org/10.1002/2017GH000073 [vi] Chen C, Schwarz L, Rosenthal N, Marlier ME, Benmarhnia T. Exploring spatial heterogeneity in synergistic effects of compound climate hazards: Extreme heat and wildfire smoke on cardiorespiratory hospitalizations in California. Sci Adv. 2024 Feb 2;10(5):eadj7264. doi: 10.1126/sciadv.adj7264. Epub 2024 Feb 2. PMID: 38306434; PMCID: PMC10836726.[vii] Ma Y, Zang E, Liu Y, Wei J, Lu Y, Krumholz HM, Bell ML, Chen K. Long-term exposure to wildland fire smoke PM2.5 and mortality in the contiguous United States. medRxiv [Preprint]. 2024 Jun 11:2023.01.31.23285059. doi: 10.1101/2023.01.31.23285059. PMID: 36778437; PMCID: PMC9915814.

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