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A Framework for Understanding the Impacts of Climate Change on the US Healthcare System and Environmental Justice Implications



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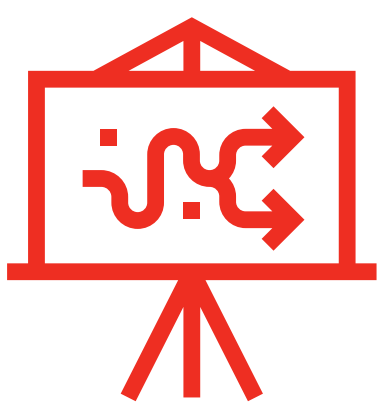


Melanie Ward, PhD, MPH; Margaret Black, MS; David Cooley, MEM; Lisa Grogan-McCulloch, MS; Ann Loeffler, MSPH; Jean O'Connor, JD, DrPH, FACHE; Sarah J. Shoemaker-Hunt, PhD



Background

- The US Administration recognizes the potential impacts of climate change on health.
- ~250,000 deaths/year will occur from climate change (WHO)
- Droughts, heat waves, wildfires, hurricanes, flooding and other climate stressors pose threats to health, health systems and the conditions in which people live.
- Climate stressors can exacerbate health inequities for communities facing the greatest social and environmental risks.



Methods

- Using current literature on climate change and health care, our team sought to:
1. Develop a framework for the range of climate stressors, their impact on health, systems, and environmental justice.
 2. Provide opportunities for health care practices and systems to address the health impact of climate change for the communities and patient populations they serve.

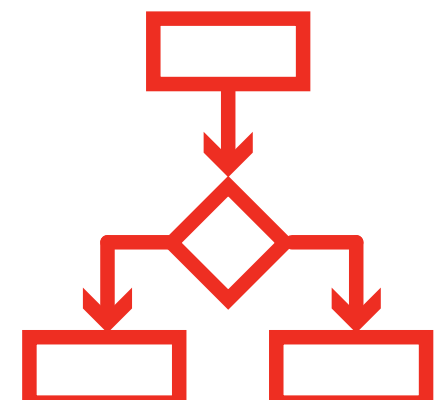
Climate stressors can exacerbate physical, social, and economic conditions that place marginalized communities at greater risk of adverse health outcomes and impact health care systems' ability to respond to health risks.



Findings

Exhibit 1: Framework for Understanding Impacts of Climate Change on Health Care and Environmental Justice

Climate Stressors	Impact on Social and Physical Conditions	Implications for Marginalized Communities	Patient Health and Health Outcomes	Opportunities for Health Care to Respond
Increased temperatures (e.g., heat islands)	<ul style="list-style-type: none">• Greater energy consumption and air pollution• Exacerbated water quality issues, heat waves	<ul style="list-style-type: none">• Greater risk of heat-related health impacts, including older individuals and outdoor workers	<ul style="list-style-type: none">• Higher rates of premature mortality and morbidity (e.g., heat stroke)	<ul style="list-style-type: none">• Patient heat index education• Resources to mitigate heat exposure
Increased frequency of extreme weather events (flooding, blizzards, hurricanes)	<ul style="list-style-type: none">• Disrupted transportation, medical infrastructure• Increased housing quality issues, power outages	<ul style="list-style-type: none">• More likely to experience income or childcare disruptions, behavioral health issues	<ul style="list-style-type: none">• Psychosocial impacts• Increased risk of injury, morbidity, and mortality	<ul style="list-style-type: none">• Resources for awareness of flood zones, alternate routes• Improve facility resilience and care continuity
Increased Risk of Wildfires	<ul style="list-style-type: none">• Decreased air quality (smoke)• Impaired water quality	<ul style="list-style-type: none">• Increased risk of heat exposure for low SES, outdoor workers, asthma/CVD patients	<ul style="list-style-type: none">• Greater risk of morbidity/mortality,• Increased ED/hospital visits in children	<ul style="list-style-type: none">• Patient education: air quality index, prep for fire/smoke events
Increased frequency of droughts	<ul style="list-style-type: none">• Disrupted food and agricultural systems• Increased water insecurity/quality issues	<ul style="list-style-type: none">• Risk of unemployment, water/food insecurity among farming and rural communities	<ul style="list-style-type: none">• Psychosocial impacts• Compromised nutrition• Increased risk of infectious disease	<ul style="list-style-type: none">• Resource management• Drought preparation and planning



Environmental Justice Implications

- Across the health care system, many opportunities exist for individual or clinician-level intervention to address climate change inequities (e.g., education).
- To advance environmental justice and reduce health disparities, solutions must address social and physical conditions.
- Current literature also acknowledges the need for health care to mitigate its contribution to climate change.
- Exhibit 2 conceptualizes climate stressors, environmental conditions, and opportunities for healthcare systems to intervene.

Exhibit 2: Health Care System Opportunities to Address Climate Change and Health Equity

