COMMUNITY HEALTH AND ENVIRONMENT

Assessing Impact and Improving Resilience

Preparing for Extreme Temperatures

WORKSHOP 4 SNAPSHOT

ACHI

AHA Community Health Improvement

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About

The Community Health and Environment initiative offers insights and resources to support hospitals, health systems and their strategic partners in addressing the health impacts of environmental and weather conditions on their communities and patient populations. As part of this initiative, there was a workshop in Scottsdale, Arizona, with hospital and health system leaders.

Workshop participants engaged in activities to identify key health outcomes in communities, prioritize challenges and develop pragmatic ideas on how hospitals and health systems can work to reduce the impact of environmental conditions on health. Participants explored how to incorporate strategies to address impacts into community health assessments (CHAs) and community health improvement plans (CHIPs). This snapshot captures practical strategies and collaborative approaches discussed during the workshop.

Insights and strategies from other workshops convened as part of this initiative are available by visiting AHA.org/community-health-environment/workshops.

Key Themes

Extreme heat was the central focus of this Community Health and Environment workshop, with participants exploring its impacts on patient safety, workforce health and community resilience. Discussions surfaced five interconnected themes that point to practical steps hospitals and health systems can take to reduce health risks and strengthen preparedness:

- Protecting at-risk populations from heat-related illness.
- Integrating education on heat and health across care teams.
- Managing medication-related risks during extreme heat.
- Expanding cross-sector collaboration on heat response.
- Addressing occupational heat risks and workforce protections.

Protecting At-risk Populations from Heat-related Illness

The impacts of heat can be especially severe on certain populations, including older adults, people with chronic behavioral or physical illnesses, those without access to air conditioning, and pregnant women, as well as outdoor and factory workers and athletes. Clinicians report rising rates of heat-related illness during periods of high temperatures, ranging from dehydration to cardiovascular, respiratory and central nervous system sequelae of heat stress and heat stroke. In the southwestern United States and other regions with high temperatures, hospitals are treating preventable injuries. These injuries include contact burns from walking or falling on hot surfaces such as asphalt, concrete and gravel. In some areas, increased heat also is accompanied by poor air quality, leading to additional cases of respiratory distress. Communities that are less prepared for and accustomed to extreme heat also may face further health risks. Populations and infrastructure in those areas are less adapted to high temperatures and may not be equipped to anticipate or respond effectively.

In this context, community health initiatives that focus on prevention can protect the health of individuals and save lives. Leveraging preventive strategies can strengthen public health resilience and ease the burden on emergency medical systems during extreme heat events.

TACTICAL TAKEAWAYS

- Some hospitals are using electronic health record data to identify patients at elevated risk for heat-related illness, such as pregnant women, older adults living alone and patients taking medications that decrease the body's ability to tolerate heat.
- Tailored messaging about the health impacts of heat can be developed for and used by leaders who have decision-making authority in workforce management, schools, sports, tenant safety, local policy and utilities. Messaging can occur before a heat event or season as well as during the event to allow time to prepare for heat avoidance and management.
- Some hospitals and health systems are exploring ways to include heat risk, hydration and shelter access in discharge planning, particularly during extreme weather events.
- Triage protocols to prevent overflow in regional health systems during summer surge periods can be adapted to extreme heat events through coordination with emergency medical services teams and integrated delivery networks.
- Electric utility disruptions and extreme heat are emerging as areas of interest when organizations review emergency operations plans and hazard risk assessments.

Integrating Education on Heat and Health Across Care Teams

Extreme heat can drive a surge in emergency department visits for related morbidity, so clinical teams across disciplines increasingly need targeted training to recognize and respond to heat-related illnesses. In Arizona, for example, physicians at the state's burn centers may simultaneously be managing patients with serious contact burns, dehydration, and other heat-related cardiac or respiratory distress.

TACTICAL TAKEAWAYS

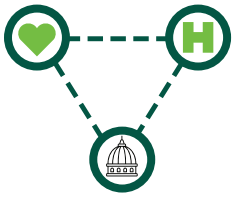
- Continuing education and onboarding programs can include training across clinical roles on how to prevent, recognize and respond to heat-related illnesses.
- Screening protocols can be developed to help clinicians identify patients with heat-exacerbated symptoms such as dehydration, confusion or chronic condition flare-ups.

Managing Medication-related Risks During Extreme Heat

Certain medications — such as diuretics, beta blockers, antipsychotics and antihistamines — can impair the body's ability to regulate temperature, making some patients more susceptible to heat-related illness. At the same time, prolonged high temperatures and power outages can compromise the storage, stability and efficacy of temperature-sensitive medications. Hospitals and health systems can take proactive approaches to ensure patient safety and maintain medication safety and supply continuity.

TACTICAL TAKEAWAYS

- Some hospitals and health systems are using EHR data to identify patients on heat-sensitive medications or medications that impair the body's ability to regulate, to provide targeted support during extreme heat.
- Pharmacy and clinical teams benefit from being equipped to provide guidance to patients on how their medications may increase heat sensitivity and how to store them safely.
- Supply chain and pharmacy teams can establish protocols to maintain medication efficacy during utility disruptions, including identifying alternative storage options and ensuring sufficient emergency inventory reserves.



Expanding Cross-Sector Collaboration on Heat Response

No organization, including a hospital, is equipped to mitigate extreme heat impacts on the community on its own. Partnerships that include hospitals and health systems, public health agencies and other health care providers are essential. For example, in Maricopa County, Arizona, cross-agency collaboration has helped reduce heat-related deaths. Public health and hospital leaders agree that sustained, nontransactional relationships — beyond seasonal campaigns — are vital for coordinated responses.

TACTICAL TAKEAWAYS

- Hospitals and health systems can participate in local heat response discussions with other health care organizations, public health agencies, EMS teams and municipal leaders to align strategies and surface shared priorities.
- Efforts to coordinate public messaging and outreach about cooling resources and transportation may include collaboration with local organizations already embedded in the community.
- Encouraging simple actions — for example, neighbors checking on one another during extreme heat — helps address health concerns and increase social connection.

Addressing Occupational Heat Risks and Workforce Protections

Community members may be exposed to extreme heat while traveling to places of employment or while at work. They include outdoor workers and people who work in poorly ventilated areas. Research from the Occupational Safety and Health Administration shows that heat is a occupational hazard across sectors, impairing productivity, decision-making and safety, particularly in roles that require physical labor or personal protective equipment.

TACTICAL TAKEAWAYS

- Engaging community partners to raise awareness among employers about work scheduling practices may be relevant for individuals and teams exposed to heat in their workplaces.
- Educating teams about heat illness symptoms, hydration protocols and early intervention strategies can build resilience and protect productivity during high-risk periods.

EXAMPLE

Workshop-Generated Extreme Heat and Behavioral Health Tactic

The Problem

Environmental stressors such as extreme heat, hurricanes, wildfires and flooding can exacerbate behavioral health conditions and chronic diseases. Challenges include:

- Following such extreme weather events, behavioral health problems increase, affecting people with no history of behavioral health illness and those who are at risk.
- Lack of accessible and safe community spaces to use as cooling centers puts populations with limited access to air conditioning at risk.
- Emergency departments can become overburdened during extreme heat events, particularly when people use hospitals as a substitute for cooling centers. This can lead to first responders and clinical teams facing fatigue and burnout.

Community Health Interventions

- Launch a proactive behavioral health resilience strategy combining community outreach, cooling centers and policy engagement to help prevent heat-amplified behavioral health emergencies.
- Deploy mobile crisis teams and street medicine units. These teams could deliver physical and behavioral care services and de-escalation support during heat emergencies.
- Create community cooling and recovery spaces. Coordinate with churches, schools, libraries and community centers to offer accessible cooling and support centers, buoyed by public education campaigns to build awareness and trust.

Community Health Impact

- Reduction in emergency service calls and preventable ED visits as individuals are more likely to receive appropriate care before reaching a point of crisis.
- Increased trust, safety and engagement in behavioral health services.

Hospital and Health System Benefits

- Lower health care costs and readmission rates through upstream crisis prevention.
- Decreased ED congestion and team burnout. Diverting behavioral health needs from ED settings eases the burden on front-line clinical teams during high-stress weather events.
- By embedding behavioral health care into emergency preparedness plans, hospitals and health systems can be better equipped to respond. Helpful resources and information on Disaster Behavioral Health are available from the Administration for Strategic Preparedness and Response, part of the Department of Health and Human Services.

Assumptions and Risks

- These interventions assume community partners and crisis teams are available and competent at handling behavioral health calls.
- Programs require collaboration between hospitals and health systems, local governments, public safety agencies and community partners to ensure rapid, coordinated response.
- Stigma around mental health may hinder participation.

EXAMPLE

Maricopa County's Coordinated Heat Response: A Model for Cross-Sector Collaboration

In 2024, Maricopa County implemented a comprehensive heat response strategy that led to a reduction in heat-related deaths for the first time in a decade. Key initiatives included expanding its Heat Relief Network to over 200 cooling and respite centers, extending these centers' operating hours into evenings and weekends, and enhancing public awareness through a regional digital billboard campaign in partnership with Clear Channel Outdoor.

The county also provided free transportation to cooling centers through the 2-1-1 service and strengthened intergovernmental agreements with cities like Phoenix, Mesa and Tempe to coordinate response efforts. For example, in Tempe, county funding supported the creation of a new community cooling center, while Mesa operates several sites — including A New Leaf/MesaCAN and the ASU Mix Center — to provide safe, air-conditioned relief for community members. To sustain gains, public officials emphasize the importance of ongoing, trust-based collaborations across agencies, systems and sectors that go beyond transactional short-term exchanges of funding or services.

In partnership with the American Red Cross, Maricopa County helped launch a large-scale door-to-door campaign in June 2024, distributing up to 150,000 heat safety door hangers in at-risk neighborhoods. The door hangers contained tips on preventing heat-related illness, recognizing early warning signs, and accessing local cooling centers and other resources. These efforts focused on reaching older adults, unhoused people and outdoor workers. The Red Cross also joined with partners such as the city of Phoenix and the Arizona Association of Manufactured Home Owners to canvas communities, reinforcing the importance of neighborhood check-ins and local relationship-building during extreme heat events.

Safeguarding Community Health During Rare Cold Events

While this workshop centered on extreme heat, communities in regions unaccustomed to freezing temperatures can face severe health risks from rare cold events, especially when infrastructure, services and residents are unprepared. Many of the resilience strategies hospitals and health systems use for extreme heat can be adapted to sudden freezes, which can disrupt essential services, overwhelm emergency care and endanger at-risk populations.

Community Health Impacts of Sudden Freezes

In southern regions of the U.S. unaccustomed to freezing temperatures, rare cold snaps can trigger widespread disruptions in essential services, with serious consequences for the community. During Winter Storm Uri in February 2021, for example, cold-related failures in municipal water utilities led to widespread water stoppages and boil-water notices. These outages impacted hospitals and left entire communities without safe drinking water or sanitation.

When communities lose access to clean water and reliable heat — even temporarily — at-risk populations such as dialysis patients, infants, older adults and people living in congregate settings face elevated risk of infection, dehydration and exposure-related illness. Hospitals and health systems may see increases in ED visits due to unsafe living conditions, especially among individuals with chronic conditions or no alternate shelter.

Community-focused Operational Considerations for Cold Resilience

- **Assess local dependencies on municipal water and sanitation systems.** Understand how your organization and patient population would be affected by communitywide boil-water orders or water shut-offs, and work with local utilities to develop contingency plans.
- **Partner with public health departments and municipal leaders** to coordinate public messaging and service delivery during freeze-related disruptions. This can include informing the community about where to access clean water, warming centers and hygiene resources, as well as how to stay safe until normal services are restored.
- **Support high-risk patients at home** through proactive outreach. Identify individuals who depend on in-home care, use electrically powered medical devices or have routine hydration needs, and coordinate alternate resources or temporary relocation if needed.
- **Update emergency communications protocols** to ensure rapid notification of boil-water notices, shelter availability or changes in care site operations, especially for patients in rural or historically marginalized areas.
- **Engage in community education** ahead of cold months — even in places unaccustomed to cold weather — to promote household readiness, ensure proper medication storage, and share instructions about what to do during power or water outages.

Top Takeaways for Leadership

- **Make health threats from the environment a part of strategic risk reduction.** By incorporating extreme heat, poor air quality and severe weather into community health assessments, hospitals and health systems are well positioned to address environmental threats to health as part of long-term planning. This approach guides investment decisions, aligns resources with community needs and builds capacity to respond effectively when emergencies occur.

- **Advance risk mitigation through proactive care models.** Care teams can use patient data to anticipate and mitigate health risks from extreme heat and other environmental hazards before they occur and escalate. This may include identifying patients who have chronic conditions or take heat-sensitive medications and providing targeted guidance, wellness checks or referrals to community resources. Proactive care can reduce emergency demand, maintain care quality during surges and protect at-risk populations.

- **Improve operational efficiency through resilience and community alignment.** Partnering with local public health agencies, emergency medical services and community-based organizations can improve coordination before and during extreme heat and other weather events. These partnerships can expand access to cooling centers, medical outreach and transportation services, while also opening funding opportunities. Together, these efforts help strengthen continuity of care, reduce operational costs and build public trust.

For more information on AHA's Community Health and Environment initiative, visit www.aha.org/community-health-environment.