SOCIETY OF BEHAVIORAL MEDICINE

POSITION STATEMENT:

Protect At-Risk Populations from Extreme Heat during the COVID-19 Pandemic

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SUMMARY STATEMENT

The Society of Behavioral Medicine supports the implementation of short- and long-term policy solutions to protect at-risk populations from extreme heat events during the COVID-19 pandemic.

THE PROBLEM

Extreme heat is a serious public health threat that can lead to dangerous medical conditions (e.g., heat stroke) and can exacerbate emergency department visits and hospital admissions for renal, respiratory, and cardiovascular conditions.[1,2,3] Heat exposure can be life threatening - in an average year, heat is the number one cause of weather-related death in the United States.[4,5,6] Some communities of color[7,8,9] non-US citizens,[8] individuals with limited English proficiency, older adults, people with pre-existing medical conditions and low-income communities are disproportionately burdened by climate-related health problems.[9] These disparities are due , in part, to lack of access to proper cooling (e.g., AC units)[1,10] and exposure to neighborhood characteristics[11] that exacerbate the urban heat island effect. Climate scientists project more frequent, more intense, and longer heat events in the future[12,13], which will likely worsen these inequities.

In an effort to slow and limit the transmission risk of COVID-19, many states have issued stay-at-home and physical distancing mandates, including elimination of non-essential congregate settings such as cooling centers, public pools, malls, and movie theaters. During the COVID-19 pandemic, individuals without properly cooled residences may be less able to safely access emergency cooling options (e.g., community cooling centers) and more likely to spend time indoors. Without air conditioning, indoor temperatures can be considerably higher than outdoors temperatures,[14] resulting in greater heat-vulnerability.

Individuals at greatest risk of experiencing heat-related illness and death are also at an increased risk of dying from COVID-19, due to overlapping preexisting hardships and social determinants of health that increase vulnerability. Mirroring patterns in heat-related inequities, low-income communities and Black communities are disproportionately burdened by COVID-19.[15,16] A failure to proactively prevent

heat-related illness and death during the COVID-19 pandemic may compound the impacts of this public-health crisis on vulnerable populations.

CURRENT POLICIES

Several strategies (e.g., cooling centers, public pools, shaded parks) designed to mitigate heat-related adverse health outcomes may not be feasible and/or safe during the COVID-19 pandemic. Other effective and sustainable solutions (e.g., cool roofs, green roofs, trees and vegetation) may not be able to be safely and immediately deployed, given construction-related work restrictions and city budgetary limitations.

Proper in-home cooling options (e.g., AC units) can significantly help prevent heat-related illness and death during excessive heat events.[1,10] The high cost of operating these cooling options (e.g., air conditioning) may discourage their use for many residents. As more families experience economic insecurity due to COVID-19, it is expected that many residents will forgo home cooling.

Some programs, such as Low Income Home Energy Assistance Programs (LIHEAP) and Weatherization Assistance Programs (WAP) are federally funded, state-administered grant programs, that help low-income people pay for winter utility and heating bills and provide some cooling assistance funding. In many states, LIHEAP does not cover all who need it, with some public and subsidized housing residents ineligible for full benefits. Finally, the application process can serve as a barrier to participation

and some aspects (e.g., submitting a note of medical necessity) could further burden the healthcare system during the COVID-19 pandemic.

PROPOSED SOLUTIONS

Policy makers and legislators must plan for how the COVID-19 pandemic response intersects with heat emergencies - which are already starting to occur - and implement rapid, actionable, integrated solutions to help prevent heat-related illness and death during summer of 2020. These solutions include investing in home cooling assistance and providing educational and economic support to at-risk communities and the healthcare workers/ systems that serve them.

Emergency short-term solutions must be paired with long-term and sustainable solutions that reduce overall air temperatures and redress environmental health inequities impacting many at-risk communities in the United States.

RECOMMENDATIONS

Immediate Policy Solutions

(1) Provide heat risk education and outreach to heat-vulnerable communities

a. Initiate and/or adapt technology (e.g., bulk text alerts, email, social media) and non-technology (e.g., public signage, public radio, flyers, television, mobile-friendly communications) programs to educate at-risk communities about heat-related illness (e.g., risk factors, warning signs, prevention, available community cooling spaces).[17,18,19] Educational content should be culturally and linguistically-tailored to the targeted audiences. Information should be accessible to individuals with limited English proficiency and low-literacy levels. Conducting additional and timely outreach to community-based organizations that provide services to heat-vulnerable populations needs is key to disseminating life-saving, heat-health information.

b. Implement phone helplines to provide heat-health information and support to callers experiencing symptoms of heat illness.[20] Create messaging to encourage people to virtually check in on neighbors, friends, and family on dangerously hot days.

(2) Provide economic support

a. Expand existing federal, state, and local programs to support heat resiliency this summer. For example, existing LIHEAP and WAP programs can be extended to cover some of the increasingly essential space-cooling costs and can waive medical documentation required for participation to minimize burden on health care professionals.

c. Waive or subsidize electricity costs during summer months for income-qualified populations. Providing utility cost assistance to income-eligible residents will protect people from extreme heat while they are complying with social distancing and/or stay-at-home orders.

(3) Distribute cooling systems

a. Provide or subsidize the purchase price of high-efficiency air conditioning units (or replace existing low efficiency units) to income-qualified populations and/or at-risk populations that do not receive LIHEAP benefits.

b. Provide window fans and thermometers to residents that live in housing that cannot safely have an air conditioner installed, and provide training on how and when to safely use fans to cool homes.[21,22]

(4) Repurpose community cooling spaces

a. Repurpose existing spaces (e.g., parks, museums, religious buildings) for cooling respite (such as the Cool Island and Urban Oases Program in Paris).[23,24] Ensure that cooling spaces can be safely used in accordance with COVID-19 guidelines and restrictions.

(5) Establish Cooling Standards

a. Enact policies for commercial and municipal buildings that promote setting AC thermostats to 78°F to minimize energy and cost impacts, while keeping building occupants and the energy grid safe. This standard should be adopted to ensure safe temperatures, particularly in buildings that house vulnerable people such as shelters and supportive housing.

b. Establish standards for access to cooling in residential multifamily buildings similar to those already in place for heat. Prioritize maintaining a maximum temperature threshold in buildings that house vulnerable populations such as adult care facilities, nursing homes, supportive and senior housing, and congregate shelters. Survey these facilities in advance of heat emergencies to ensure the availability of generators, and the ability to maintain safe indoor temperatures during potential power outages.

Long-term Policy Solutions

In the short-term, jurisdictions will likely be compelled to enhance indoor thermal comfort by expanding the use of air conditioning. The waste heat from increased air conditioning use will worsen outdoor conditions in urban areas. Increased energy demand will also increase emissions of greenhouse gases along with traditional air pollutants like PM2.5, unless cities work to actively create a culture of responsible and equitable energy use. Cities should adopt smart urban transformations that reduce air temperatures and promote the use of properly cooled and safe spaces. Cities can develop these policies individually or adopt a green code that includes urban heat island provisions, waste-heat capture and minimization, and encourage the use of green building/community certification programs.

(1) Urban surfaces that reflect, rather than absorb, the sun's energy

a. Cool roofs – Lighten the color of roofs in order to reduce indoor air temperatures and reduce cooling energy demand.[25,26] Cities like New York,[27] Los Angeles,[28,29] and Denver[30] have already implemented cool roof regulations.

b. Cool walls – Encourage the use of lighter colored exterior walls, particularly in multi-story buildings where the roof is a smaller percentage of the overall building envelope or in older buildings with little to no insulation.

c. Cool pavements – Pilot cool pavement solutions to assess their local performance in hot areas or where there are concentrations of heat-vulnerable populations. Los Angeles has a cool pavement pilot program focusing on areas around major transportation hubs.[28,31]

(2) Vegetation, trees, and shade

a. Green roofs – Incentivize the use of green roofs on buildings with the structural strength to support them (such as Toronto's Eco Roof Incentive Program).[32]

b. Increased tree canopy –Identify all feasible areas that can support new trees in heat vulnerable areas (such as Guadalajara's Ciudad Fresca program and New York City's Cool Neighborhoods NYC program).[33,34] Budget for the maintenance of trees through municipal and volunteer efforts, especially during the establishment period.

c. Install structures to shade buildings and pedestrian areas. These could include freestanding structures or exterior window attachments.

(3) Create and annually update heat emergency response plans (such as the Heat Action Planning process in Ahmedabad, India)[35,36,37] to substantially improve response to extreme heat and help save lives.

(4) Increase federal and state grant funding to investigate innovate solutions to prevent heat-related illness, particularly among vulnerable and at-risk populations. Build on the short-term evaluation of programs that could provide for active or passive cooling assistance to ensure they are available and accessible to heat-vulnerable communities in future years.

(5) Partner with individuals from heat-vulnerable communities in the testing, evaluating, and disseminating extreme heat policy solutions.

IMPACT

The goal of these policies is twofold. In the short term, these policies will help keep homes and neighborhoods cool while Americans follow social distancing mandates and stay-at-home orders, protecting those in some of our hardest-hit communities. In the long term, addressing climate equity will protect our communities from extreme heat impacts including severe illness, health care surges, and death.

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ENDORSEMENTS

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