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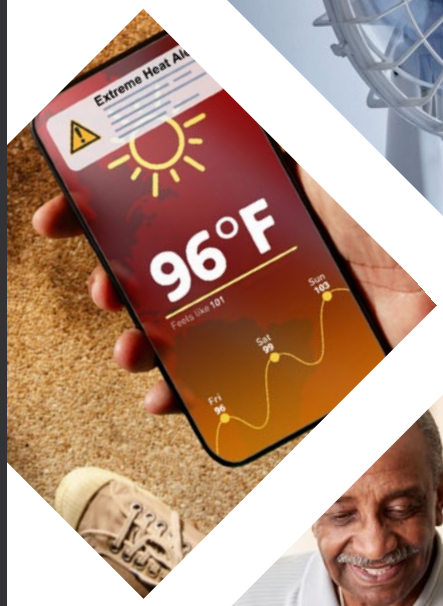

2024

HEAT-HEALTH INTERVENTIONS

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With support from Johnson&Johnson

Heat-Health Action Plan: Leveraging Community Interventions to Safeguard Patient Health

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This Heat-Health Action Plan reflects the dedication, expertise, and collaborative spirit of many individuals committed to advancing climate resilience in frontline health care settings.

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We extend our deep gratitude to all who contributed their time, insights, and expertise to shaping these resources. From research and technical review to program implementation and partner engagement, their collective efforts have strengthened the usability and impact of these tools.

This Heat-Health Action Plan was made possible through the dedication, expertise, and lived experience of frontline health care providers who serve communities most affected by extreme heat/wildfire smoke. We extend our deepest gratitude to the clinics and health centers that generously shared their insights, tested these tools in real-world settings, and provided invaluable feedback to strengthen their effectiveness. Their commitment to patient care and community resilience has shaped these resources in meaningful ways, ensuring they are practical, actionable, and centered on the needs of those most impacted. While we do not list individual contributors here, we recognize and appreciate the essential role they have played in co-developing and refining these tools. We also acknowledge the dedication of our partners and collaborators in the broader health and climate resilience community, whose ongoing efforts continue to drive innovation and preparedness in the face of a changing climate.

Table of Contents

Introduction

As the world grapples with escalating temperatures and the health challenges associated with extreme heat events, **community health centers and free and charitable clinics** can stand at the forefront of community readiness.

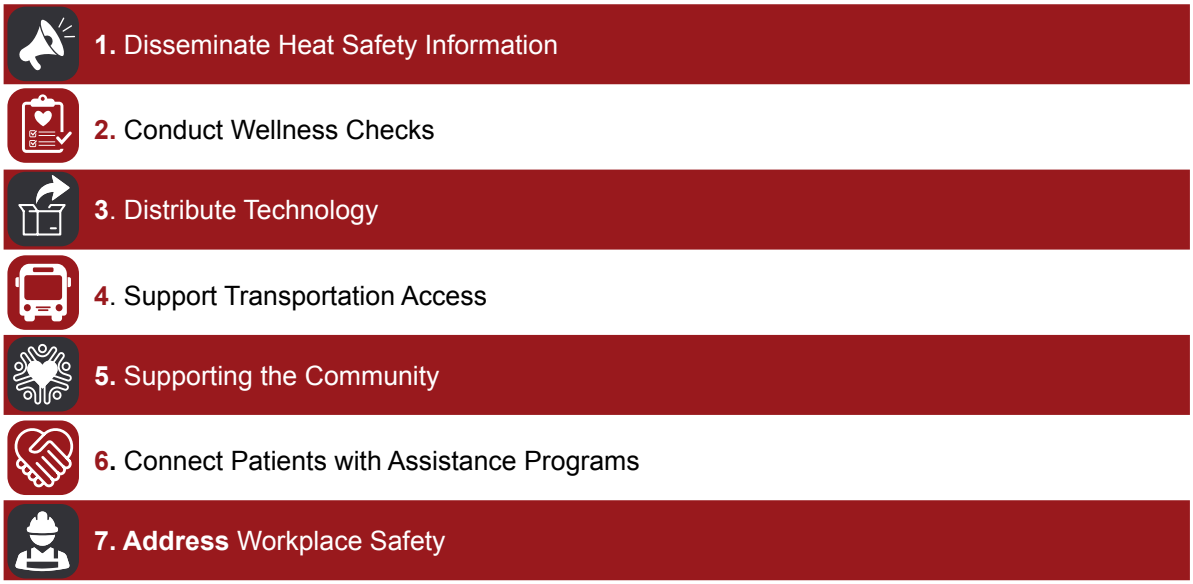
These health centers and clinics are trusted anchors within the community, with deep-rooted relationships and a detailed understanding of the nuanced needs of their patients. These clinics can become more than just healthcare providers, especially for patients with conditions that make them particularly vulnerable to extreme heat; clinics can act as advocates and bridges connecting patients with essential health-safety information, resources, and services.

Purpose and Scope

This comprehensive **Heat-Health Action Plan (HHAP)** expands upon the tailored plan you received after completing the heat-health assessment tool. While your tailored plan presented a curated selection of 5 interventions based on the assessment tool data, this comprehensive document allows for a deeper exploration into the full array of potential interventions, including operational considerations, and illustrative case studies.

The intention here is to offer you a broader perspective, enabling you to discover additional, potentially more aligned strategies, opportunities for adapting interventions to the local context, and ways to leverage your clinic's resources to better cater to specific patient populations. This approach encourages a holistic understanding of clinic-supported heat preparedness, ensuring that your clinic is better prepared by integrating insights from the full spectrum of available interventions.

Interventions within this HHAP fall under the following categories:



Definitions

Resources

Under Resourced [Intervention - Minimal to Moderate Resources]

Lacking sufficient funds or equipment to implement additional programmatic activities.

• Recommended interventions will identify partnerships that can support resource capacity

Adequately Resourced [Intervention - Moderate to Significant Resources]

Sufficient funds or equipment to implement additional programmatic activities.

• Recommended interventions will leverage clinic resources to lead intervention activities

Staffing

Understaffed [Intervention - Minimal to Moderate Staffing Required]

Lacking sufficient staff to lead additional programmatic activities

• Recommended interventions will identify partnerships that can support staffing capacity

Adequately Staffed [Intervention - Moderate to Significant Staffing Required]

Sufficient staff to lead additional programmatic activities

• Recommended interventions will leverage clinic staff to lead intervention activities

Patient Populations

Housing Insecure – **People experiencing homelessness or unstable/uncertain housing** (often accompanied by substance use, mental illness, and lack of support systems)

At-Risk Workers – **Workers in locations prone to high temperatures** (construction, agriculture, warehouses, kitchens, etc.)

Limited English – **Limited English or literacy proficiency** (English as a second language, limited education opportunities, disability, etc.)

General – **People who fall outside the high-risk patient population groups listed above**

Vulnerability to extreme heat varies widely in the general population due to age, health status, social isolation, and cooling access. Although interventions tailored for high-risk groups may not directly apply to everyone, strategies benefiting the general population can also support high-risk individuals, despite varying levels of vulnerability.

What We Know

- The hot weather season is getting longer across the United States.
- Heat events are occurring more often, are hotter, and last longer.
- Extreme heat in the spring or early summer can cause higher rates of morbidity and mortality than later in the season.
- National Weather Service (NWS) alerts are based on regional weather-related indicators (temperature and humidity) and do not account for individual exposure and vulnerability (medications, health conditions, local environment, etc.). Waiting until NWS alerts are sent to act may not be appropriate for high-risk individuals, and preventative measures should be communicated before an extreme heat event. Although still under-development, the NWS HeatRisk Map provides impact-based forecasts for extreme heat which can support appropriate timing for health communications.

Clinic operations can be impacted by extreme heat events in a variety of direct and indirect ways:

Staff safety issues related to heat, including heatstroke, heat exhaustion, and dehydration-related illnesses. There will be an added burden for staff working with personal protective equipment.

HVAC system failure or insufficient HVAC capacity, leading to overheating of clinic spaces.

Impacts from **failure of critical infrastructure** such as water, transportation, and power supplies in your community, which can prevent normal clinic operations unless backup options are available.

Both acute and prolonged **increase in demand for patient health service needs:** acute onset of heat related illness may result in increased demand during the event, while delayed care due to extreme heat may result in increasing demand after the event.

Operationalizing the HHAP

Below is a list of items to consider as you implement any of the interventions described in this HHAP.

Establish Your Team

To ensure a smooth and successful rollout of the HHAP, consider forming a dedicated team including clinical expertise, administrative leadership, and/or facility management with clearly assigned responsibilities.

Integrating the plan into the work of an already established emergency preparedness team or establishing a dedicated heat planning team at your clinic can ensure accountability, oversight, and validation of your heat plan.

The most appropriate team members are often the administrative staff responsible for implementing various aspects of the plan (facility management, clinic leadership, etc.).

Successful implementation of the HHAP also requires a well-coordinated effort among other stakeholders, including healthcare providers, community leaders, and emergency services. Identify and engage community stakeholders relevant to your planned interventions early in the process, and work to engage them in discussions about what actions are right for your clinic and community. Many municipalities/local governments may already have a disaster response or emergency action plan that includes heat; it is worth exploring how to coordinate at municipal level to include health considerations in their plans.

Clarify Roles and Responsibilities

For any collaborative initiative to be effective, it is crucial to establish clear roles and responsibilities for each party involved – both internally amongst clinic staff and externally between the clinic and involved community partners.

Establishing clear roles ensures that tasks are executed efficiently, minimizes overlap or gaps in responsibilities, and establishes accountability. By clearly outlining who is responsible for what, this plan ensures effective coordination and collaboration between relevant stakeholders.

Consider the Timing

Timing is critical for the effective implementation of the interventions included in the HHAP, with different actions being most appropriate at different times of year.

The interventions proposed in this HHAP may have different ideal timing to maximize effectiveness. Recommended actions for each intervention will be designated under 1 of 6 timing categories:

1. Year-round
2. Before the start of heat season
3. At the start of heat season
4. When an extreme heat event is in the forecast [see timing considerations below]
5. During an extreme heat event [see timing considerations below]
6. After an extreme heat event or the end of heat season

Synchronizing actions with weather forecasts and heatwave alerts also ensures timely interventions that can prevent health emergencies. Implementing a phased approach allows for the gradual rollout of interventions, ensuring that resources are optimally utilized, and the community is adequately prepared.

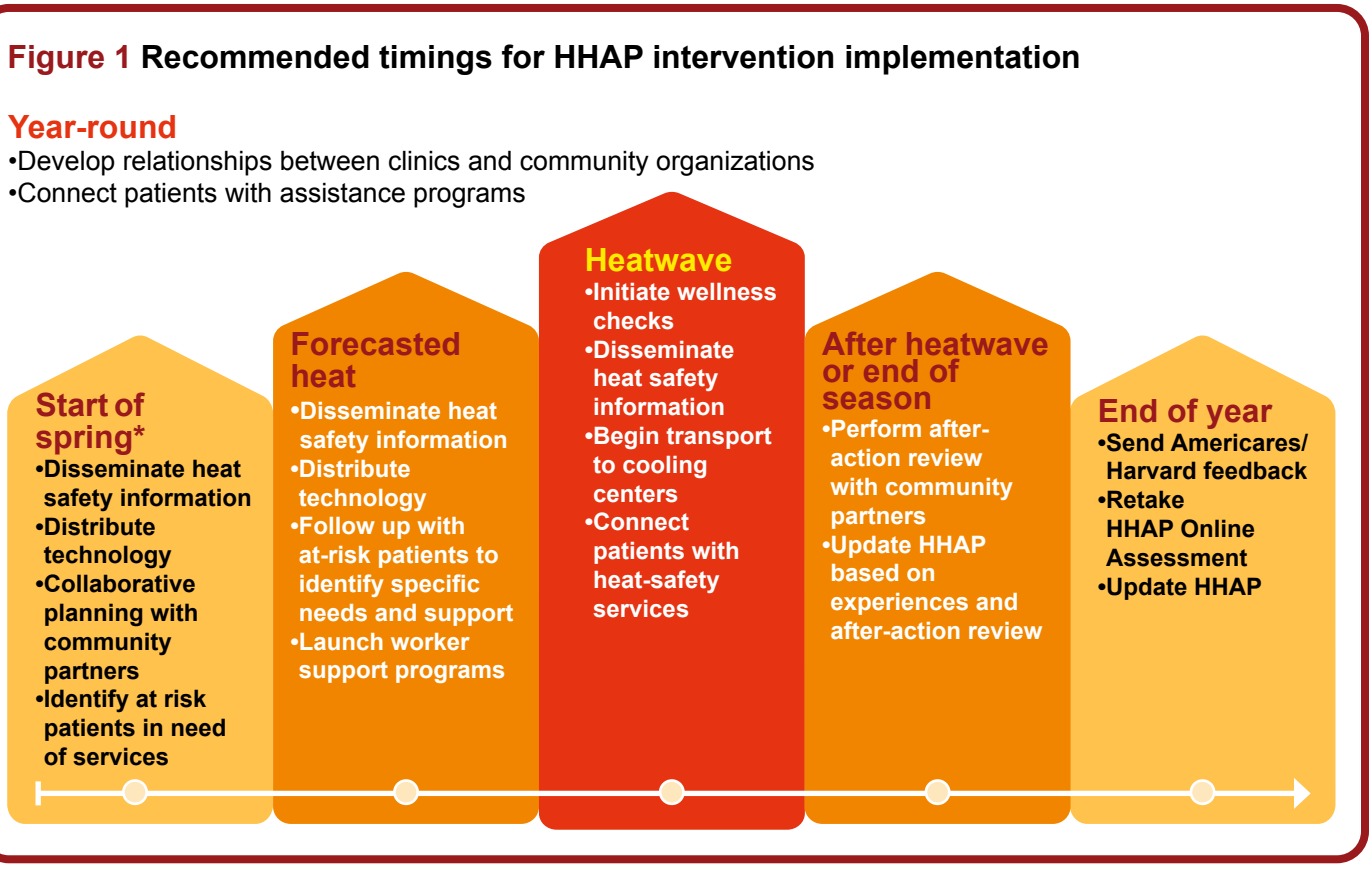
Timing Considerations for High-Risk Patients

Heatstroke and other heat illnesses can happen even on days that aren't hot enough for official warnings from the NWS. This is because some people are at higher risk, due to certain health conditions or medication use, engage in higher-risk activities such as substance use, work/exercise in hot settings, or live in homes that are not designed for hotter temperatures and become hotter than outdoors.

If your clinic treats patients who might be at risk from heat, you should act early. Don't wait for an NWS warning. Instead, be proactive and give your patients:

- Information on how to stay safe in hot weather
- Tips and tools for staying cool
- Resources to answer their questions about heat illness
- Follow-up care for high-risk patients

Figure 1 Recommended timings for HHAP intervention implementation



**Heat season dates are generalized.* *Actual start and end of heat season will differ based on annual variability, location, and will gradually shift because of climate change. We encourage you to stay connected with local weather reports to anticipate the start of heat season for your locale.*

Adapt to Your Local Context

Case studies from a variety of communities are included in each intervention summary in this HHAP and provide valuable insights into the practical application and effectiveness of different strategies and context modifications. Lessons learned from case studies can help guide the adaptation and improvement of the plan to meet local needs effectively but cannot replace your knowledge of the community you serve.

The HHAP is meant to be adapted to the unique demographic, geographic, and cultural aspects of each community. We encourage you to modify the content to reflect your community's unique context and community needs.

Building Partnerships

Some of the strategies outlined below will be easier to implement if you enter into a partnership with other local organizations. Think about partner organizations that have similar goals and interests especially when it comes to protecting your community from the dangers of extreme heat. If you are not already in contact with them, reach out and schedule a conversation. Share with them your heat action plan and tell them what support you may need from them – for example, if you are considering advocating with your local transport authority to provide free rides during heat waves, this could benefit the local community at large and may be of interest to other community organizations serving low income or homeless people.

A partnership could have powerful results for your community and will make it easier to realize your goals. For more information on how to find, build and maintain community partnerships, please review the Health Professional and Community Collaboration Guide created by the Medical Society Consortium on Climate and Health.

Resource Mobilization

Mobilizing resources is an integral part of any plan, but it does not have to be intimidating. Consider who within your community might be able to help – for example local businesses can donate water, fans, perhaps even air conditioning units. More specialized organizations can donate medicines and supplies, including those critical during a heat wave. Community fundraising events are a powerful way to raise awareness of the dangers of extreme heat among community members while also collecting donations for realizing your clinic's heat action plan.

Your local Chamber of Commerce can be a good place to start inquiring about potential funding opportunities. Other local foundations may also have grants available to cover your needs. At the federal level, the Department of Health and Human Services launched a catalytic program in early 2024 to support health care providers, especially safety net organizations, in taking advantage of the tax credits, grants and other supports made available by the Inflation Reduction Act.

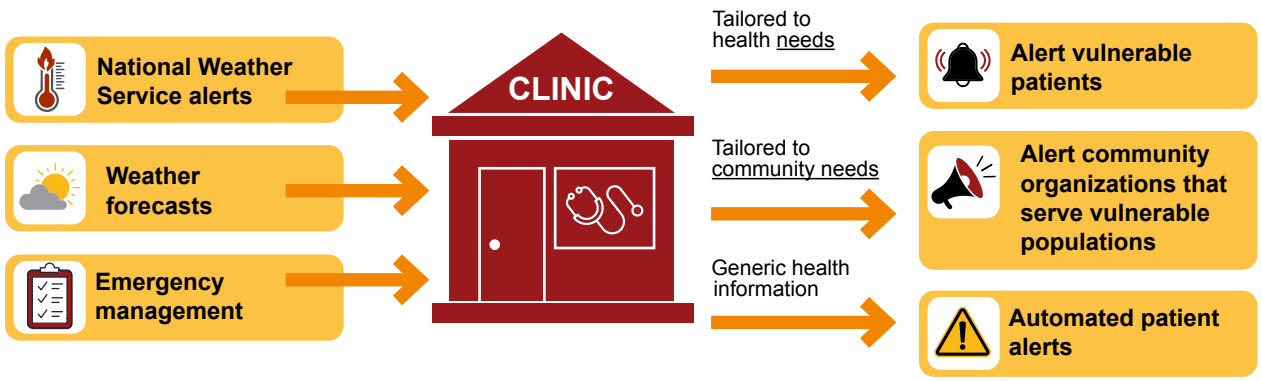
Develop a Communications Plan

An effective communications plan is a roadmap that ensures clear and timely information reaches all stakeholders during a heat event. It outlines the messages you want to convey, who is responsible for sending the messages, who the target audiences are (staff, patients general public), the most appropriate communication channels, and a schedule for disseminating information. Additional strategies for disseminating heat-safety information can be found in Annex 1.

To allow for smooth execution of the HHAP and to safeguard patient well-being, it is recommended to have effective communication channels established prior to an extreme heat event, both within the clinic as well as with patients and community stakeholders.

Clinics are uniquely positioned to tailor information to be relevant to patients or specific populations. Leveraging digital tools, such as automated patient reminders and list-serv emails to community partners, can play an important role in ensuring that vulnerable individuals are prepared and supported.

Figure 2 Example of information flow



Develop a Process for Gathering and Incorporating Feedback

As collaboration with local organizations and authorities is key to ensure the plan is comprehensive and successful, establishing robust feedback mechanisms is vital. Regular monitoring and assessment of the implementation process can help identify challenges and areas for improvement.

Your established heat team should actively and regularly gather community and patient feedback. This should be from a wide range of stakeholders to ensure the plan remains relevant and effective for the local population. Regular analysis of feedback data and sharing with community partners can help everyone understand the impact of the plan and identify gaps or unforeseen challenges. As seen in Figure 1, this should be part of a structured after-action review process.

Annual reassessment of clinic staffing, resources, and patient demographics will allow the plan to adapt to evolving needs and new information that may be added. Completing the assessment tool annually, will ensure interventions align with changes in clinic resource and staffing capacity.

Encouraging a culture of open communication and continuous learning within the implementation team fosters a responsive and dynamic approach to heat-health action planning.

Providing information, feedback, insights, and data to the Americares and Harvard teams ensures new case studies are generated, lessons learned are captured, and the HHAP is updated and improved to best meet the need of frontline clinics by reflecting the experience of frontline clinic staff who have worked on heat issues.

Figure 3 **Recommended cycle of HHAP planning, implementation, evaluation, and improvement to be carried out annually by clinic-designed heat or emergency preparedness team**

Understand Limitations and Use Good Judgment

The interventions described in the following sections are based on the best available information at the time of writing. In some cases, interventions have been the subject of scientific studies and published academic literature; in other cases, they have not been formally studied, but have been or are being implemented by public health agencies, nonprofit organizations or other entities, providing case–specific information about their use.

It is important to recognize that community and individual adaptation to heat is a topic of active study, and that additional research is being conducted and will become available in future years. Even interventions that have been scientifically studied in some settings may not perform in an equivalent matter in other settings.

Use your best judgment and your understanding of your patients and community to inform your decisions about which interventions may be most appropriate in your specific context.

ANNEX 1

Disseminate Heat Safety Information

The interventions in this annex prioritize communication as a key tool to strengthen a clinic's readiness for extreme heat events. They focus on establishing a robust network for knowledge sharing, ensuring the community has the critical information needed to stay safe during periods of intense heat. This proactive approach empowers both the clinic and the community to effectively respond to heat-related emergencies.

1.1 Establish a Heat Safety Telephone Hotline

Summary

A heat safety hotline provides a resource for vulnerable patients seeking information during extreme heat events. It operates as a dedicated phone line, where callers can obtain real-time information about staying safe during high temperatures, ask about heat-related symptoms, be assessed by a healthcare provider (if staffed by licensed clinicians), identify barriers to staying safe (such as transportation needs), and/or locate cooling centers or other cool spaces nearby.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Moderate to Significant: Space, dedicated phoneline or call forwarding system

Staff Requirements

Significant: Have staff to monitor the line. Staff must be able to:

- Triage to assess patient safety (if staffed by licensed clinicians with appropriate training)
- Answer heat-related questions and share general guidance
- Assist in identifying resources near the patient, such as cooling centers / resilience hubs or other available air-conditioned spaces

Suggested Timing

Before Start of Heat Season:
•Establish phone line and staffing plan

Start of Heat Season:
• Distribute phone number to patients

When Extreme Heat is Forecast:
• Distribute phone number to patients

During Extreme Heat Events:
• Staff the hotline

Additional Considerations

1. Prioritizing who receives the hotline number will help ensure vulnerable patients can access support without phone lines becoming overwhelmed.
2. If you anticipate high demand, consider adding additional lines.
3. How can at-risk patients who may not have access to telephones be reached?
4. How can language barriers be prepared for and overcome?
5. Ensuring that the hotline is for informational purposes, and that individuals experiencing a medical emergency call 911 or have 911 called to their location.
6. Deciding whether to staff with licensed clinicians and provide medical screening by phone, or whether to purely provide heat safety information using non-clinician staff.

1.2. Share Heat Safety Information via Automated SMS

Summary

Disseminating heat safety alerts directly to patients via individualized SMS messages can provide a cost-effective way to get information to patients. Vulnerable patients can receive information tailored to their health, including dangerous heat forecasts, cooling center locations, and tips for staying cool. Larger systems could consider automating SMS messages, which can provide an accessible medium for potentially life-saving information, especially for those without internet access.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Minimal to Moderate: Consider automated messaging system if feasible and not already in place

Staff Requirements

Moderate:

- If using automated system: staff member dedicated to overseeing the system should any issues arise
- If using manual system: staff member to draft and schedule/send the SMS messages
- Ensure people are registered for the system

Suggested Timing

Before Start of Heat Season:
- Establish SMS service and staffing plan
- Compose messages for use during heatwaves
- Ensure patients understand their individual vulnerability to heat

Start of Heat Season:
- Ensure that patients can opt in to receive heat/health messages and indicate their specific vulnerability for easy message targeting
- Ensure contact information is up to date

When Extreme Heat is Forecast:
- Schedule timing and frequency of SMS messages

During Extreme Heat Event:
- Activate messaging system

Additional Considerations

1. Are similar automated messages already shared by other sources? For example, the local school system. Ensure messages and timing are aligned to avoid confusion or overwhelming recipients.
2. Consider partnering with other stakeholders who share similar concerns. For example, local pharmacies may already be targeting clients on special kinds of medication with SMS messages.
3. Language barriers. Is message translation needed?
4. Consider briefing emergency response officials and emergency health care facilities, so that they know when the clinic has sent warnings as that may lead to greater demand for their services.

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1.3 Share Heat Safety Information via Social Media

Summary

Leveraging the reach and immediacy of digital platforms, this service would deliver heat safety alerts and tips through social media posts. Information can provide real-time updates that include:

- temperature forecasts
- cooling center locations, and
- advice on preventing heat-related illnesses

The service amplifies the reach of crucial information, targeting a wide audience, and utilizes a platform where many people already access news and information.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Moderate:

- Set up social media accounts on appropriate platforms
- Develop communication protocols and templates

Staff Requirements

Minimal:

- Staff member to manage social media accounts
- Evaluate messages - review site engagement/views

Suggested Timing

Before Start of Heat Season:

- Determine the best social media platforms for the populations you serve
- Establish social media accounts and presence
- Develop communication protocols and templates for the program

Start of Heat Season:

- Socialize resource for patient awareness
- Increase patient engagement through creative/interactive posting

When Extreme Heat is Forecast:

- Market resource for patient awareness

During Extreme Heat Events:

- Post updates regularly

Additional Considerations

1. Encourage community members, family members of patients or other platforms to re-share posts within their networks to enhance reach of heat safety information.
2. Language barriers – translation, reading-level
3. Post frequently enough to keep patients engaged but not too frequently; may cause alert fatigue and lead patients to ignore updates.
4. Ensure posts are accessible to a variety of patient audiences – translations and plain language.

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1.4 Partner with Community Health Workers to Share Heat Safety Information

Summary

Community Health Workers (CHWs) can serve as a vital link between healthcare systems and vulnerable communities. These trained individuals can disseminate heat safety information and provide in-person advice tailored to people's unique language, health, and cultural needs. CHWs can also identify health barriers, such as living conditions, and connect patients to supportive services. CHWs often have strong ties with the communities they serve and are trusted voices that can help patients stay safe during extreme heat.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Minimal to Moderate:

- Develop or compile heat-related education materials for CHWs
- Develop or compile patient assessment materials for CHWs

Staff Requirements

Minimal to Moderate:

- Recommended to partner with existing municipal/state CHW program(s), if possible.
- Will need staff member assigned to manage that relationship and resource compilation described above.

Suggested Timing

Before Start of Heat Season:
- Work with CHW program staff to train CHWs

Start of Heat Season:
- Deploy CHWs to vulnerable patients for heat education

When Extreme Heat is Forecast:
- Deploy CHWs to vulnerable patients for heat education

During Extreme Heat Events:
- Deploy CHWs to vulnerable patients for well-checks and heat education

Additional Considerations

1. Are there adequate levels of community health workers to serve the population in need?
2. Is it beneficial to develop a community health worker training program to meet volunteer demand?
3. Could community health workers be leveraged to conduct wellness checks in tandem with information sharing?
4. Consider establishing guidelines for components of the Heat-Health risk assessment.

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1.5 Partner with Community Organizations to Share Heat Safety Information

Summary

Partnering with community organizations that already provide services to vulnerable individuals improves a clinic's ability to share heat safety information. It involves establishing collaborations to disseminate crucial heat safety information before and during heat events. Through these partnerships, clinics utilize their reach and credibility within vulnerable communities to educate individuals on heat-related risks and appropriate preventive measures.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Minimal to Significant: Complexity will be based on partnership

Staff Requirements

Minimal to Significant: May be simple resource sharing or close collaboration and facilitation of heat-safety outreach

Suggested Timing

Before Start of Heat Season:
- Develop relationship and information sharing plan with community partner – including roles and responsibilities for each organization and assigning specific staff to implement

Start of Heat Season:
- Market resource to patients (as applicable)

When Extreme Heat is Forecast:
- Initiate information sharing plan

During Extreme Heat Events:
- Implement information sharing plan

Additional Considerations

1. Check if there is a heat emergency plan at the municipal or regional level.
2. Identify and establish partnerships with community organizations that have a strong presence and influence within the target community.
3. Tailor heat safety information to suit the specific needs and cultural context of the communities.
4. Ensure timely dissemination of heat safety information before, during, and after heat events.
5. Foster ongoing collaboration and communication with community organizations to continually assess and improve efforts.

1.6 Distribute Heat Kits with Heat Safety Information

Summary

During hot weather, people may benefit from being able to check the temperature in their home, having sugar-free electrolytes available, having sunscreen, sunglasses, sun hats or other resources to help them stay cool and protect them from the sun. Distributing hot weather kits may also be a good way to connect with your community and can be combined with sharing information on how to stay safe during hot weather.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Moderate: Contents of kits, bags or boxes to store them in

Staff Requirements

Moderate: Staff to carry out distribution of kits or care packages

Suggested Timing

- **Before Start of Heat Season:**
  - Identify donors who can provide contents for the kits
  - Establish a plan for how they will be assembled and distributed
- **Start of Heat Season:**
  - Obtain contents for the kits
  - Identify staff who will carry out distribution
- **When Extreme Heat is Forecast:**
  - Distribute kits to at-risk individuals
- **During extreme heat events:**
  - Distribute kits to at-risk individuals

Additional Considerations

1. There is no research on whether distributing heat kits improves health outcomes for at-risk patients. The information is based on anecdotal experience of frontline clinics and nonprofits. Staff should evaluate if this unproven intervention is the best use of resources.
2. The value of a kit depends on its contents and the recipients' needs. Staff should assess the population they serve and ensure the kit's contents are appropriate for their needs.
3. Suggested kit contents include cooling towels, thermometers, electrolytes, sunglasses, flyer or pamphlet for heat exhaustion and heat stroke, sunscreen, SPF ChapStick and water bottles.

1.7 Deliver Heat Safety Education in Schools

Summary

Students are increasingly impacted by hot weather, both in the classroom and during athletic activities. Heatstroke is a leading cause of death for student athletes. Additionally, students often play important roles educating their families about health issues and can protect older adults and their families during hot weather. Educating students on recognition, treatment and prevention of heat-related illness has the potential to keep them and their families safe.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Minimal to Moderate: Pamphlets or wallet cards to hand out with heat safety information and information on recognizing heat-related illness

Staff Requirements

Moderate: Staff to conduct heat safety education sessions with students

Suggested Timing

Before Start of Heat Season:
- Establish relationships with schools
- Identify education needs (general vs athletes)
- Develop and schedule education sessions

Start of Heat Season:
- Conduct education sessions
- Provide heat safety toolkits
- Train staff on heat protocols

When Extreme Heat is Forecast:
- Distribute heat advisories to schools and families
- Promote hydration and cooling
- Advise school staff/students to monitor outdoor activity

During Extreme Heat Events:
- Advise school staff/students to limit outdoor activities

Additional Considerations

1. A wide variety of resources already exist for educating student athletes on how to avoid heat stroke and how to recognize and treat it when it does occur. Clinics are trusted sources of information within their community and can distribute this information to school staff and students.
2. Some students may have elderly or medically vulnerable family members, and may desire resources on how to help their family members stay safe during hot weather. Consider the medical profile of your community and add relevant information for student families.
3. Consider leveraging back-to-school events as an opportunity to partner with schools to share heat safety information to families, students and staff all in one place.

ANNEX 2

Conduct Wellness Checks

The interventions within this section emphasize a direct approach to ensuring well-being during extreme heat events. They outline a multi-layered wellness check program, employing in-person visits, both independently and in collaboration with community partners, as well as telephone check-ins. By proactively checking on at-risk residents, these interventions aim to identify and address potential heat-related emergencies before they escalate.

2.1 Conduct In-Person Wellness Checks

Summary

An in-person wellness check involves designated individuals or teams visiting vulnerable patients to ensure their well-being and safety during extreme heat. These visits can assess mental and physical condition, ensure access to essential resources, or arrange for additional help if serious health or living condition concerns are identified. However, these checks have risks and can be physically taxing on staff.

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Significant: Assessment supplies, ambient thermometers, vehicle, training program with medical oversight for volunteers

Staff Requirements

Significant: Staff or volunteers to visit patients' homes during extreme heat (or phone wellness checks)

Implementation Examples and Additional Resources

CLICK HERE

Suggested Timing

- **Before Start of Heat Season:**
  - Develop staffing plan for program
  - Identify heat thresholds for program implementation
  - Develop method for identifying patients to visit
  - Conduct staff/volunteer training, with medical oversight
  - Collect and prepare needed supplies
- **Start of Heat Season:**
  - Refresh staff/volunteer training and check supplies
- **When Extreme Heat is Forecast:**
  - Alert program staff and mobilize volunteers and ready supplies
- **During Extreme Heat Events:**
  - Initiate wellness check program

Additional Considerations

1. Who will be doing the wellness checks?
2. How will you ensure the safety of the people that are performing the wellness checks, both in terms of safety from the heat and safety from interactions with other people?
3. What should staff do if they find someone in a potentially dangerous situation? What resources are you able to offer or connect them with?
4. Under what circumstances should program staff call 911?

This National Collaborating Centre for Environment Health guide for in-person and remote health checks is a vital resource to support clinic staff or volunteers.

2.2 Conduct In-Person Wellness Checks with Community Partners

Summary

In-person wellness checks during extreme heat involve visits to vulnerable individuals by trained teams to assess well-being, hydration, and living conditions, ensure access to cooling and prevent heat-related illness. They can provide immediate aid or additional support if needed. However, these checks carry risks due to the physical toll on staff. Partnering with door-to-door service organizations can enhance effectiveness of the intervention.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Moderate: Assessment supplies, ambient thermometer, training materials, information on cooling centers and non-emergency transport

Staff Requirements

Moderate: Staff time to train and manage partnership; support from clinician if needed

.

Suggested Timing

- **Before Start of Heat Season:**
  - Develop partnerships and solidify plan for program
  - Identify heat thresholds for program implementation
  - Conduct training with the community partners
  - Collect and prepare needed supplies
- **Start of Heat Season:**
  - Refresh staff training and check supplies
- **When Extreme Heat is Forecast:**
  - Alert community partner and refresh staff training
- **During Extreme Heat Events:**
  - Community organization staff conduct in-person heat assessments; clinical staff prepared to receive calls as needed

Additional Considerations

1. How will you ensure the safety of the people that are performing the wellness checks, both in terms of safety from the heat and safety from interactions with other people?
2. What should staff do if they find someone in a potentially dangerous situation? What resources are you able to offer or connect them with?
3. Under what circumstances should program staff call 911?

This National Collaborating Centre for Environment Health guide for in-person and remote health checks is a vital resource to support clinic staff or volunteers.

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2.3 Conduct Wellness Checks via Telephone

Summary

Telephone-based wellness checks involve clinic staff/volunteers calling vulnerable individuals to assess their well-being and safety, ensuring access to cooling and hydration to prevent heat-related illnesses. These checks allow staff to offer advice, share cooling center locations, and facilitate emergency assistance. They are safer and more cost-effective than in-person visits, however, they rely on recipients answering their phones and provide less comprehensive information.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Minimal to Moderate: Dedicated phone live, phone triage protocol for assessing patients (guide)

Staff Requirements

Moderate to Significant: Staff/volunteers to conduct the checks, clinical contact to consult with

.

Suggested Timing

Before Start of Heat Season:
- Arrange space and phone line for wellness checks
- Develop staffing plan. The number of staff/ volunteers will vary depending on the number of patients called, frequency of checks, and patients' unique needs
- Develop method for identifying patients to call

Start of Heat Season:
- Train staff/volunteers who will conduct checks
- Identify a clinical point of contact for volunteers

When Extreme Heat is Forecast:
- Alert staff/volunteers

During Extreme Heat Events:
- Conduct telephone checks

Additional Considerations

1. Determine who will conduct the wellness checks and the patient list. Patients should know to expect the call. It's beneficial if callers have pre-existing relationships with recipients.

2. Define protocols for unresponsive calls and encounters with patients needing care, including available resources and criteria for emergency services contact.

3. Address special needs, such as language barriers.

4. Telephone calls can be paired with less frequent in-person checks. .

This National Collaborating Centre for Environment Health guide for in-person and remote health checks is a vital resource to support clinic staff or volunteers.

ANNEX 3

Distribute Technology

The interventions in this section prioritize direct resource distribution to enhance a clinic's capacity to support vulnerable patients during extreme heat events. This targeted approach equips patients with essential tools to manage indoor temperatures and monitor their environment, promoting individual comfort and safety within their homes. By directly distributing these technologies, the clinic empowers patients to take control of their environment and mitigate heat-related risks.

3.1 Distribute Air Conditioners to Vulnerable Patients

Summary

Air conditioner (AC) distribution aims to provide the most vulnerable patients with AC units to mitigate the risks of extreme heat. For the distribution to be successful it is important to identify patients that could benefit and assess barriers to utilization (ability to afford energy costs, installation support, understanding how to use and maintain the unit, etc.) Due to the cost of AC, clinics should consider partnerships, grants, and/or limited, highly targeted distribution.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General

Might be challenging to reach: Housing Insecure

Resource Requirements

Moderate to Significant: Air conditioners, educational materials on safe use and maintenance, storage space

Staff Requirements

Moderate: Staff to identify at-risk patients, additional associated needs such as energy cost assistance or installation support, educate patients on safe air conditioner use and unit maintenance, and either distribute units or connect with partner for distribution

Suggested Timing

Before Start of Heat Season:
- Seek funding or develop partnerships to create an AC distribution program
- Identify patients and distribute

Start of Heat Season:
- Support patients to apply for Low-Income Home Energy Assistance Program (LIHEAP) to cover the energy costs
- Ensure support for unit installation and functioning

When Extreme Heat is Forecast:
- Alert patients that heat can impact them negatively and encourage them to utilize AC

During Extreme Heat Events:
- Repeat messages on the dangers of heat and the positive impact of AC to protect health, even for limited periods each day or night

Additional Considerations

1. Funding sources for air conditioners. Consider partnership, donations, or grants.
2. Who will receive the AC units? What are the criteria?
3. Will AC units be loaned or given?
4. Who will be responsible for the delivery and installation of the AC units? How will liability for problems, such as faulty installation, be handled?
5. How will clinic staff or programs support patients in applying for energy assistance programs (such as LIHEAP) to offset the burden of energy costs?
6. Consider pairing with ambient indoor thermometer distribution to provide important information on cost-effective air conditioner use (when temp exceeds 78F.)

3.2 Distribute Evaporative Coolers to Vulnerable Patients

Summary

Evaporative coolers, only efficient in dry climates, offer an energy-saving cooling method by evaporating water. Options range from professional installation for roof units to DIY setups for window or portable units. Though more energy-efficient than air conditioners, they have limitations: less effective in humid conditions; cooling range of 5 to 30 degrees; require clean running water, ventilation, and regular maintenance. Clinics should explore partnerships for affordable distribution.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General

Might be challenging to reach: Housing Insecure

Resource Requirements

Moderate to Significant: Evaporative coolers, materials on safe use and maintenance, storage

Staff Requirements

Moderate: Staff to identify at-risk patients and associated needs such as energy cost assistance or installation support, educate patients on safe use and unit maintenance, and distribute units or connect with partner for distribution

Suggested Timing

Before Start of Heat Season:
- Funding, donations, or partnerships to create distribution program. Identify patients who may benefit and distribute units

Start of Heat Season:
- Support patients to apply for energy assistance programs (such as LIHEAP) to cover increased energy costs. Installation support

When Extreme Heat is Forecast:
- Alert patients and encourage them to utilize evaporative cooling

During Extreme Heat Events:
- Repeat messages on the dangers of heat and the positive impact of evaporative cooling to protect health

Additional Considerations

1. Funding sources for evaporative coolers. Consider partnership, donations, or grants.
2. Whether the climate is suitable and models to distribute.
3. Evaporative coolers will be loaned or gifted
4. Recipient criteria.
5. Who will handle delivery and installation
6. Potential partnerships for funding.
7. Help recipients apply for energy assistance programs to mitigate energy costs.
8. Air quality considerations. If recipients are unable to cool their indoor location without smoke infiltration, they should seek a cooling shelter or air-conditioned space.
9. Consider pairing with ambient indoor thermometer distribution to provide important information on safe and effective evaporative cooler use.

3.3 Distribute Fans to Vulnerable Patients

Summary

Fans are cheaper and less energy intensive than air conditioners, cooling the body via aiding sweat evaporation. Fans can be harmful in extreme temperatures, especially above 95°F, as they may increase body temperature and the risk of dehydration. It's crucial for users to stay hydrated, pair skin wetting with fan use, and recognize fans' limitations. Cooling off in air-conditioned spaces is more effective at reducing injury, particularly when extreme heat is prolonged.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General

Might be challenging to reach: Housing Insecure

Resource Requirements

Moderate: Fans (purchase or through community partner), educational materials on safe use, storage space

Staff Requirements

Moderate: Staff to procure fans, identify at-risk patients, educate patients on safe fan use, and distribute

Suggested Timing

Before Start of Heat Season:
- Buy fans, gather fan donations, or partner with a community organization to purchase and store fans
- Identify and inform involved staff
- Develop method for identifying fan recipients
- Identify/create accompanying educational materials

Start of Heat Season:
- Distribute fans to identified patients

When Extreme Heat is Forecast:
- Distribute materials to patients in need

During Extreme Heat Events:
- Remind patients of conditions for safe fan use

Additional Considerations

If you are considering implement in a fan distribution program, it may be helpful to consider the following:

1. Funding sources for fans. Consider partnership, donations, or grants.
2. Will fans be loaned or given?
3. Patients should be educated about effective fan use and thresholds when fans may contribute to harmful physiological heating. Toolkit link
4. Who will you prioritize to receive fans? Who should prioritize seeking air-conditioned spaces?
5. Consider pairing with ambient indoor thermometer distribution to provide important information on safe and effective fan use.

3.4. Distribute Ambient Thermometers to Vulnerable Patients

Summary

An indoor ambient thermometer is a vital and often overlooked tool for heat safety. It enables patients to actively monitor their temperature exposure and identify when they need to seek alternative, cooler locations. However, many individuals may not have access to an indoor ambient thermometer or have knowledge of indoor temperature thresholds and specific actions they can or should take to prevent heat-related illness.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Minimal to Moderate: Purchase ambient thermometers, educational materials about safety thresholds, storage space

Staff Requirements

Minimal: Staff to procure thermometers, identify at-risk patients and distribute thermometers and educational materials

Suggested Timing

Before Start of Heat Season:
- Purchase and store thermometers (or partner with another organization)
- Identify and inform involved staff
- Identify/create accompanying educational materials

Start of Heat Season:
- Market program to patients
- Initiate distribution plan with involved staff

When Extreme Heat is Forecast:
- Distribute education materials to patients in need

During Extreme Heat Events:
- Remind patients on how to use thermometers to determine when to seek cooler shelter

Additional Considerations

1. Funding sources for thermometers. Consider partnership, donations, or grants.
2. Need to be accompanied with information identifying locally dangerous temperature thresholds and actions patients should take if thresholds are exceeded.
3. Will thermometers be loaned or given?
4. Thermometers should be stored in a central room (living room) and out of direct sunlight. If possible, it might also be beneficial to monitor bedroom temperature.
5. Consider pairing with air conditioner, evaporative cooler, or fan distribution.

ANNEX 4

Support Transportation Access

The interventions within this section prioritize ensuring access to transportation during extreme heat events. This collaborative approach focuses on forging partnerships with rideshare companies and public transit authorities. In doing so, these interventions aim to mitigate transportation barriers and ensure the community has safe and reliable means of reaching cooling centers or seeking medical attention during periods of intense heat.

4.1 Partner with Rideshare Companies During Heat Events

Summary

Clinics could partner with rideshare firms to offer transport vouchers to cooling shelters/ resilience hubs or other cool spaces for vulnerable patients, leveraging rideshare efficiency for easier access. This addresses barriers like lack of personal transport, limited mobility, and concerns over public transit safety, ensuring those at risk can access cool spaces.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Minimal: Method for distributing vouchers to vulnerable patients. Printed materials with location of cooling shelter/resilience hub, hours of operation, and contact information

Staff Requirements

Minimal: Staff time to contact rideshare companies and coordinate opportunities for free or reduced-cost ride vouchers for vulnerable patients

Suggested Timing

Before Start of Heat Season:
- Reach out to rideshare companies at the start of heat season to coordinate free or reduced-cost rides

Start of Heat Season:
- Confirm program status with rideshare companies and prepare for voucher distribution

When Extreme Heat is Forecast:
- Distribute vouchers

During Extreme Heat Events:
- Distribute vouchers

Additional Considerations

Rideshare companies like Lyft and Uber have previously offered free or reduced-cost rides to individuals during disasters or crises. These initiatives are part of their community support programs/disaster relief programs. To explore collaboration opportunities with Lyft or Uber's community support programs, clinics can visit their community support websites or contact them directly.

Consider the following:

1. How will you define criteria for who is or isn't eligible to receive a free ride?
2. How will you ensure that your program is accessible to people who have never used rideshare apps before?

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4.2 Coordinate with Public Transit During Heat Events

Summary

In many places, cooling centers, or publicly accessible places with AC, already exist, but many individuals are unable to get to those locations. To mitigate this issue, established public transit can offer free service to individuals traveling to cooling centers, and clinics can support the development of such programs. By doing so, people who may originally be hesitant to use public transit due to cost may feel less of a barrier to using public transport.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Minimal: Printed materials for patients. Include route information, cooling shelter/resilience hub hours of operation, and contact information

Staff Requirements

Minimal to Moderate: Clinic leadership and/or staff to coordinate with public transit representative

Suggested Timing

Before Start of Heat Season:
- Establish relationship and plan with public transit agencies
- Prepare informative patient materials

Start of Heat Season:
- Confirm transport plan and support
- Update informative patient materials as needed
- Share information with patients

When Extreme Heat is Forecast:
- Confirm transport details and share with patients

During Extreme Heat Events:
- Share transport details with patients and communicate any changes that develop

Additional Considerations

1. Buses with refrigerated air can act as mobile cooling centers. Consider advocating for strategic location of buses, such as homeless encampments.
2. How to encourage people to utilize this free service if they are typically uncomfortable using public transit?
3. Will this service always be free, or only during heat events or the summer? Ensure those specifics are shared with patients.
4. Consider additional coordination to support patients with mobility limitations.
5. In some cases, special bus routes may be established during heat emergencies, specifically for transport to cooling shelters/ resilience hubs.
6. Consider whether waiting at bus stops will increase exposure to dangerous temperatures.

4.3 Partner with Community Organizations to Leverage Public Transit During Heat Events

Summary

Public air-conditioned spaces are often available, however vulnerable individuals may be unable to access them. To mitigate this issue, established public transit can offer free service to individuals traveling to cooling centers. For clinics with fewer resources, advocating with other community organizations, such as senior citizen resource centers, can provide the leverage and resources needed to facilitate free and accessible transportation to cooling centers.

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Minimal: Printed materials for patients. Include route information, cooling shelter/resilience hub hours of operation, and contact information

Staff Requirements

Minimal: Staff to participate in community organization(s') meetings

Implementation Examples and Additional Resources

CLICK HERE

Suggested Timing

Before Start of Heat Season:
- Establish relationships with community organizations which serve similar populations
- As a coalition, establish relationship with public transit authority and advocate for free transit to cooling shelters/resilience hubs or other cool spaces
- Prepare informative patient materials

Start of Heat Season:
- Meet with community groups to confirm transport plan and support
- Share information with patients

When Extreme Heat is Forecast:
- Confirm transport details and share with patients

During Extreme Heat Events:
- Communicate with patients about any changes

Additional Considerations

1. Buses with refrigerated air can act as mobile cooling centers. Consider advocating for strategic location of buses for people to cool down, e.g., near homeless encampments.
2. How to encourage people to utilize this free service if they are typically uncomfortable using public transit?
3. Will this service always be free, or only during heat events or the summer? Ensure those specifics are shared with patients.
4. Consider patients with mobility limitations, and any additional resources or coordination necessary for them.
5. In some cases, special bus routes may be established during heat emergencies, specifically for transport to cooling shelters/resilience hubs.
6. Consider whether waiting at bus stops will increase exposure to dangerous temperatures.

ANNEX 5

Support the Community

The interventions in this section prioritize the well-being of the community during extreme heat events. They focus on strengthening existing cooling shelters by integrating clinic support. This collaborative approach aims to provide vital medical services on-site, ensuring vulnerable individuals have access to immediate care and resources when temperatures rise to dangerous levels.

5.1 Empower Cooling Shelters/Resilience Hubs with Clinic Support

Summary

Cooling centers or resilience hubs provide a safe, cool space for vulnerable populations during heatwaves, especially the elderly, those without air conditioning, and the unhoused. Clinics can support these centers by offering medical aid, educating staff on heat illnesses and naloxone use, and making further medical referrals. Staff can help ensure a comfortable environment, collaborate with local authorities, and manage health operations, crucial for preventing heat-related health issues and reducing unnecessary medical services.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Moderate to Significant: Medical assessment and treatment supplies

Staff Requirements

Significant: Supporting cooling centers can be staff intensive

Suggested Timing

Before Start of Heat Season:
- Establish relationships with relevant local organizations
- Develop plan for clinic engagement with cooling center(s)/resilience hub(s)
- Prepare staffing plan to enable clinic support of cooling center/resilience hub

Start of Heat Season:
- Confirm plan with local organization partners
- Confirm staffing plan

When Extreme Heat is Forecast:
- Determine if cooling shelter/resilience hub will be operational during forecasted heat

During Extreme Heat Events:
- Initiate staffing plan if cooling shelter/resilience hub will be operational

Additional Considerations

1. It takes time and effort to establish relationships with community organizations or local agencies that run cooling centers/resilience hubs.
2. Determine medical staff presence, when cooling center/resilience hubs are operational, to assess and manage medical needs.
3. Consider administrative staff managing clinical staff scheduling and coordination with cooling center/resilience hub staff.
4. When working with your partners, who is responsible for what task?
5. Who is your target audience? How can you create more welcoming spaces for those most vulnerable?
6. How do you share resources in a way that is beneficial to all parties?
7. Consider utilizing mobile medical units at the shelter.

ANNEX 6

Connect Patients with Assistance Programs

The interventions outlined here prioritize patient well-being through improved access to financial resources. This focus on connection aims to bridge the gap between patients and essential support programs, specifically those offering energy assistance. By facilitating this connection, the clinic empowers patients to manage their utility costs, ultimately promoting a more stable and healthier environment within the home during all seasons.

6.1 Energy Assistance Programs

Summary

The Low-Income Home Energy Assistance Program (LIHEAP), the Weatherization Assistance Program (WAP) may help households (renters and homeowners) with their energy bills, including heating and/or cooling expenses, and weatherization upgrades to reduce energy consumption. These programs can offer aid to the most vulnerable, the elderly, disabled, and families with children. These programs are funded via different sources, however are distributed via states, tribes, and territories, or local municipalities.

Implementation Examples and Additional Resources

CLICK HERE

Patient Populations

At-Risk Workers | Limited English | General

Might be challenging to reach: Housing Insecure

Resource Requirements

Minimal: Printed LIHEAP/WAP/local program materials

Staff Requirements

Minimal to Moderate: Staff are needed to

- Either identify community partnerships that can help patients apply to programs or require training to assist patients
- Contact programs to get materials for patients

Suggested Timing

Year-Round:

- LIHEAP/WAP/local programs can provide significant benefits to recipients year-round and the process to apply and start receiving benefits can vary in timing depending on the funding process.

Additional Considerations

1. Helping patients apply for LIHEAP/WAP/local programs will vary depending on the region-specific application process, the ability of the patient to complete paperwork and/or provide eligibility, and staffing availability.
2. Local nonprofits that help community members apply for various assistance programs may be able to help.
3. Clinics should consider whether working with a local organization is strategic and how to direct/support patients accessing this support.

Examples include having information on LIHEAP/WAP/local programs to discuss with patients, having volunteer staff in waiting areas to talk with patients, or co-hosting a registration event.

ANNEX 7

Address Workplace Safety

The interventions within this section target the crucial role of healthcare professionals in fostering safer workplaces during extreme heat. By equipping clinic staff with the knowledge to educate both employers and workers on heat stress prevention, these strategies empower businesses to create a more secure environment for their workforce. This proactive approach aims to mitigate heat-related risks within the workplace, ultimately protecting employee health and well-being.

7.1 Employer Education & Action

Summary

Employer education aims to equip businesses and organizations with the knowledge and tools to protect their employees from heat stress, especially during extreme heat events. Although federal and state occupational health and safety agencies provide information on extreme heat and occupational heat stress prevention, information and training from trusted local clinic staff can provide additional support and foster safer work environments.

Patient Populations

At-Risk Workers | Limited English | General | Housing Insecure

Resource Requirements

Minimal: Printing educational materials

Staff Requirements

Moderate: Staff needed for outreach, education, and/or presentation to local business leaders, unions, and/or worker resource centers

Implementation Examples and Additional Resources

CLICK HERE

Suggested Timing

- **Before Start of Heat Season:**
  - Identify and plan opportunities for employer education
  - Develop an education and training program
  - Develop training materials that are culturally appropriate for the community
- **Start of Heat Season:**
  - Conduct planned employer education
- **When Extreme Heat is Forecast:**
  - Remind trained employers of safety information
- **During Extreme Heat Events:**
  - Remind trained employers of safety information

Additional Considerations

1. Building relationships with business associations will support outreach and build trust.
2. Consider framing content in language that speaks to business productivity. For example, preventing heat injuries will ensure a safe and productive work environment. Exposure to high temperatures has been linked to reduced productivity and increases in workplace injuries.
3. Focus should be on agriculture and construction workers, as well as indoor workers in hot environments (e.g., kitchen, factory, foundry).
4. Consider partnerships with organizations already focusing on occupational safety and advocacy. Offer assistance on outreach materials and trainings.

INTERVENTION ANNEX

Title:

Summary

Patient Populations

☐ At-Risk Workers ☐ Limited English ☐ General ☐ Housing Insecure

Might be challenging to reach:

Resource Requirements

Staff Requirements

Suggested Timing

Before Start of Heat Season:

Start of Heat Season:

When Extreme Heat is Forecast:

During Extreme Heat Events:

Additional Considerations

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NOTES:

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