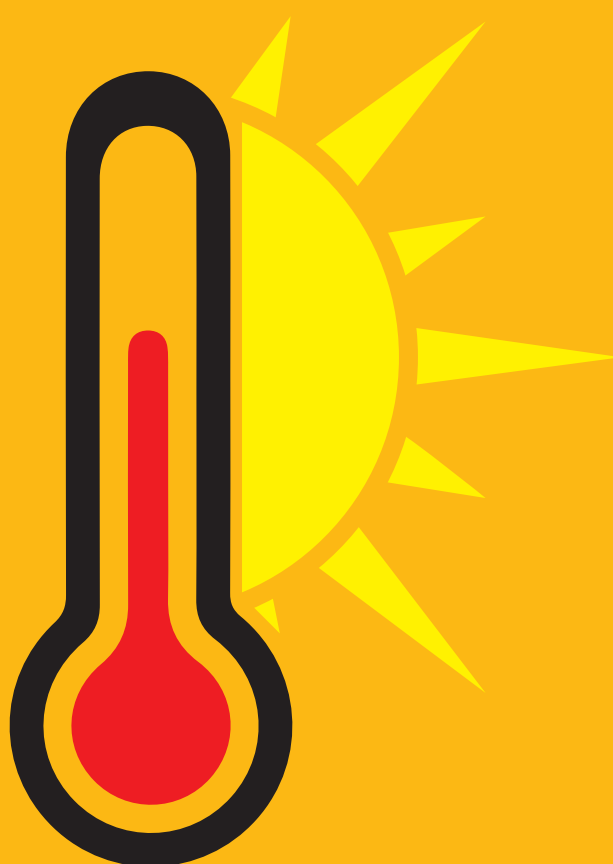


# **Climate Resilience Toolkit** **for Health Centers in the Philippines**

## **Heat**







Republic of the Philippines  
**DEPARTMENT OF HEALTH**  
*Office of the Secretary*



***Greetings to our Health Resilience Champions!***

On behalf of the Department of Health (DOH), I extend my warmest congratulations to AmeriCares Philippines on the launch of the *Climate Resilience Toolkit for Health Centers in the Philippines*.

This initiative comes at a critical time. As one of the countries most vulnerable to the impacts of climate change, the Philippines faces growing challenges from extreme heat, floods, and typhoons. These hazards not only threaten lives and livelihoods, but they also place immense pressure on our health systems and the people who uphold them, our frontline health workers.

Aligned with Agenda #4 of the DOH's 8-Point Action Agenda, "*Handa sa Krisis*", this toolkit strengthens our efforts to build climate-resilient and sustainable healthcare facilities. Developed through the strong collaboration between the DOH and AmeriCares, with support from Johnson & Johnson and global experts, the toolkit offers practical, evidence-based tools for health centers in high-risk and underserved areas to assess vulnerabilities, respond to threats, and sustain services.

But beyond infrastructure and protocols, this toolkit affirms our shared belief: climate resilience begins with people. It begins with empowering our doctors, nurses, barangay health workers, and administrators with the skills and tools to act decisively when lives are on the line. This is a step toward a more prepared, more compassionate, and more equitable health system.

The toolkit aligns with the Philippine Roadmap on Health and Climate Change and supports our international commitments under the United Nations Framework Convention on Climate Change and the Paris Agreement. It helps us build climate *SMARTER* health systems – sustainable, multisectoral, adaptive, resilient, transformative, equitable, and responsive.

To our partners at AmeriCares Philippines and to everyone who contributed their time, expertise, and heart to this effort, *maraming salamat!* Your work reflects what is best about public health: collaboration, compassion, and commitment to the greater good. Together, we can build climate-resilient and low-carbon sustainable health systems as part of our universal health care, *dahil sa Bagong Pilipinas, Bawat Buhay Mahalaga!*

**TEODORO J. HERBOSA, MD**  
Secretary of Health

## Acknowledgments

The Department of Health and AmeriCares Philippines extend their gratitude to **Johnson & Johnson** for its generous support for the development of a Climate Resilience Toolkit for the Philippine context. This adaptation was made possible through the technical guidance and expertise of Harvard Chan C-CHANGE and the invaluable contributions of the following Contributors and Project Team Members.

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# How to Use This Toolkit

The Climate Resilience Toolkit for Health Centers in the Philippines includes a wide variety of resources for three climate-related hazards: heat, floods, and typhoons. There is more material here than anyone has time to read in one sitting. The following suggestions may help you make the best use of these resources. These suggestions are based on feedback, focus groups, and interviews with frontline clinic staff that implemented earlier versions of these toolkit materials.

In addition, this toolkit was developed through extensive collaboration with the Technical Advisory Committee and Working Groups, ensuring that its content is tailored to the unique needs and priorities of health centers in the Philippines. Their cross-sectoral expertise has been integral in contextualizing the material to align with the country's climate resilience strategies.

## Designate a Preparedness Lead

Designate one person at your facility as a Preparedness Lead. This person can:

- Take the time to review these documents in detail.
- Review and identify materials that will be most useful to all parts of the institution.
- Assign a staff member to monitor local weather threats such as typhoons, floods, and hot weather.
- Ensure the staff is signed up for alerts from the PAGASA, NDRRMC, and other relevant local agencies.

## Identify your Clinical Engagement Strategy

Set up a meeting with members of your health care team to determine how you would like to use the Information, Education, and Communication (IEC) materials at your facility. Primary Care Facilities that participated in the development of these resources use them in several different ways, including the following:

- Educate clinicians on the specific impacts of climate hazards prevalent in the Philippines, such as typhoons and flooding, and how to counsel patients accordingly.
- Make sure posters and flyers are easily accessible, visible, and available in local languages along with other counseling materials used in the health facility.

- Include patient flyers in their home instructions and prescriptions after consultation.
- Provide posters and place them in prominent locations such as waiting rooms.
- Conduct education sessions tailored to the local context for staff, and patients focusing on common climate hazards in the Philippines.
- Assign a specific member of the health care team to ask patients about relevant hazards and provide educational materials. This could include roles such as nurses, doctors, social workers, pharmacists, community health workers, and others.

## Tailor These Resources to the Needs of Your Institution

In some cases, it may be desirable to modify toolkit resources to include contact information for local authorities, such as barangay officials and local disaster risk reduction and management offices. Include details on local policies and practices relevant to climate resilience. Examples of this could include:

- Providing information on local resources like evacuation centers, cooling centers, and community health services.
- Providing information about specific policies and practices at your institution.
- You are welcome to include this reference material or link them to your internal institutional reference documents or database.

Alternatively, you may find it helpful to make a separate flyer with a list of local resources and phone numbers to accompany the materials from this toolkit.

## Integrate Resources Into Your Health Facility's Manual of Operations

You may find it helpful to integrate toolkit resources into the health facility's Manual of Operations for easy reference and review.

- You are welcome to include the attached PDFs and content in after-visit summaries or to link to them from internal institutional reference documents or databases.
- If you need more advanced integration support, such as creating templates of these materials within your electronic health record system, we may be able to help provide the content in a compatible format. Please contact our team for more information.

## Share Your Experience and Ideas

Many of the clinics that helped develop these materials encourage the sharing of successful strategies and experiences dealing with climate hazards specific to the Philippines, such as typhoon preparedness and response. Do annual reviews and periodic reassessments of the resources after a specific climate-related event or risk of climate hazards has decreased.

If you have insights or experiences to share, please contact our team at [resilience@americares.org](mailto:resilience@americares.org). In some cases, your contributions may be shared with other health centers, with credit to you and your institution if desired. Examples of what you might share include:

- A description of how you have been using a specific resource in the toolkit.
- An anecdote about a climate hazard that you have dealt with successfully.
- Best practices, lessons learned, innovations and other initiatives that your institutions are undertaking or implemented successfully.

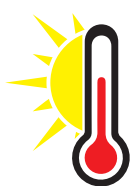
## Conduct Periodic Reassessments

It may be beneficial to periodically reassess your climate resilience activities. Consider doing this:

- Annually after the risk of climate hazards has decreased.
- After specific climate-related events, such as a typhoon or hot weather, review and learn from the experience.

**NOTES:**

[illegible]



# Practical Guidance for Health Care Providers on Prevention and Treatment of Heat Related Illness

## Prevention of Heat-Related Illness

(See page 12)

- You can counsel patients on steps they can take to prevent heat-related illness, including awareness of dangerous heat conditions, access to cool locations, and guidance on hydration, electrolyte intake, and workplace safety.
- Patient handouts providing easy-to-understand information on how to stay safe during hot weather and when to seek medical attention are available.
- Some populations and types of patients are particularly at high risk of heat-related illness and may benefit from increased attention to the prevention of heat exposure. These include infants and small children, older persons, pregnant women, persons with disabilities, patients with diabetes, heart disease, previous history of stroke or coronary artery disease, kidney disease, lung disease, dementia or cognitive impairment, mental health conditions, or substance use disorders.

## Diagnosis of Heat-Related Illness

(See page 14)

- Heat-related illnesses include heatstroke, heat exhaustion, heat-related syncope, heat cramps, heat rash, dehydration, and electrolyte abnormalities such as hyponatremia.
- **Heatstroke** is defined as severe hyperthermia (core body temperature greater than 40°C) due to heat exposure or exertion, combined with altered mental status. Patients may have seizures, coma, or other neurologic abnormalities.
- **Heat exhaustion** occurs when heat stress leads to depletion of fluid and electrolyte reserves. Symptoms may include headache, fatigue, weakness, dizziness, lightheadedness, nausea, and vomiting. There may also be mild to moderate increases in core body temperature.
- It is important to **measure a core body temperature using a rectal thermometer** in suspected cases of heatstroke. Other methods of measuring body temperature can be falsely reassuring.
- Heat-related illnesses can mimic a variety of other conditions, including infections, arrhythmias, strokes, hypoglycemia, and intoxication. It is important to **consider a broad differential diagnosis and maintain a high index of suspicion** for both heat-related illnesses and non-heat-related illnesses during hot conditions.

## Treatment of Heat-Related Illness

(See page 14)

- **Patients with heatstroke should be immediately cooled to a safe body temperature** (less than 38.8°C). External cooling using **cold water immersion is the preferred approach**; providing evaporative cooling by **wetting the body and running powerful fans, or placing ice packs on the groin, armpits, and body** are also acceptable if other options are not available.
- Most patients with heatstroke will be dehydrated and will benefit from **IV fluid rehydration and correction of electrolyte abnormalities**.
- Heatstroke carries high mortality, and after initiating cooling treatments, **patients with heatstroke should be transported to a hospital** capable of comprehensive care for this condition, including monitoring for metabolic complications and organ injury.
- **Patients with heat exhaustion need fluids, electrolytes, and relief from the heat.** In healthy patients with mild-to-moderate symptoms, oral rehydration, eating a meal containing salt, and moving to a cool location are often enough to treat this problem. In patients with chronic illness, older persons, small children and babies, persons with severe symptoms, and people who do not improve with oral therapies, IV fluid rehydration in a hospital setting may be necessary.
- Patients with heat syncope should have standard syncope assessments performed by health professionals, as well as rehydration, and if necessary, cooling and correction of electrolyte abnormalities.

## Heat is Getting More Dangerous in the Philippines

(See page 9)

- Climate change, also known as global warming, is leading to hotter temperatures in the Philippines. More patients are being exposed to dangerous heat than ever before.
- Studies conducted in the Philippines show that very hot weather is associated with increased morbidity and mortality.
- Cities where large numbers of older persons live are particularly high-risk settings.
- You can access information on the heat index and heat forecast from PAGASA.

## Objective

**This document is intended to provide health professionals with an overview of the relationship between heat and health in the Philippines and to provide a set of practical actions and information that can support good clinical practice and preventative medicine in the context of increasing heat exposure resulting from global climate change.**

## Contents

This document is divided into sections on the following topics:

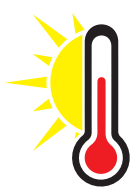
- Prevalence of heat-related illness and burden of disease (*page 9*)
- Prevention of heat-related illness (*page 12*)
- Recognition and management of acute heat-related illness (*page 14*)
- Reference materials (*page 17*)

Providers looking for guidance on the acute management of heatstroke should go to (*page 14*).

High humidity reduces the effectiveness of sweating as a cooling mechanism, making conditions feel significantly hotter than the actual temperature displayed on the thermometer.







# Prevalence of Heat-Related Illness and Burden of Disease For Providers

Hot conditions are dangerous, and have been associated with increased morbidity, mortality, and health care utilization in a wide variety of settings around the world.

## Epidemiology

The temperatures that increase the risk of harm for high-risk individuals may be lower than those considered dangerous by many people (Tobias et al, 2021). A study of the Philippines as a whole showed that overall mortality increases when it is hotter than about 25°C at night (Estoque et al, 2020); another study showed that mortality in Manila City increases at temperatures above 30°C (Seposo et al, 2015). A wide variety of diseases can be associated with hot weather; for example, in some parts of the Philippines, including Cagayan Valley, Tuguegarao City, and Isabela Province, the risk of hospitalization or death from enteric infections increases in hot weather (Chua et al, 2022).

## At-Risk Populations:

Some Filipinos are at particularly high risk during hot weather, for example, older persons, women, and people with lung conditions (Seposo et al, 2015). After taking into account at-risk populations and other factors, population-level risk from heat is higher in some parts of the Philippines than others, as shown in this [map of heat risk distribution](#) (Vergara & Blanco, 2023). **See Figure 2 on page 11** for additional information on at-risk populations.

## Physiologic Effects

Heat is dangerous to human health. When the body overheats, in a condition called heatstroke, internal organs can shut down and people can quickly die if they are not cooled down. Dehydration and loss of electrolytes can cause a condition called heat exhaustion, which can also be dangerous, particularly to people who already have problems with their heart or kidneys. In addition to the risk of **heatstroke** and **heat exhaustion**, people are at higher risk of heart attacks, strokes, hospitalization, and death during hot weather, due to a combination of dehydration, inflammatory and stress-related biochemistry, and resulting endothelial and end-organ injury.

## Influence of Humidity

Higher humidity levels mean that the air is holding a larger proportion of moisture, and can interfere with the efficiency and effectiveness of sweating (perspiration) as a means to cool the body. The Philippines has high year-round humidity, meaning that it can be harder for patients to cool down by sweating. This also means that a given temperature is more dangerous to health than it would be in dry conditions. **See Figure 4 on page 14** for further information on how temperature and humidity interact to create dangerous heat conditions.

Metro Manila logged its new hottest temperature in recorded history of 38.8 degrees Celsius at the PAGASA station April 2024



Photo from: charlesdeluvio-unsplash.com



### Influence of Cities and Buildings

The forecast temperature may not accurately represent the temperature people are exposed to in their homes or workplaces. Urban heat island effects mean that cities can be hotter than rural areas, due to factors such as fewer trees, less greenspace, more concrete, and more traffic. In the Philippines, urban areas including Metro Manila, Cebu City, and Cagayan de Oro experience higher temperatures than the rest of the country; many of the Filipinos who are most vulnerable to heat, including older persons, are concentrated in these urban areas (Vergara & Blanco, 2023). Even within a city, the upper floors of multi-story buildings, especially those without air conditioning, may be much hotter than lower levels.

### Daily Temperature Variation

Temperatures tend to peak in the mid-to-late afternoon. The time of day with the highest temperatures for your location can be found at [PAGASA](#) or from your local meteorological agency. Night-time temperatures are important for physiological recovery and elevated nighttime temperatures have been associated with higher mortality in the Philippines (Estoque et al, 2020). Night-time cooling is more limited in dense urban areas due to heat retention in concrete and masonry structures and surfaces.

### Seasonal Temperature Variation

The Philippines is warm year-round, with an annual seasonal variation of about 3°C. The greatest risk of dangerous heat occurs in April and May (World Bank, 2020).

### Long-Term Change

Temperatures in the Philippines are getting hotter because of climate change, and long-term warming of more than a degree Centigrade has already occurred (IPCC, 2023). While a difference of a degree may seem small, what is changing is the average temperature; even relatively small increases in average temperature can lead to dramatic increases in the number of dangerously hot days. Heat-related illness and mortality are expected to increase as climate change leads to increasing exposure to hazardous heat amongst the population of the Philippines.

### Impacts on Infectious Diseases

Warmer conditions can alter the dynamics of infectious diseases and their vectors. These changes tend to be linked with changes in long-term average temperatures, rather than the occurrence of short spells of intense heat. There is some evidence from the Philippines linking the hatching of dengue vector *Aedes aegypti* eggs with warmer temperatures, which may allow transmission in new areas such as rural highlands (Edillo et al, 2022). A wide variety of diseases can be associated with hot weather; for example, in some parts of the Philippines, the risk of hospitalization or death from enteric infections increases in hot weather (Chua et al, 2022).

Figure 1

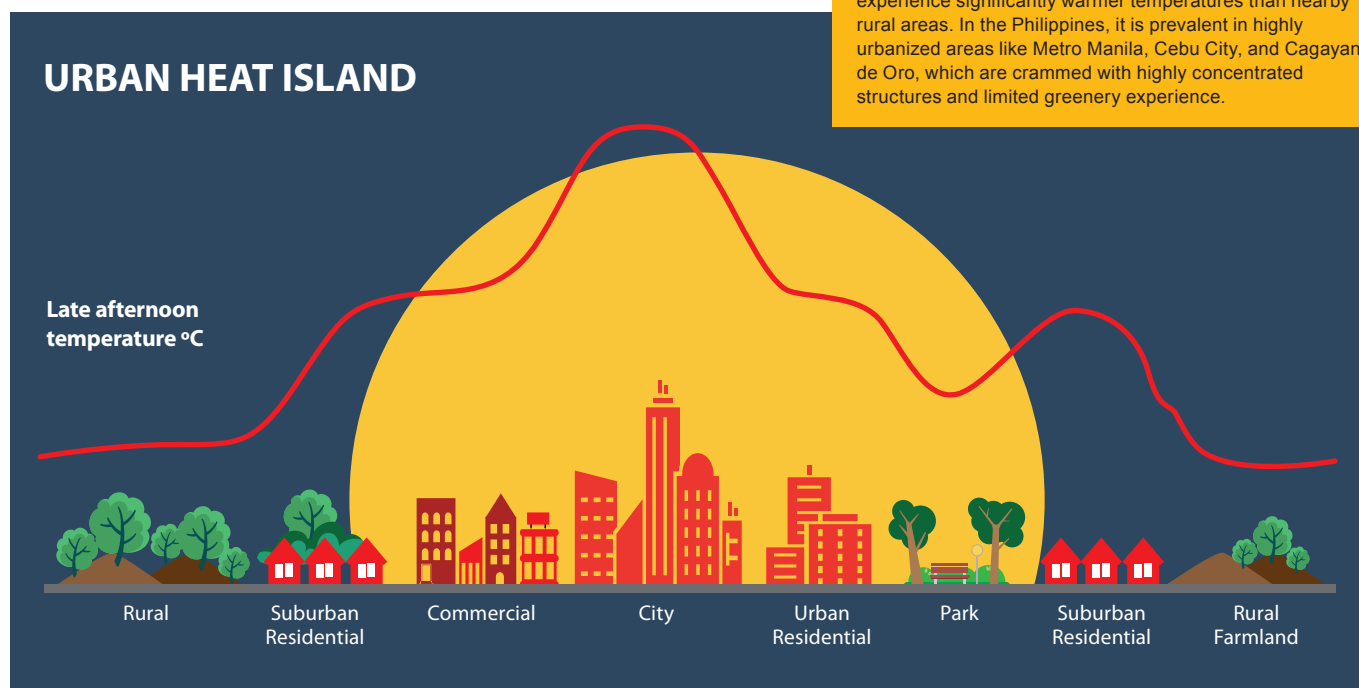
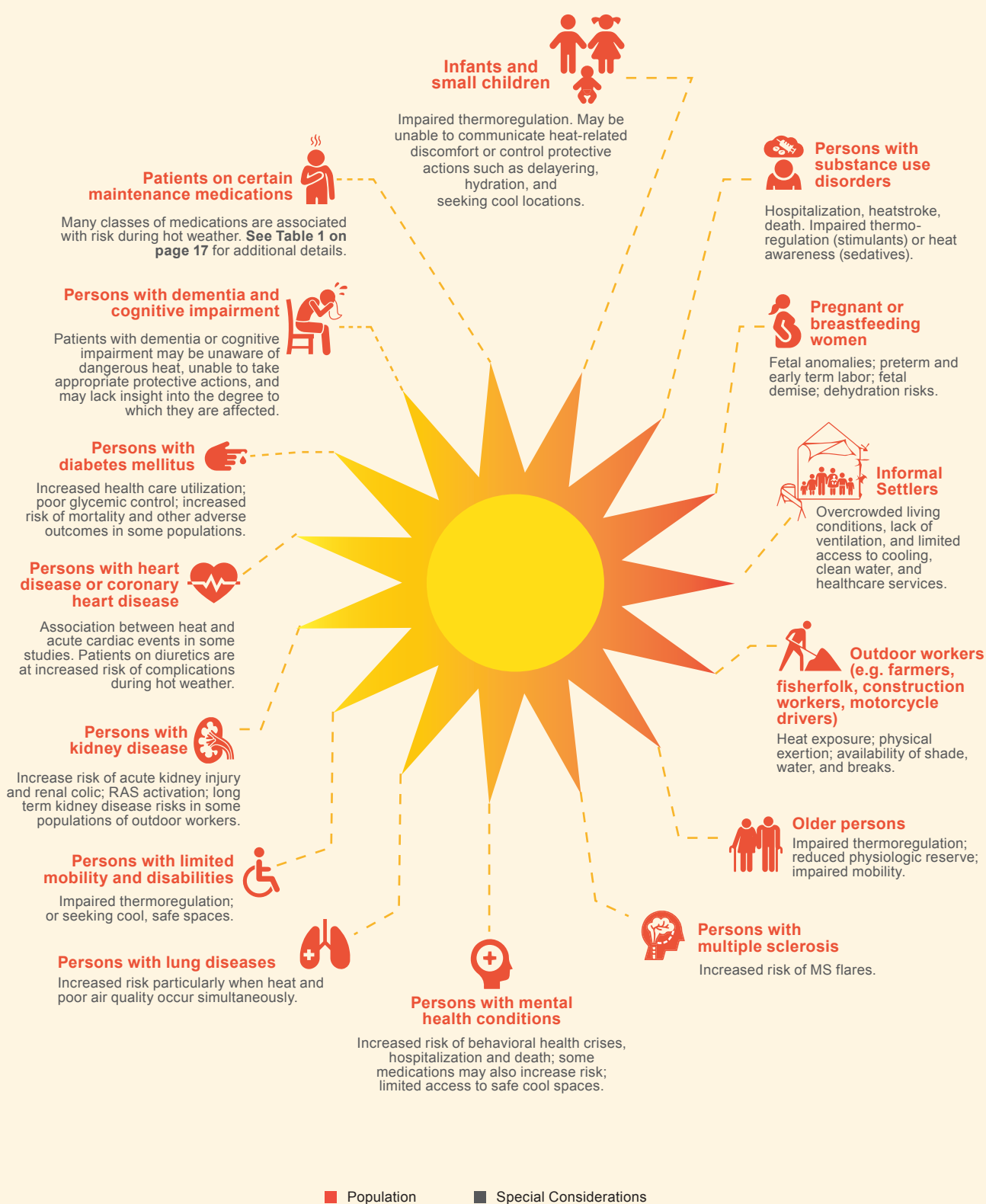
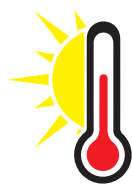


Figure 2

## Special populations that have been found to be at increased risk of health harms during hot weather conditions in the Philippines and in other settings around the world.





# Prevention of Heat-Related Illness For Providers

**Many cases of heat-related illness can be prevented through education, access to hydration and cool spaces, and early recognition of potentially concerning symptoms or situations and actions to address these. Anticipatory guidance and development of personalized heat risk assessments can help patients know which actions to take on hot days. The following information, strategies, and resources can help you educate and guide patients who are at risk from heat on steps they can take to prevent heat-related health harms.**

## Outdoor Temperature

Outdoor temperature and humidity in the Philippines are becoming increasingly dangerous, particularly in April and May. Before going outside or performing a heavy physical activity such as exercise or outdoor work, patients can check weather forecasts via phone, television, radio, or the Internet. Risk increases with higher temperatures and humidity (**See Figure 4 on page 14** for specific temperature-humidity thresholds).

## Indoor Temperature

Studies performed outside the Philippines suggest that temperatures in a patient's home should ideally remain below 27°C, and that if they cannot keep the temperature below 27°C, they should use a fan or consider moving to an air-conditioned space until the temperature cools. Indoor temperature guidelines specific to the Philippines may become available in the future.

If a patient does not have a thermostat or thermometer that measures room temperature in their home, they can be bought for a small amount of money at local stores or online. Consider distributing inexpensive thermometers in your clinic.

## Heat Advisories and Heat Alerts

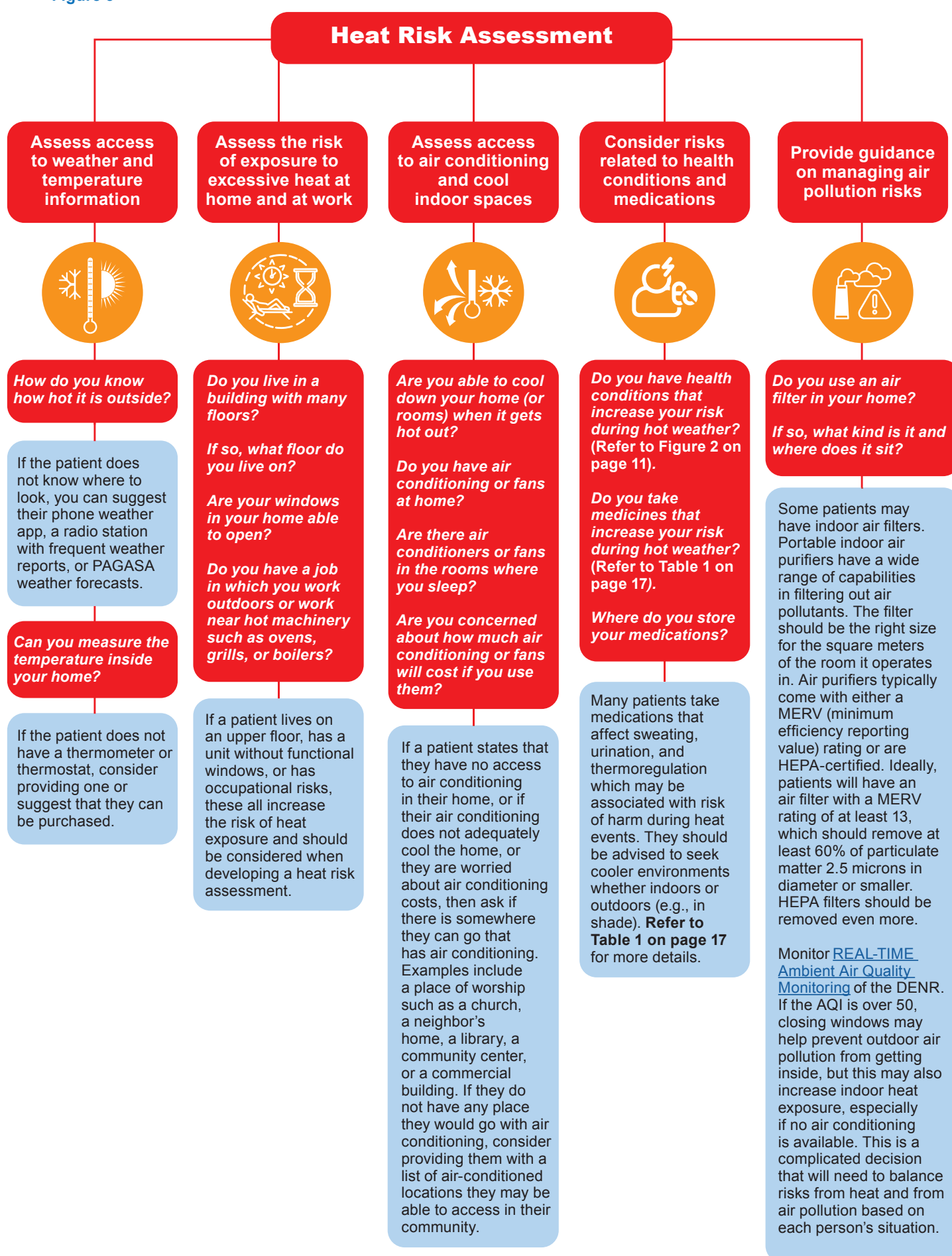
When a public health advisory has been announced, advise patients to follow their heat risk assessment (**See Figure 3 on page 13**). Patients should stay indoors in an air-conditioned space when possible or may utilize shaded outdoor areas if necessary; it is particularly important for members of the groups listed in **Figure 2 on page 11** to seek shelter from the heat. If going outside is necessary, limit outdoor activities and avoid intense activities. Stay in shaded areas or seek shelter with shade, and wear protective gear like wide-brimmed hats and sunshades, especially during the hottest part of the day, typically from 10 a.m. to 3 p.m.

## Establishing a Heat Risk Assessment

Some patients may benefit from a detailed heat risk assessment. Guidance should be based on their disease severity, comorbidities, access to air conditioning, and exposure to dangerous heat in their community, workplace, or home. The action plan can be updated during clinic visits and form the basis for both individual protective actions and clinical management of their care in the event of extreme heat.

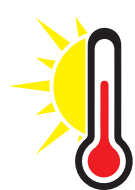
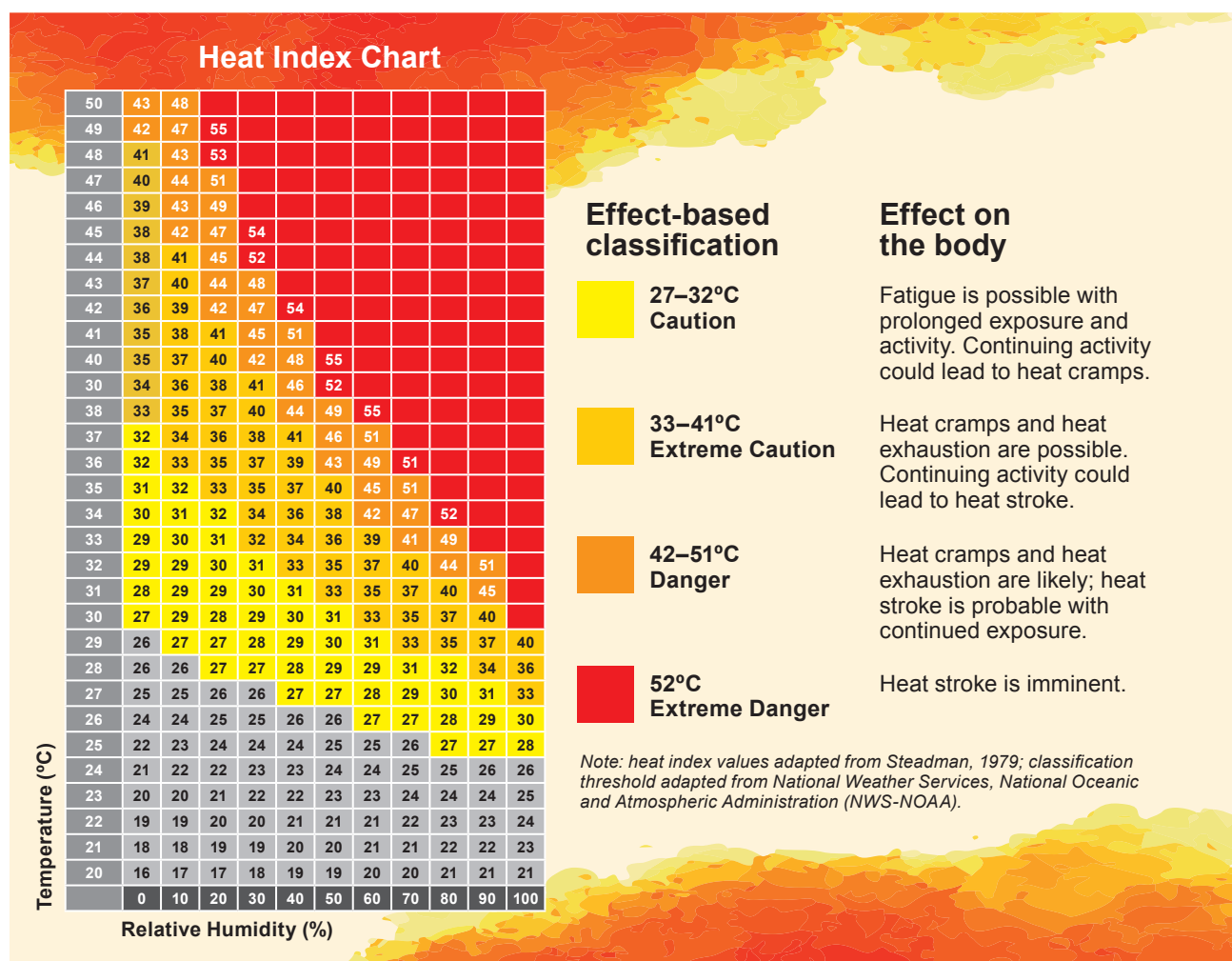
The following questions can help you assess the risk to your patients posed by extreme heat and can provide a template through which you can provide guidance on actions they can take to reduce their risk during hot weather.

Figure 3



**Figure 4.**

Both temperature and humidity affect how dangerous conditions are to human health, as shown in the following Humidex chart (Source: [PAGASA Heat Index](#)).



## Recognition and Management of Acute Heat-Related Illness For Providers

Heat-related illness spans a spectrum from heatstroke, which is immediately life-threatening, through moderate acuity conditions such as heat exhaustion and heat syncope, to low acuity conditions such as heat rash and mild dehydration. Likewise, the treatment of acute heat-related illness may range from basic interventions such as providing water and electrolytes to advanced, invasive critical care procedures performed in a referral hospital setting.

The following guidance consists of essential information and critical actions that should be understood by all health care professionals. Some techniques or interventions may be inappropriate in some settings. Health professionals are expected to practice at the level of their training or licensing, and to seek assistance or arrange transfer for cases that exceed their capabilities.

**Figure 5.**

Recognition and initial actions to treat heatstroke and heat exhaustion in out-of-hospital settings.

Source: [Harvard / AmeriCares Climate Resilience for Frontline Clinics Toolkit, 2024.](#)

## Heat Exhaustion vs. Heat Stroke



### HEAT EXHAUSTION

**Heat Exhaustion symptoms** that need emergency medical attention include:

- Feeling weak or extremely tired
- Nausea
- Heavy sweating
- Feeling light-headed or as if you might pass out
- Heat cramps

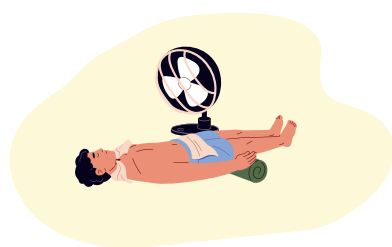


### HEAT STROKE

**Heat stroke symptoms** that need emergency medical attention include:

- Unconsciousness
- Convulsions or seizures
- Difficulty breathing
- Confusion or slurred speech
- Dry skin and very warm to touch

Heat stroke victims may look drunk. They need to be aggressively cooled immediately.



## Treatment of Heat Stroke

### GOOD

- Put ice packs or cold packs on the patient's neck, armpits, and groin
- Wet the patient's skin and sit in front of a fan

### BETTER

- The TACO Method or Tarp-Assisted Cooling Oscillation, where you use a tarp or plastic sheet to cool the patient using cold water.
- TACO Method demonstration video: [TACO Method Provides Rapid Cooling \(Christopher Sampson, MD\).](#)

### BEST

- Cold or ice water immersion
- Make sure to hold the patient up in the tub to protect their airway.
- Ice water demonstration video: [Ice Water Immersion Video: Adding Ice to the Tub - Susan Yeargin | MedBridge - YouTube](#)



### Initial Assessment and Diagnosis

The initial assessment of ill-appearing patients presenting during hot conditions should proceed using standard prioritized assessment techniques, focusing on airway, breathing, circulation, disability status, blood glucose levels, body exposure, and assessment of environmental exposures. In patients suffering from acute heat-related illness, an exertional and/or exposure-related heat stressor is usually readily identifiable.

It is important to avoid early diagnostic closure and to recognize that non-heat-related emergencies will continue to occur during hot weather, while also recognizing that heat-related illness, particularly heatstroke, can initially mimic common conditions such as acute ischemic stroke, intoxication, or sepsis.

Core body temperature in confused or unresponsive patients who arrive during hot weather should be measured using a rectal thermometer when possible. Forehead, tympanic, and axillary temperatures may be lower than the core body temperature and thus falsely reassuring.

Diagnosis of heatstroke is established through the presence of a) hyperthermia as defined by an elevated core body temperature, typically above 40°C, and b) central nervous system dysfunction as evidenced by the presence of altered sensorium, altered mental status, seizures, coma, or other neurologic abnormalities.

Heat exhaustion is characterized by dehydration, electrolyte abnormalities, profound fatigue, and in some cases nausea, vomiting, or moist clammy skin, in patients who are awake and neurologically intact. This diagnosis is typically made clinically, although testing to assess for other conditions, such as hypoglycemia, is often indicated.

### Heatstroke: Active Cooling

Actively cooling the patient, rather than relying on sweating/perspiration, is a mainstay of heatstroke treatment. Patients suffering from heatstroke should be actively cooled until their core body temperature is less than 38.8°C. Rapid cooling is essential, as the degree of end organ damage caused by heatstroke is related to the amount of time during which the patient is severely hyperthermic.

**External Cooling:** Placing the body in ice water or cold water is the preferred approach, as conductive heat transfer allows for rapid cooling. If ice water immersion is not feasible, evaporative cooling can be achieved by dousing the body with water and running powerful fans to circulate air. Packing the groin, axilla, and other areas with ice packs can also help cool the body.

**Internal Cooling:** While active external cooling is the mainstay of heatstroke management, administration of chilled IV fluids, continuous bladder irrigation with chilled fluid, and advanced internal cooling options may also be considered.

### Heatstroke: Advanced Cooling Interventions

In some hospital settings, advanced cooling interventions may be considered. These may include the application of external cooling devices typically used for targeted temperature management in ICU patients, placement of endovascular cooling devices, placement of chest tubes to allow thoracic lavage with chilled saline, or use of dialysis or extracorporeal membrane oxygenation systems to allow for direct temperature management of the patient's bloodstream. Advanced interventions should only be attempted by properly trained specialists in settings with appropriate technical and institutional capabilities. The use of standard active external cooling techniques such as ice water immersion should not be delayed while awaiting the availability of more advanced interventions.

### Heatstroke: Preventing Endogenous Heat Generation

Once heatstroke is identified and active cooling has been initiated, it is often desirable to also produce heat production by the body. Much of the heat produced by the human body in this situation is produced by the contraction of skeletal muscle, particularly during shivering. Benzodiazepines may be administered to reduce shivering. In patients who are unresponsive or are unable to protect their airway, endotracheal intubation may be performed and the patient placed on a ventilator, after which chemical paralysis can definitively prevent skeletal muscle contraction. Mechanical ventilation has the added benefit of reducing heat generation related to respiratory activity.

### Fluid and Electrolyte Management

Patients experiencing heatstroke and heat exhaustion are typically volume depleted and are likely to benefit from fluid administration. In awake patients, including most patients with heat exhaustion, oral fluid and electrolyte repletion is typically effective. Patients with altered sensorium, including most patients with heatstroke, are likely to benefit from IV fluid administration if available. It is important to consider that in addition to water losses, some patients may experience hyponatremia due to insufficient intake of solutes. Altered mental status in a patient with normal body temperature should prompt evaluation of chemistries to assess for hyponatremia, which should be carefully corrected in accordance with local protocols to prevent brain injury from rapid sodium correction.



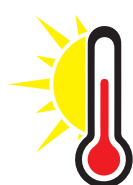
### Supportive Care

Once heat-related illness has been identified and critical actions such as rapid cooling have been initiated, if appropriate, supportive care becomes a major focus of treatment. Airway management, if indicated, can prevent aspiration and reduce metabolic load. Maintaining adequate intravascular volume can help support organ function, address acute kidney injury when present, and treat rhabdomyolysis in the subset of exertional heatstroke patients who develop elevated creatine kinase levels. A small proportion of patients with severe heatstroke will go on to develop liver failure, and can benefit from transfer to a liver transplant center if available; liver function tests should be monitored in patients who require hospitalization for heatstroke. Persistent neurologic abnormalities including cerebellar dysfunction have been observed in

survivors of heatstroke; referral of affected individuals for appropriate neurologic evaluation and physical or occupational therapy services may be beneficial.

### Information sources

The Philippine Atmospheric, Geophysical and Astronomical Services Administration ([PAGASA](#)) issues weather forecasts, advisories, and warnings. During hot conditions, details on dangerous heat conditions including heat index information may be available. Information on long-term changes in heat exposure in different parts of the Philippines, including the implications of climate change, can be obtained from the [WHO/WMO](#), the [Philippine Climate Change Assessment](#), and recent reports from the [Intergovernmental Panel on Climate Change](#).



## Reference Materials For Providers

The following materials provide additional technical detail that may be relevant for physicians, nurses, pharmacists, and other health care professionals involved in the care of persons whose health may be affected by exposure to extreme heat.

### Medications

Evidence to guide specific dosing or medication changes specifically to reduce risks during extreme heat is very limited, and guidance should typically focus on behavior emphasizing seeking safe, cool locations for patients on the following medications.

Regular comprehensive medication reviews, including evaluation of over the counters and supplements, can help identify these medications, assess patient risk, and proactively address potential medication-related issues. It should also be noted that hot temperatures can degrade or damage medicines and medical devices. Patients should be advised on proper storage methods to protect their medications and medical devices during high temperatures. This applies to medications like inhalers, epinephrine, and insulin as well as equipment like blood glucose meters and test strips.

**Table 1.**

Medications associated with increased risk during hot weather. Adapted from [Medications and Heat](#), by Hayley Blackburn Pharm.D, Americares, and Harvard C-CHANGE (2024).

Medication Class	Effect on Thermoregulation and Heat Sensitivity
<b>SSRIs and SNRIs</b>	Impaired central thermoregulation, increased sweating and increased risk of dehydration and electrolyte abnormalities
<b>Tricyclic antidepressants</b>	Impaired central thermoregulation, decreased sweating; Sedation or altered cognition impacting behavioral response to heat
<b>Antipsychotics</b>	Impaired central thermoregulation and impaired sweating; increased sedation, cognitive effects may lead to reduced alertness, judgment, and perception of hot weather which impact behavioral responses to heat. Antipsychotics with increased anticholinergic effects (e.g., clozapine, olanzapine, quetiapine) may have additive blunting of thermoregulation and increased risk
<b>Stimulants</b>	Impaired central thermoregulation, increased metabolic rates leading to excess heat production and hyperthermia, and altered heat perception
<b>Benzodiazepines</b>	Sedation, altered cognition impacting behavioral response to heat
<b>Mood stabilizers such as Lithium</b>	Electrolyte imbalances; risk of toxicity in the setting of dehydration

Medication Class	Effect on Thermoregulation and Heat Sensitivity
<b>Opioids</b>	Sedation, altered cognition impacting behavioral response to heat; potential for misdiagnosis of opioid overdose vs heat stroke delaying appropriate treatment
<b>Diuretics</b>	Increased risk of dehydration and hypovolemia; risk of electrolyte abnormalities; risk of hypotension and fainting/falls
<b>ACEi and ARB</b>	Suppressed thirst sensation impacting fluid intake behaviors and increasing risk of dehydration; increased risk of renal injury with dehydration; increased risk of hyperkalemia and other electrolyte abnormalities; risk of hypotension and fainting/falls
<b>Beta-blockers</b>	Disrupted thermoregulatory response through inhibition of cutaneous vasodilation and decreased sweat response; risk of hypotension and fainting/falls
<b>Calcium channel blockers</b>	Increased risk of hypotension and fainting/falls; risk of electrolyte abnormalities
<b>Antiplatelets</b>	Both aspirin and clopidogrel have been shown to impair thermoregulatory responses during passive and exertional heat stress by reducing skin blood flow and possibly suppressing sweat responses
<b>Insulin</b>	Altered thermoregulatory response; increased subcutaneous absorption of insulin leading to hypoglycemic emergencies
<b>SGLT2i</b>	Increased osmotic diuresis and increases the risk of dehydration; dehydration may increase the risk of euglycemic DKA with SGLT2i use
<b>Metformin and GLP-1 RA medications</b>	Increased GI disturbances and diarrhea upon drug initiation or dose increase, leading to increased risk of dehydration

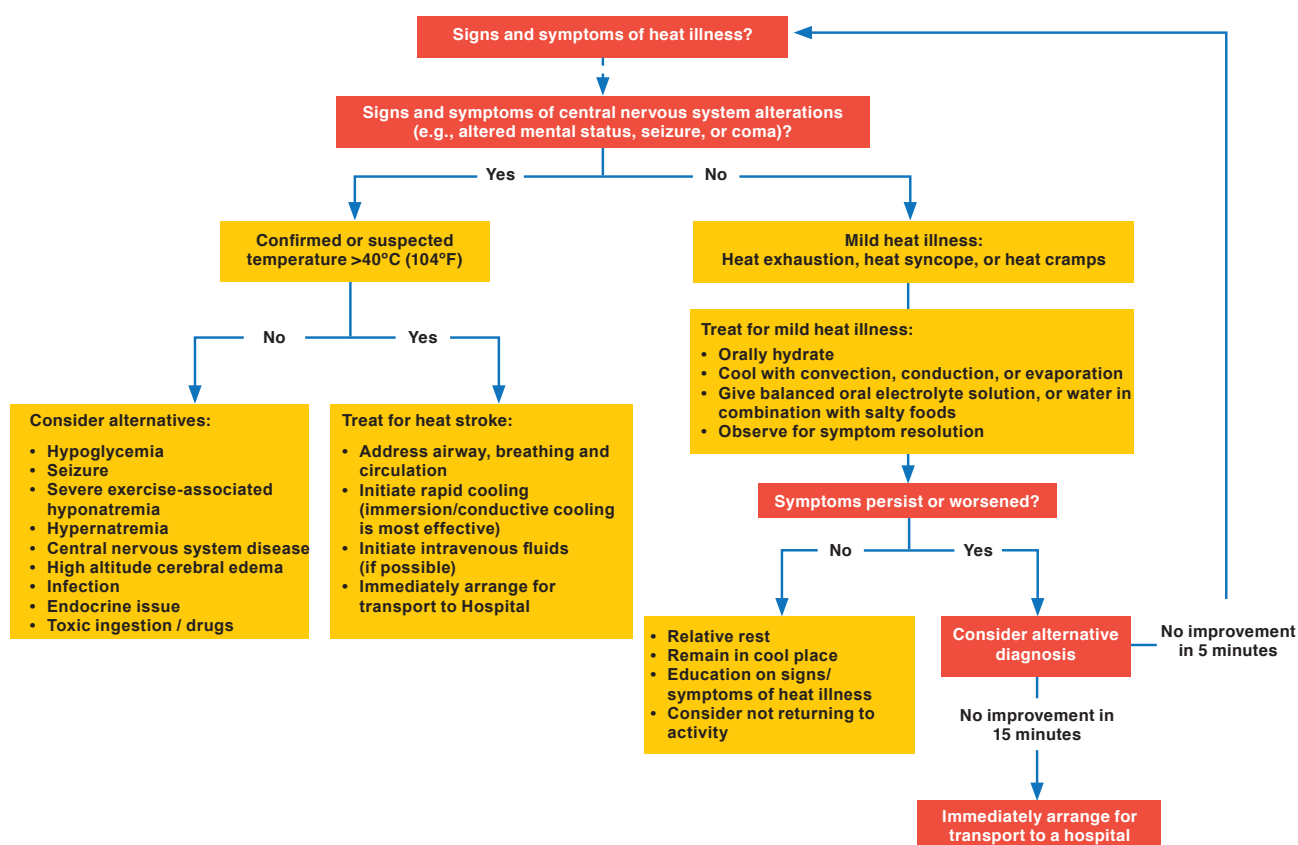
### Management of Heat-Related Illness

The management of heat-related illness is focused on early diagnosis of heatstroke or heat exhaustion, and early intervention to correct core body temperature, volume depletion, electrolyte abnormalities, and organ dysfunction. Algorithms have been developed to guide management in various settings; the algorithms

presented here include an approach to diagnosis and treatment in low-resource settings (**See Figure 6 below**) and a pathway that provides additional detail on diagnostic, cooling, and supportive care actions that can be taken in higher-resource settings (**See Figure 7 on page 19**).

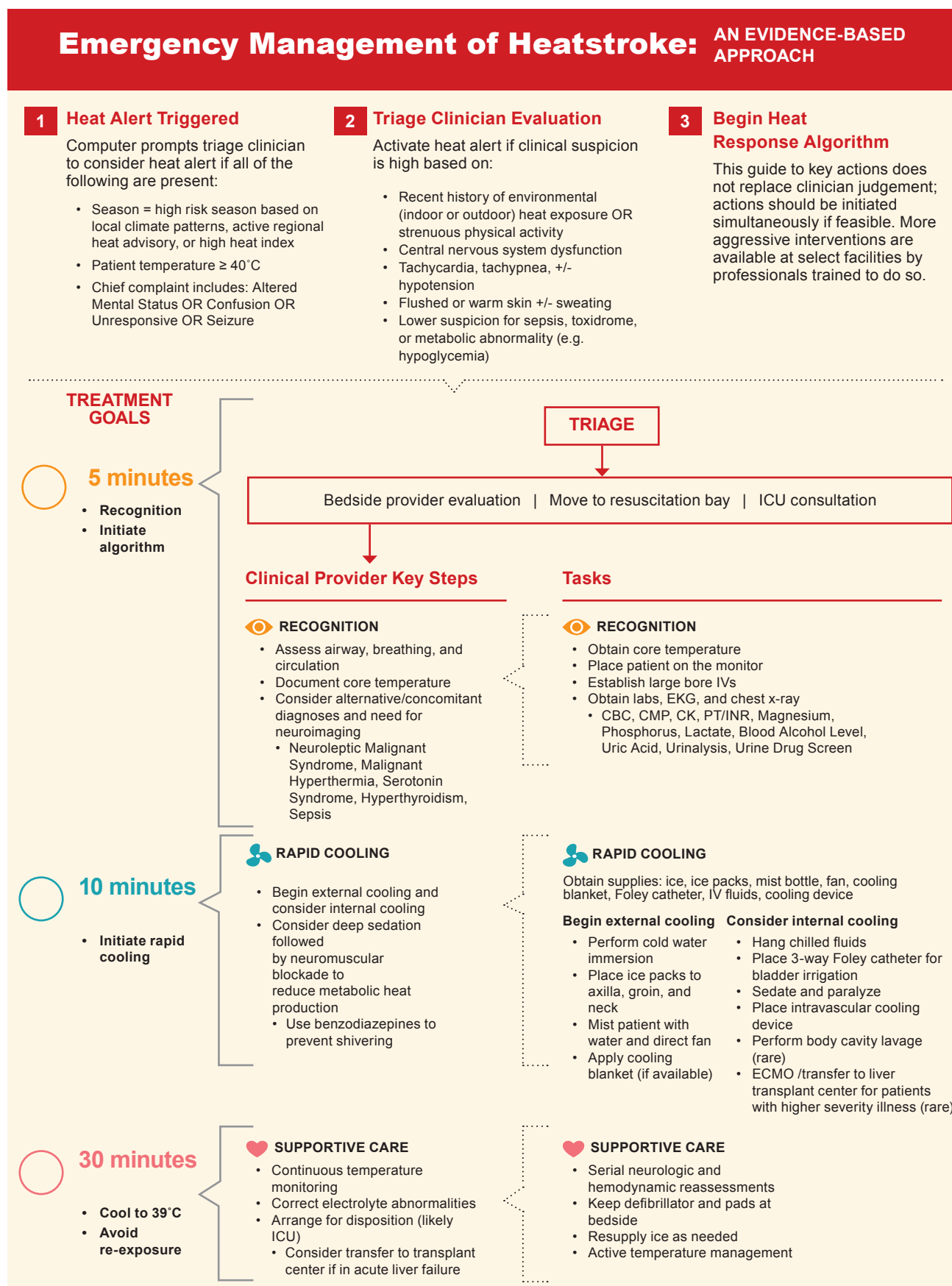
**Figure 6.**

The Wilderness Medical Society's 2024 [heat illness treatment algorithm](#), designed for the diagnosis and management of heat-related illness in austere environments.



**Figure 7.**

Heatstroke management algorithm developed by [Rublee, Dresser, Giudice, et. al. \(2021\)](#) for diagnosis and management of heatstroke in emergency care settings.



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# Stay Safe When It's Hot



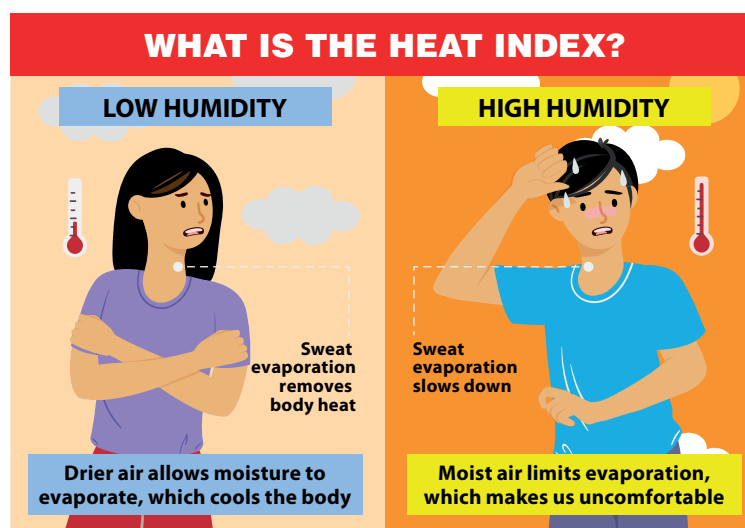
## Heat Action Plan and Tip Sheet For Patients

1. **Heat with high humidity is dangerous.** It can be dangerous even when the temperature isn't extremely high.

Local weather can be checked at PAGASA or on the radio, TV, or local announcements.

High humidity is common in the Philippines.

High humidity makes hot weather more dangerous.



To check my weather forecast, I will:

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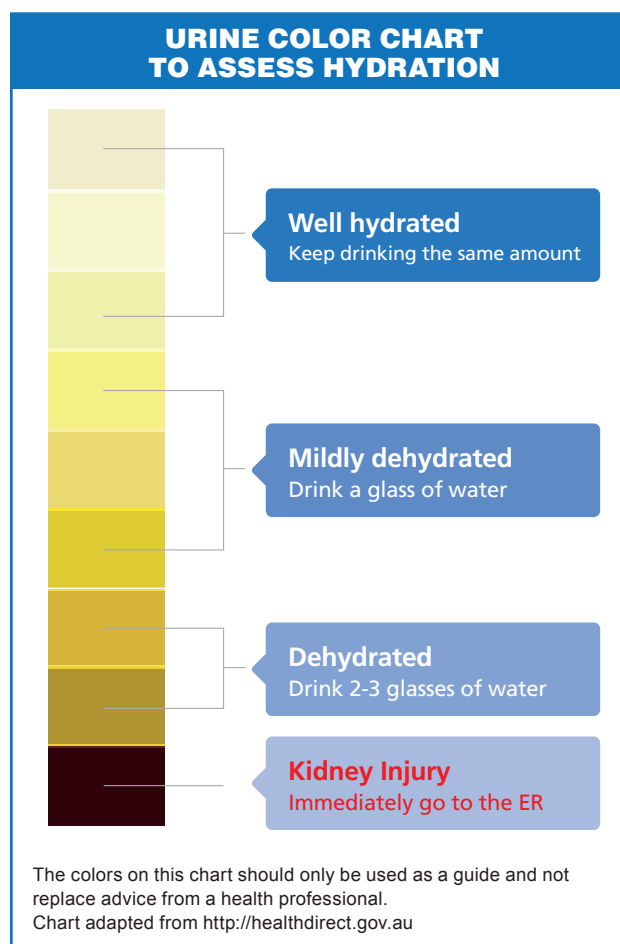


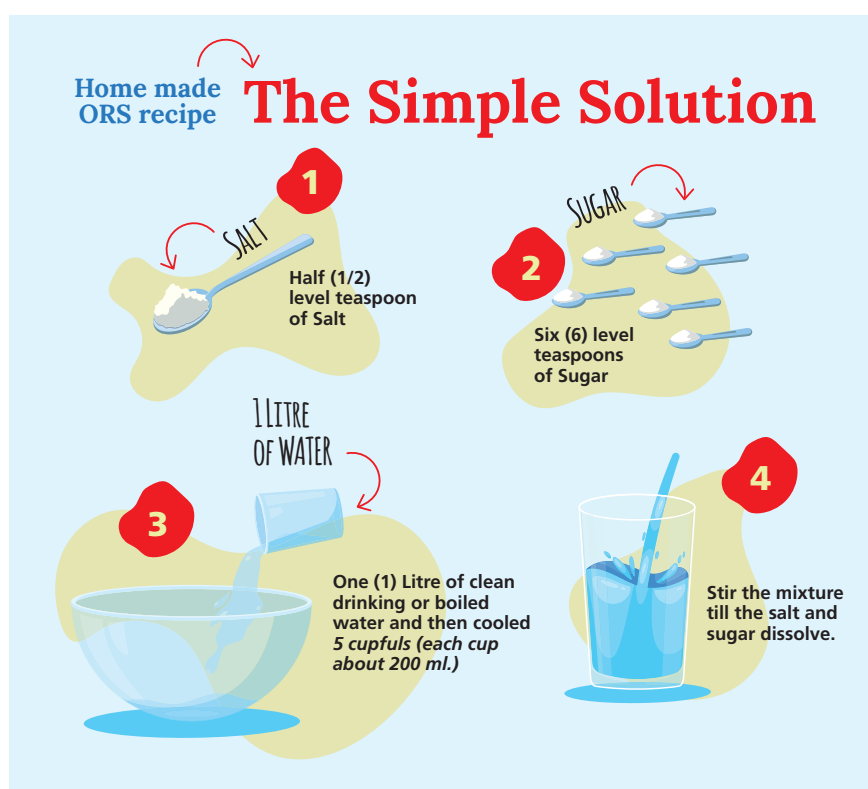
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If the air feels hot, even if there is no heat advisory or heat warning, use the following tips to stay safe.

2. **Drink plenty of water or oral rehydration solution (ORS) and food-based fluids such as soup or buko juice.**

- If your urine is dark yellow, you need to drink more water until your urine is a lighter color.
- If ORS packets are available, mix them with 1 liter of water. If they are not available, you can make home-made ORS by following these steps:
  1. Wash your hands thoroughly.
  2. In a clean container, mix the following ingredients:
    - \* 1 liter of safe drinking water
    - \* 1/2 teaspoon (3.5grams) of salt
    - \* 4 tablespoons (or 8 teaspoons) of sugar (40 grams)
  3. Stir the mixture well until the salt and sugar are fully dissolved in the water.

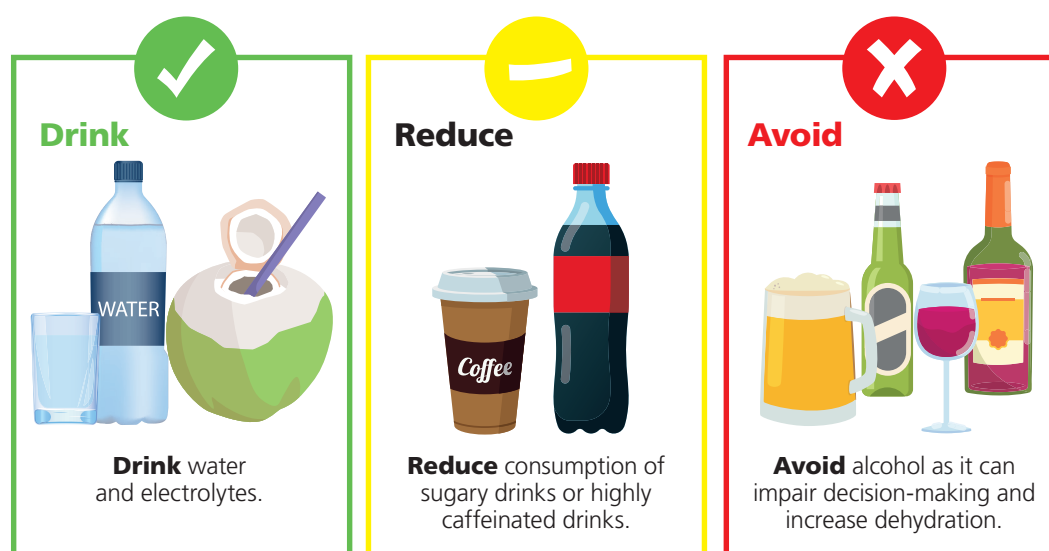




- If you have heart or kidney problems, ask your doctor how much you should drink.
- Avoid soft drinks, alcohol, coffee, tea, energy drinks, and other drinks with sugar or caffeine. They can make you more dehydrated.

If you are drinking a lot of water to stay hydrated, make sure to add a little extra salt to your food or add some oral rehydration salts to your water.

To stay hydrated, I will drink:



### Food Safety

Food spoils more quickly in hot weather. Spoiled food can make you sick. Do not eat food that appears or smells spoiled. Meat, fish, and milk products can spoil especially fast.



- 3. Protect yourself from the sun.** Wear loose, lightweight, light-colored clothing, hat or head covering, and sunscreen (SPF 30 or higher). You can use an umbrella or parasol to provide shade.

To stay cool, I will wear:

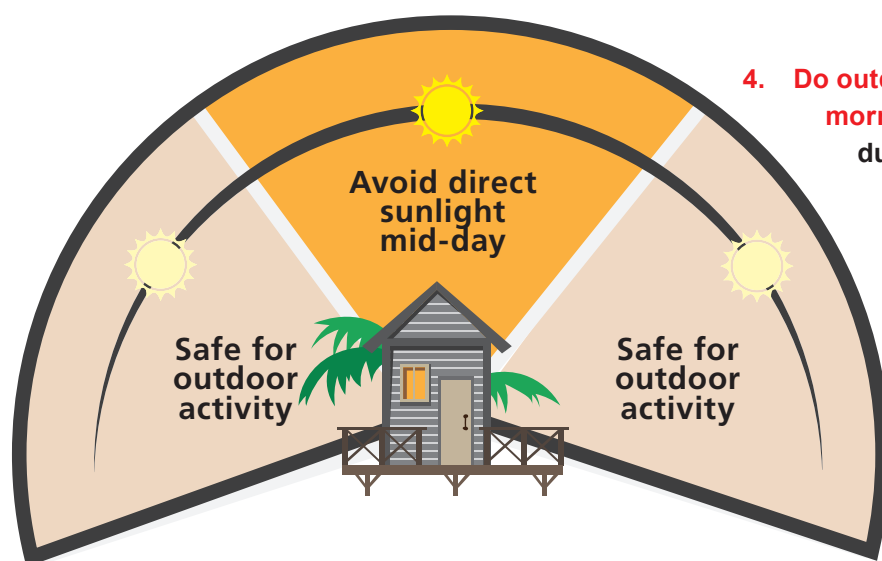
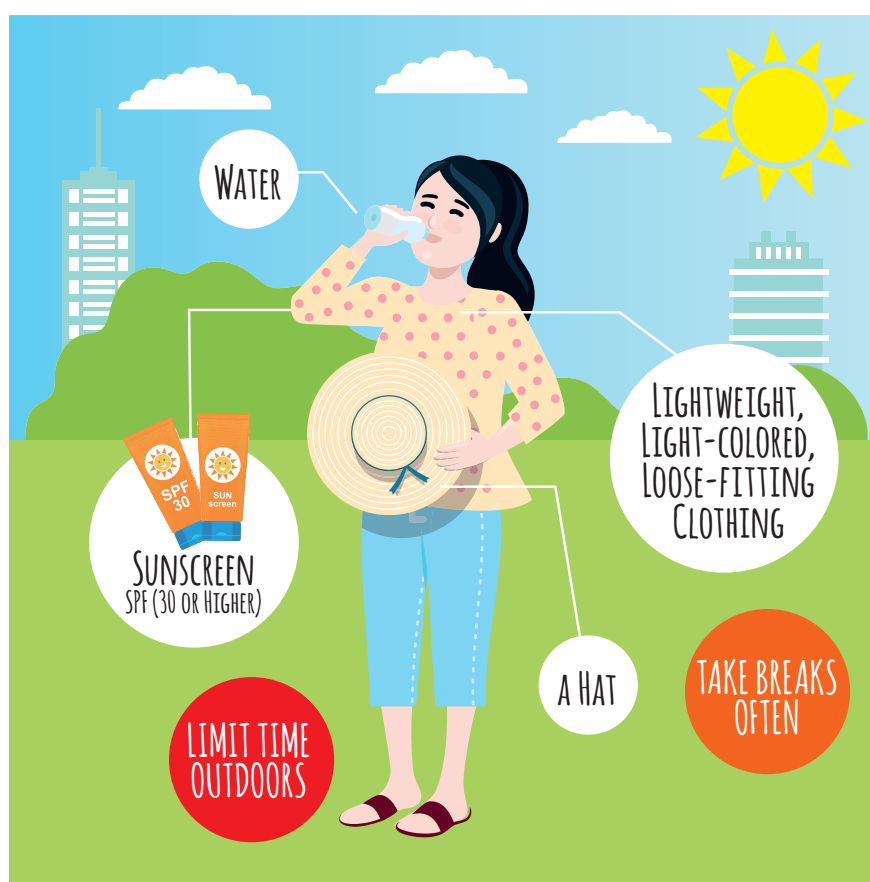
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- 4. Do outdoor work when it is cool, in the morning or evening.** Avoid working during the hottest part of the day. Particularly during extreme heat, check local temperature and humidity to know when it is safe to work outdoors.

If you have to work in the heat:

- Take breaks in the shade or in a cool space.
- Drink plenty of water.
- Talk about a heat safety plan with others.

- 5. Take steps to cool down:**

If you have to work in the heat:

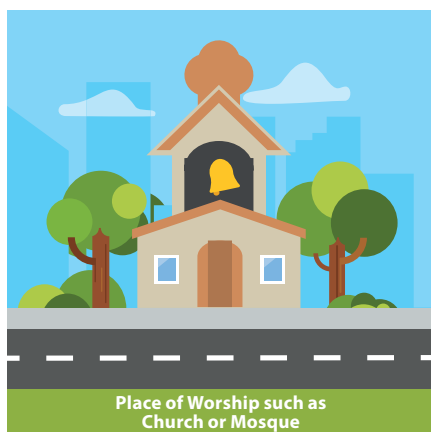
- Rest, shade, and hydration are essential.
- Running a fan can help, but if the temperature is above 37°C, also wet your skin with water to help cool down.
- If possible, move to a space with air conditioning (**see Tip 6**)

To cool off, I will:

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## 6. Go somewhere cooler if it's too hot where you are.



If needed, I can go to:

---



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I will get there by:

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## 7. Know what to do if you, or someone around you, is suffering from a heat-related illness.

You can get medical help through the following:

- Local Rural Health Unit
- Nearest local health facility
- 911
- Barangay / LGU Emergency Hotline
- NDRRM or CDRRM

### First Aid

While you are waiting for transportation, cool the person down using ice or cool water and fan their body. If they are awake, have them drink fluids.

### Enteric Infections

If you have vomiting and diarrhea, you are at higher risk of health problems during hot weather. Use ORS to stay hydrated. Seek medical attention if they are having concerning symptoms such as fever or bleeding, feel like they might pass out, or have problems staying hydrated.

## 8. Take your medicines as prescribed unless your provider tells you not to.

If you have high blood pressure, diabetes, heart problems, kidney problems, a mental health condition, or other health problems, talk to your doctor.

My health care provider told me to do the following when it is hot out:

---

## 9. If you, or a loved one, have any of the below conditions, also review the Tips for People with Specific Health Conditions:

- ▶ Dementia
- ▶ Diabetes
- ▶ Heart Disease
- ▶ Kidney Disease
- ▶ Lung Diseases (Asthma, COPD)
- ▶ Mental Health Conditions
- ▶ Multiple Sclerosis
- ▶ Pregnancy
- ▶ Small Children or Older Persons

## Heat Exhaustion vs. Heat Stroke



### HEAT EXHAUSTION

**Heat Exhaustion symptoms** that need emergency medical attention include:

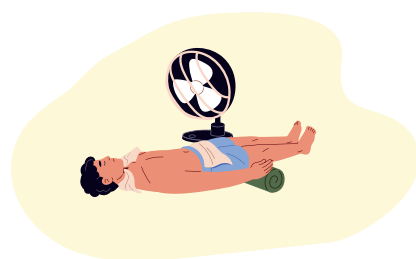
- Feeling weak or extremely tired
- Nausea
- Heavy sweating
- Feeling light-headed or as if you might pass out
- Heat cramps

### HEAT STROKE

**Heat stroke symptoms** that need emergency medical attention include:

- Unconsciousness
- Convulsions or seizures
- Difficulty breathing
- Confusion or slurred speech
- Dry skin and very warm to touch

Heat stroke victims may look drunk. They need to be aggressively cooled immediately.



## Treatment of Heat Stroke

### GOOD

- Put ice packs or cold packs on the patient's neck, armpits, and groin
- Wet the patient's skin and sit in front of a fan

### BETTER

- The TACO Method or Tarp-Assisted Cooling Oscillation, where you use a tarp or plastic sheet to cool the patient using cold water.
- TACO Method demonstration video: [TACO Method Provides Rapid Cooling \(Christopher Sampson, MD\)](#).

### BEST

- Cold or ice water immersion
- Make sure to hold the patient up in the tub to protect their airway.
- Ice water demonstration video: [Ice Water Immersion Video: Adding Ice to the Tub - Susan Yeargin | MedBridge - YouTube](#)



# Tips for People with Pre-Existing Health Conditions

## For Patients



### Dementia

1. Hot weather can pose health risks for individuals with dementia, like Alzheimer's disease or Parkinson's.
2. Dementia patients have a **higher risk of heat stroke, hospitalization, and death** during heat.
3. Dementia can **impair temperature regulation and memory**, making people forget to stay hydrated or seek cooler places.
4. Regularly check on individuals with dementia during the day and early evening to ensure their well-being.
5. Remind those with dementia to drink fluids and move them to a cooler place if they are in a hot environment.



### Diabetes

1. High temperatures can lead to dehydration and cause problems with blood sugar control for people with diabetes. It is especially important for you to drink enough fluids.
2. Keep your blood sugar monitor (glucometer) and insulin cool, but do not put insulin directly on ice.
3. Monitor blood sugar before, during, and after activity in hot weather; adjust insulin if needed.
4. Avoid strenuous activity during the hottest part of the day, and sleep in a cool area.



### High Blood Pressure, Heart Disease and Stroke

1. Hot weather can put stress on the heart and lungs and cause problems for those with cardiovascular diseases, such as heart failure or a history of heart attack.
2. Watch out for both **dehydration** and **overheating**.
3. Talk to your doctor about how to manage your heart medicines.
4. Avoid strenuous activities during the hottest part of the day and sleep in a cool environment if possible.



### Kidney Disease

1. Kidneys work extra hard in hot conditions and can be damaged if you do not drink enough water. Ensure **proper hydration**, indicated by light-colored urine. Watch out for changes in your usual urinary pattern.
2. Individuals with chronic kidney disease or on dialysis have a higher risk in hot weather.
3. Talk to your doctor about how to manage your kidney medicines.
4. If your kidneys are unhealthy you may not be able to drink large amounts of water safely. Discuss your ideal fluid intake with a health care provider and dietician and monitor your weight to track your water intake and loss.



### Lung Diseases (such as Asthma or COPD)

1. Hot weather can be dangerous for people with lung conditions like COPD and asthma.
2. **You may monitor air quality** using the Real-Time Ambient Air Quality Monitoring <https://air.emb.gov.ph/ambient-air-quality-monitoring/> to decide whether it's safe to be outdoors. If the air quality is below 50, outdoor activities are generally safe. Consult your health care provider if it's above 50."
3. **Seek cool environments** on hot days if you have a lung condition.
4. **Stay indoors when air quality is poor** due to smoke or pollution, particularly on hot days when smog is visible.
5. Make sure you have the necessary medicines available, such as inhalers. Store medicines at the recommended temperature from the manufacturer.



### Mental Health Conditions

1. Hot weather can **exacerbate symptoms** of mental health conditions and **disrupt sleep**, leading to worsened symptoms.
2. Certain mental health conditions and **medications** such as antidepressants and antipsychotics can impair the body's ability to cool down. Take extra care in the heat if you take these medicines. Do not stop taking them just because it is hot. Talk to your doctor.
3. Avoid extremely hot places or workspaces and drink plenty of fluids.
4. If you, or someone, appears lightheaded, confused or behaves unusually, move to a cooler environment and seek medical attention.
5. Check in on people who are living with mental health conditions every day when it is hot.



### Pregnancy

1. Pregnancy can **make it more difficult to cope** with hot weather.
2. Hot weather can be risky for pregnant women and their unborn babies.
3. Heat is associated with a **risk of birth defects** and higher chances of **pregnancy loss** or **premature birth**.
4. Pregnant women should take precautions to stay cool and avoid excessive heat.



### Small Children

1. Babies and small children are more vulnerable to heat due to their small bodies and difficulty controlling their temperature.
2. Keep babies and children in a **cool and shaded area** during hot weather.
3. Ensure babies and children stay **well-hydrated** with fluids or breast milk.
4. Make sure they are urinating regularly
5. **If a baby or child appears pale, floppy, or exhibits unusual behavior, seek immediate medical attention.**



### Older Persons

1. Older persons can have difficulty staying cool during hot weather.
2. During dangerous heat, many of those who are injured or die are older persons.
3. Prevention is the best medicine. If you are over age 65, be extra careful to **avoid strenuous outdoor activities** during hot conditions.
4. If your house is too hot, ask for help from others to **get to a safe, cool location**.
5. If your neighbor, friend, or family member is an older person, check on them during hot weather, and, if possible, find them a safe place to stay until the weather cools down.
6. **If an older person is behaving unusually during hot weather, appears pale or weak, or is having difficulty walking, seek medical attention right away.**

# Helping Others Stay Safe When It's Hot



## Heat Health Guide For Communities

### Dangerous Heat is Hurting People Around You

You can help them stay safe.

- It's important to help others stay safe when the weather is hot.
- Hot weather can cause serious health problems. It can make people's chronic problems worse, and can even lead to a life-threatening condition called heatstroke. Some people, including babies, older persons, and those who are pregnant, or have medical conditions such as diabetes or lung diseases, are more vulnerable.
- Protecting people from the heat can help prevent health problems, hospitalization and death.

### Key Safety Tips for Hot Weather

#### ■ Help People Stay Hydrated

- It is important for people to drink plenty of water to prevent dehydration.
- People can check the color of their urine. Dark urine means they need to drink more water.
- People who are drinking large amounts of water

should consider adding a little extra salt to their food or use oral rehydration salts.

- If people have heart or kidney problems, it is important for them to consult with their doctor about how much water they should drink.



### Urine color chart to assess hydration

WELL HYDRATED	MILDLY DEHYDRATED	DEHYDRATED	KIDNEY INJURY
Keep drinking the same amount	Drink a glass of water	Drink 2-3 glasses of water	Immediately go the ER

The colors on this chart should only be used as a guide and not replace advice from a health professional.  
Chart adapted from <http://healthdirect.gov.au>

### ■ Help People Eat and Drink Right

- Sugary drinks, alcohol, coffee, tea, and energy drinks can make people dehydrated and put them at higher risk from heat-related illnesses.
- Help people drink water or oral rehydration solutions. Remind them to reduce consumption of sugary or caffeinated drinks. Avoid all alcohol or highly caffeinated drinks.
- Setting up a place to distribute cool water can help people remember to drink water.
- Food spoils more quickly in hot weather. Spoiled food can make you very sick. Avoid eating perishable foods that have been left in the heat for more than two hours.
- Encourage people to eat cool foods and those with higher water content, such as fruits and vegetables.

### ■ Help People Wear the Right Clothing and Sun Protection

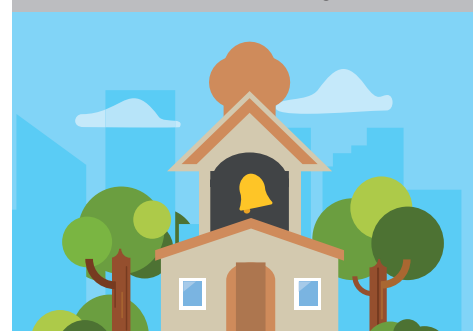
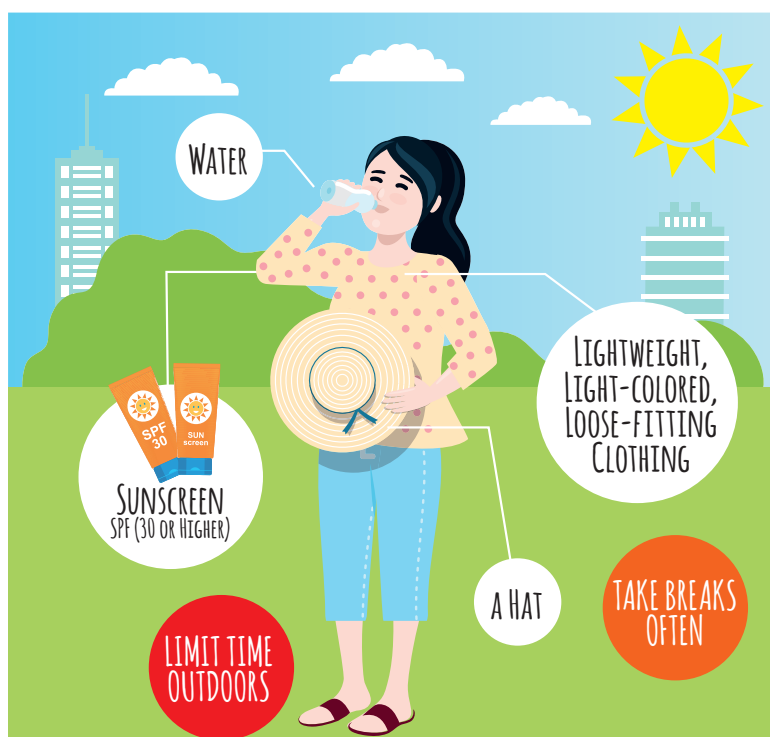
- Wearing light, loose clothing helps people stay cool.
- If people are working outside, they can protect themselves from the sun by wearing a hat or head covering and applying sunscreen, if available.
- If older persons have difficulty caring for themselves, it's important to help them remember to put on light, loose clothing to avoid overheating in the hot weather.

### ■ Help People Stay Cool

- Seek shade or cool spaces.
- Avoid strenuous activities during the hottest part of the day.

### ■ Help People Know the Weather:

- Check the weather forecast (<https://www.pagasa.dost.gov.ph/>) regularly to plan your activities.
- Help others access information about dangerous heat, or explain current conditions if they are unable to check the weather themselves.





### ■ Check on People Who Are at Risk in Hot Weather

- Keep an eye on your neighbors, especially those who are older persons or have medical conditions that put them at risk.
- Check on people with disabilities who may have trouble controlling their body temperature or taking steps to stay cool.
- Check on farmers, fisherfolks, outside laborers, construction workers, and motor-ride delivery drivers; and make sure they are taking breaks, hydrating, and resting in the shade.
- Offer to help people get to safe, cool locations.

### ■ Know When to Help People or Get Medical Attention

- Recognize early signs of heat-related health problems. If someone is feeling hot, tired, thirsty, or has nausea, move them to a cooler place and give them fluids to drink. Simple home remedies for dehydration include drinking water, oral rehydration solution, soup or buko juice.
- If someone feels very hot or has an elevated body temperature, and appears confused, like they might collapse, or is unconscious, start cooling them down right away using ice water or fans, and get them medical attention immediately.
- If someone has vomiting and diarrhea, they are at higher risk of health problems during hot weather. Use ORS to help them stay hydrated. Seek medical attention if they are having concerning symptoms such as fever or bleeding, pass out or feel like they might pass out, or have problems staying hydrated.

- You can seek help from ambulance services, rural health units, and barangay health workers.

Local ambulance contact number:

Local health center contact number:

Local heat information hotline (if available):

Local municipal or city health office number:

- While you are waiting for transportation, cool the person down using ice or cool water and fan their body. If they are awake, have them drink fluids.

## Heat Exhaustion vs. Heat Stroke



### HEAT EXHAUSTION

**Heat Exhaustion symptoms** that need emergency medical attention include:

- Feeling weak or extremely tired
- Nausea
- Heavy sweating
- Feeling light-headed or as if you might pass out
- Heat cramps



### HEAT STROKE

**Heat stroke symptoms** that need emergency medical attention include:

- Unconsciousness
- Convulsions or seizures
- Difficulty breathing
- Confusion or slurred speech
- Dry skin and very warm to touch

Heat stroke victims may look drunk. They need to be aggressively cooled immediately.





### Treatment of Heat Stroke

GOOD	BETTER	BEST
<ul style="list-style-type: none"> <li>• Put ice packs or cold packs on the patient's neck, armpits, and groin</li> <li>• Wet the patient's skin and sit in front of a fan</li> </ul>	<ul style="list-style-type: none"> <li>• The TACO Method or Tarp-Assisted Cooling Oscillation, where you use a tarp or plastic sheet to cool the patient using cold water.</li> <li>• TACO Method demonstration video: <a href="#">TACO Method Provides Rapid Cooling (Christopher Sampson, MD)</a></li> </ul>	<ul style="list-style-type: none"> <li>• Cold or ice water immersion</li> <li>• Make sure to hold the patient up in the tub to protect their airway.</li> <li>• Ice water demonstration video: <a href="#">Ice Water Immersion Video: Adding Ice to the Tub - Susan Yeargin   MedBridge - YouTube</a></li> </ul>



## Helping People with Specific Health Conditions:

The best things that at-risk people can do are to stay in cool spaces, avoid activity in the heat of the day, stay hydrated, sleep somewhere cool, and stay connected to others. In addition, there are things you can do to help specific groups of people:



### People with Diabetes:

Help them keep glucometer and insulin cool; avoid direct exposure to ice. Encourage people to check their blood sugar before, during, and after activity in hot weather.



### People with Heart Disease or High Blood Pressure:

Watch for dehydration and overheating. Some medications such as diuretics (“water pills”) can lead to dehydration; encourage patients to consult with their doctor about medicines, fluid intake, and weight goals.



### People with Kidney Disease:

Discuss ideal fluid intake with health care professionals; monitor weight to track water intake. Medications for kidney disease can affect heat tolerance; encourage patients to consult with their doctor.



### People with Lung Disease:

Hot weather is risky for people with lung conditions like COPD and asthma. Air pollution adds to this risk. Help people find cool, indoor environments on hot days with poor air quality from smog, smoke, or other air pollutants. N95 masks can filter out pollution if people need to travel outside.



### People living with Mental Health Conditions:

Medications such as antidepressants and antipsychotics may affect the body’s ability to stay cool; it’s important to help people taking these medicines find cool safe spaces during hot weather. Help people seek medical attention if lightheaded, confused, or exhibiting unusual behavior.



### Pregnant Women:

Pregnancy makes coping with hot weather more challenging. Help people with hydration, access to bathrooms, and access to cool

areas. Very hot weather is associated with the risk of birth defects and pregnancy loss, so it’s important to help pregnant women avoid hot places or strenuous activities.



### Small Children:

Babies and small children are more vulnerable to heat. Help people remember that they are safest in cool, shaded areas during hot weather. It’s also important to ensure regular fluid intake (fluids or breastmilk) and seek medical attention if they appear pale, weak, or exhibit unusual behavior.



### Older Persons:

Older persons may struggle to stay cool in hot weather and have an increased risk of hospitalization and death during dangerous heat. Help older persons avoid strenuous activities during hot conditions. Check on older persons and family members and offer to help them access safe, cool locations. Remind them to stay hydrated, wear appropriate clothing, and move to cooler places.



### People Living with Tuberculosis (TB):

It is important to stay hydrated. If you need to travel for DOTS therapy, try to stay out of the sun. Since TB is transmitted in closed spaces, shady outdoor areas may be a safer option if you need to be around other people.



### People with Disabilities:

Persons with disabilities, especially those with physical impairments or paralysis, should prioritize staying cool and hydrated by using air-conditioning, fans, and drinking plenty of water. Regularly checking the skin for moisture build-up or redness can prevent pressure sores, while avoiding prolonged sun exposure reduces the risk of overheating. If sweating is impaired due to a spinal cord injury, using misting sprays or damp cloths can help regulate body temperature.

# Action Steps for Health Centers to Address Extreme Heat Events



## Extreme Heat Primary Care Facility Preparedness Guide For Administrators

### Purpose

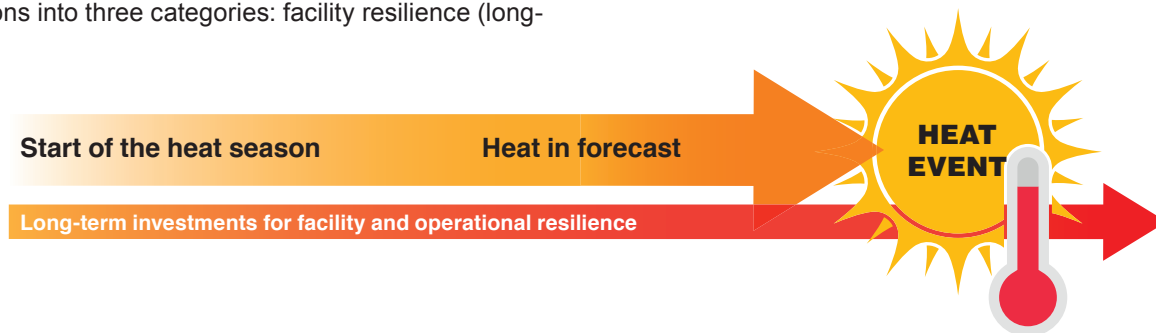
This document is designed to assist primary care facilities in preparing for extreme heat events that may impact facility operations. Based on regional variations in capacity and capabilities, not all content may be relevant.

Preparedness actions in this document focus on **facility and infrastructure actions**, while staff actions to prepare can be found in the “Operational Preparedness Guide”.

This facility preparedness guide divides recommended actions into three categories: facility resilience (long-

term), actions for the start of the heat season (middle-term), and actions when extreme heat is in the forecast (short-term). Actions to be taken during an extreme heat event can be found in the “Heat Response Checklist”.

Each category in this guide complements the others, for example, longer-term investments, such as purchasing a backup generator, increase the ability of a health center to carry out middle- to shorter-term preparedness.



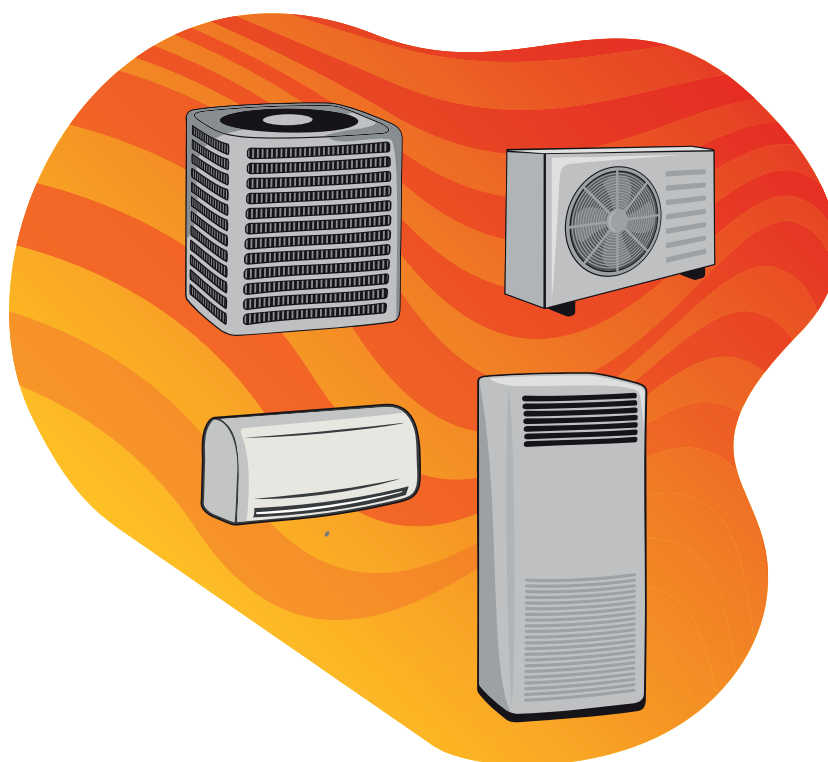
### Facility Resilience (Longer-Term Investments)

- Establish a heat-safety committee and designate a personnel within the health facility to oversee the development and implementation of policies for facility improvements and cost planning for climate-change-related emergencies. If possible, the heat-safety committee should be connected to broader community resilience efforts and/or agencies. Committee responsibilities include long-term, middle-term, and short-term preparedness, oversight, and accountability. See “Operational Preparedness Guide” for more information.
- Identify maintenance schedules and assign staff roles that will inspect critical equipment and cooling technology as part of their roles and responsibilities.
- Develop strategies for procuring, replacing, and maintaining sustainable energy equipment, such as solar panels, thermostats, or insulation. This should include timelines to afford high-priced materials over an extended period.
- Identify critical systems and establish emergency maintenance agreements with suppliers (example: emergency refueling).

- As much as possible, promote biophilic design or green spaces in the health facility. **Plant trees** on the property to provide shade and evaporative cooling.
- Identify strategies to **reduce non-essential equipment use** and energy consumption, such as installing motion sensors for lights and switching to LED lightbulbs.
- Identify equipment that can be powered via solar (facility systems or equipment-specific panel) to extend generator fuel for essential equipment and reduce energy use during high-demand times. Consider equipment that may be sensitive to power fluctuations or may present a life-safety risk if power is interrupted.
- **Re-evaluate the duration and availability of power** when new equipment or lighting has been added to the facility.
- **Develop an improvement plan to buy solar equipment** and energy storage over an extended period, which can support longer-term resilience.
- Replace or cover cracked or old concrete/pavement with **“cool pavement”** or **“cool paints”** which can reduce the amount of heat absorption.
- **Minimize or reduce the use of diesel or propane backup generators**, as they present storage risks and contribute to local air pollution, which can pose significant risks to vulnerable patients.

## Start of Heat Season

- **Check, clean, maintain, and/or repair relevant equipment:**
  - Air conditioners or heat pump systems
  - Fans
  - Window blinds
  - Dehumidifiers
  - Refrigerators, freezers, and other cold storage equipment
  - Structure insulation
  - Generators or other backup power systems
- **Identify non-essential equipment** that can be turned off during extreme heat to conserve electricity and reduce heat generation.
- **Ensure emergency generators or battery storage are connected to refrigeration units** to keep them running during power outages.
- **Review facility response plans in case of equipment failure** and identify thresholds for specific actions. This should include backup storage for temperature-sensitive equipment, pharmaceuticals, vaccines, etc.
- **Consider installing the following** to reduce indoor temperatures:
  - Window UV film, window deflectors, or shades to reduce direct sunlight into the facility.
  - Double pane windows to promote insulation.
- “Cool roofs” by painting the roof with white paint or reflective materials.
  - Painting or shading concrete surfaces that receive direct sunlight can reduce nighttime temperatures.
- **Consider acquiring body bags** to support the rapid cooling of patients experiencing acute heat stroke. Body bags can be filled with ice or cool water, and be reused, as necessary.



## When Extreme Heat is Forecast

- Check and test critical systems:

- Backup generator(s) or energy systems
  - Conduct test run
  - Check fuel
  - Confirm full battery storage
  - Test solar panel output
- Air conditioners or heat pump systems
- Fans
- Water systems and water fountains

- Check with suppliers to ensure priority emergency access for your facility:

- Refueling
- Ice
- Equipment repairs

- Just-in-time actions:

- Purchase or rent freezers to store ice for heat stroke treatment and maintain temperature-sensitive medications/vaccines

- Install shade or blinds to reduce direct sunlight exposure in the facility
- Install indoor thermometers to monitor indoor temperatures
- Identify a “cool room” for the most vulnerable patients
- Consider rescheduling non-urgent appointments (reduce patient exposure and support surge capacity)
- Acquire supplies to help patients and staff remain cool
  - Ice packs
  - Popsicles or other cool refreshments
  - Spray bottles (to accompany fan use)
  - Foot submersion buckets
  - Hydration stations

For additional information on introducing sustainable energy and developing a resilient health center, please see:

- [Philippines Green and Safe Health Facilities Manual](#)
- [WHO's Guidance for Climate Resilient and Environmentally Sustainable Health Care Facilities](#)

**NOTES:**

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



# Extreme Heat Operational Preparedness Guide

## For Administrators

### Purpose

This document is designed to serve as comprehensive guidance for preparing for extreme heat events. It details a recommended staffing structure for heat preparedness and a year-round preparatory approach, emphasizing the essential operational tasks to be completed year-round, at the beginning of the heat season, and when heat is in the forecast.

This document should be used alongside the Facility Preparedness Guide and Heat Alert Guide, which focus on critical and just-in-time infrastructure improvements and communication needs.

It is important to recognize that not all recommendations will be applicable to every facility. Health facilities should prioritize tasks based on health needs, capacities, and available resources to optimize heat event preparedness and response. The Heat Officer role can be filled by either an administrator, Public Health Nurse, Human Resources for Health (HRH) staff, or ancillary staff member, as makes sense for clinic capacity and capabilities.

This document should be used as part of a comprehensive, progressive preparedness program, that uses lessons learned from facility exercises or real-world responses to improve systems and thus promote longer-term resilience (**See the “Recovery Checklist” for recommended improvement actions**).

### Staff Roles and Responsibilities

#### Heat Safety Officer

Identifying an appropriate Heat Safety Officer at each facility is critical to ensuring accountability and operational success. The designated Heat Safety Officer will be responsible for:

1. Organizing and convening a clinic heat safety committee (**see next section**).
2. Facilitating heat-related preparedness activities at the clinic.
  - a. Preparing and revising/improving heat plans
  - b. Facilitating trainings and exercises
  - c. Planning resource acquisition
3. Receiving weather-related information and disseminating it appropriately to clinic staff and/or patients.



- a. Weather data can be monitored via DOH/ PAGASA.
  - b. Heat index 5-day forecasts, which can more accurately predict impacts on health, can be found on the [PAGASA website](#). Heat index forecasts with multiple days of orange (danger) and red (extreme danger) should be considered an extreme heat event.
  - c. The Heat Alert Officer will sign up for a local emergency cell broadcast system (ECBS) via local government notification such as the MDRRMC or PAGASA weather alert system and learn how to distinguish between the types/ levels of heat alerts.
4. Assessing the facility's heat readiness and coordinating actions to improve it, as detailed in the following sections.
  5. Activating the heat response when extreme heat is forecast or happening.

The Heat Safety Officer role can be filled by either an administrator, clinic leader, facility manager, or provider/ancillary staff member, as makes sense for clinic capacity and capabilities. Assigning a backup (secondary) heat officer will ensure continuity in case of staff absence or shift changes.

The *Primary Heat Safety Officer* for our clinic is:

The *Secondary Heat Safety Officer* for our clinic is:





### Heat Safety Committee

Below is an example list of Heat Safety Committee participant roles and responsibilities:

Position	Responsibilities	Assigned to
Heat Safety Officer (may be PHN, or HRH staff)	Training facilitator, plan implementation, Authority and oversight, Advising / Communications	
Assistant Heat Safety Officer (may be PHM or HRH staff)	Backup facilitator, support the Heat Safety Officer, Operational support	
Heat Safety Support (may be Midwives, CHW or BHW)	Operational support in the community	

## Preparatory Actions for Heat Safety Officer and Committee

### Year-Round

- **Identify high-risk patients and flag their charts.** If you do not have a charting system, establish a list of patients and relevant information. Get contact information for family or caregivers of patients deemed high-risk to check on the patient during extreme heat. Factors that contribute to elevated risk:

- Age: infant, children under age of five (5), or older persons
- Pre-existing health conditions
- Working outdoors and/or in manual labor jobs
- Socioeconomic status: low-income status, living in informal settlements, low-income neighborhoods, or being unhoused
- Social isolation
- Transportation barriers
- Lack of cooling technology: fans, air conditioning, heat pumps, etc.

- **Develop a communication plan for at-risk patients.**

- Either through the health station or a family member, high-risk patients should be assessed daily for:
  - Use of cooling technology (remind the patient

that below 27°C is safe for most people)

- Signs of heat-related illness
- Adequate fluid intake
- Appropriate clothing: light-colored and loose

- **See the Heat Tip Sheet for Patients** provided in this toolkit for additional heat-illness prevention measures to be communicated and encouraged.
- **See the “Heat Alert Plan”** in this toolkit for draft language and templates to use.
- All patients and staff should have access to weather forecasts either via phone, television, or an identified caregiver or family member.

- **Discuss heat wave preparedness with staff.**

- Consider scenario-based discussions or tabletop exercises involving staff at all levels.
- Ensure staff know how to protect themselves and their families from heat-related illness and conduct training as appropriate.
- Communicate any changes in roles and responsibilities that might occur due to an extreme heat event. These may already be outlined in the clinic’s existing emergency plan.

- **Prepare for power outages:** See the “**Health Center Power Outage Preparedness and Response**” on page 39 for additional information about power outages at your facility.
- **Connect with existing community organizations, government agencies, private sectors, and NGO partners** that would be able to support the clinic or the patients during extreme heat.
- **Connect with Rural Health Units and City Health Officials** to make sure the clinic is on all important messaging lists for heat-related communications.
- **Work with nearby BHS and RHUs** to identify where staff can be relocated in case of a facility closure or evacuation during an extreme heat event. These relationships can be utilized beyond extreme heat events and have supported communities responding to human-caused and natural hazard emergencies.

## Start of the Heat Season

- Check with the Department of Health (DOH), Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), or your local health department to see if your city or town has **heat vulnerability maps**. These can help you understand your patients’ level of vulnerability based on where they live. You can also use it to identify whether your clinic is in a geographically vulnerable area.
- **Review toolkit materials with providers and staff**, and ensure providers are prepared to use and distribute the materials.
- **Encourage or require providers to:**
  - Update family or caregiver contact information for high-risk patients to prepare for wellness checks during extreme heat.
  - Incorporate heat illness prevention and signs of heat illness into the clinic’s existing patient and caregiver education process.
- **Consider adjusting health facility operational hours to cooler times.** This can reduce the risk of patient heat exposure as they travel to their appointment. However, the facility should also be prepared to stabilize patients experiencing heat-related injuries. Pre-planning and communicating about changes to operational hours during extreme heat can ensure efficient communication between patients and local authorities.

- **Consider occupational safety issues.** Ensure staff have access to sufficient water for hydration and a cool place to work and take breaks. Where the work environment is hotter, longer breaks and increased water intake may be necessary before it is safe for an employee to return to work.

## When Extreme Heat is Forecast

- **Ensure medical staff provide heat safety information** to patients identified as being high-risk.
- **Modify scheduling for patients** requiring routine, time-sensitive treatments and/or lab tests (such as dialysis or INR levels). Work to get these patients scheduled either ahead of an anticipated extreme heat event, or in the early morning or evening when temperatures are lower (**See Beginning of the Heat Season in “Facility Preparedness Guide”** for more information about facility operational hours).
- **Have additional supplies on hand** to treat heat-related illness, including ice packs, cool water, or cool IV fluids.
- **Identify scheduling opportunities.**
  - Keep any open appointment times available for potential heat-related non-emergency visits.
  - When possible, reschedule non-acute appointments to prevent patients from traveling in the heat. Patients at high risk from heat should be prioritized for rescheduling if their appointment is not time-sensitive. Consider telehealth if available.
- **Address necessary changes in staff’s roles and responsibilities**, to ensure essential heat-related tasks are completed (**See “Facility Preparedness Guide”** for additional tasks).
  - If not a standard part of operations, institute morning huddles to discuss staff and patient needs and challenges and address any updates or changes.
- **Monitor changes in public transit.**
  - Heat can cause public transit to slow down or stop functioning entirely. Even where transit continues to function normally, ridership may decrease due to access issues (example: unshaded bus stops). This affects both staff getting to work and patients getting to appointments.

## FOR ADMINISTRATORS

- **Ensure staff have family preparedness plans** and feel confident that their families will be safe during the extreme heat event. This will help ensure staff can focus on supporting facility operations during extreme heat.
  - **Use the heat alert/communications plan** (See “Heat Alert Plan and Communication Templates”) for high-risk patients.
- This guidance has been adapted from the NYC Health*

*This guidance has been adapted from the NYC Health “Heatwave Guidance for Service Providers” document.*

**NOTES:**

[illegible]



# Health Center Power Outage Preparedness and Response For Administrators

## Purpose

This document provides recommendations for policies and procedures in the event of a power outage that can be included in a facility's emergency plan or in a standalone power outage plan. These plans can help ensure the safety of staff and patients in the event of a power outage. Improving clinic resilience may have the added benefit of improving clinic sustainability and cost-savings.

## Power Outage Preparedness

1. Develop policies and procedures for a) periods of time when a power outage occurs, and clinic operations can rely on backup power, and b) situations when backup power is unavailable or fails.
  - a. Responses to power failures may include limiting services, communicating operational changes to staff and patients, and assisting high-risk patients out of the facility.
2. Have an inventory of what equipment is and is not powered when using a generator or battery.
  - a. Have equipment clearly marked, including power outlets.
  - b. Update inventory when new equipment is purchased, or facility electrical upgrades occur.
3. Explore partnerships with local hospitals for short-term refrigeration of vaccines and medications in case of a power outage.
4. Implement policies to reduce energy demand during normal operations, which translates into less backup energy needs during outages:
  - a. Install a smart thermostat.
  - b. Install motion sensor lights.
  - c. Use LED bulbs throughout the facility (LEDs use less electricity and produce less heat).
  - d. Conduct an energy audit to identify other opportunities for energy savings.
5. Develop a purchasing schedule policy to procure energy-efficient equipment to limit the strain on generators during power outages.
6. Understand the capability of your backup generators, including the anticipated length of time they can run with various electrical loads with the current amount of fuel.

- a. Create an easily understood comparison chart of electrical load to the length of time the generator can function, with examples of equipment, to improve the duration of backup power.
7. Identify staff members to oversee the implementation of each of these policies and ensure they are followed through.

## Partnerships and Vendors

### Contacting Partners

Establish relationships with power-related companies, such as electrical utility companies, generator service companies, electricians, and others. Plan for at least annual communication with these companies to check on the status of any verbal or written agreements, especially those that pertain to power outages. All formal business relationships such as with vendors should have written agreements. Create agreements with partners to receive emergency maintenance in case alternative power sources fail during an extreme heat event.

1. **Utility Companies:** Contact your power company to identify if your clinic is listed as a priority location during a power outage. Priority locations may receive preferential access to electricity during system outages or have electricity restored earlier.
2. **Electricians and Contractors:** Establish a relationship with an electrical or contractor company to have the facility generator regularly inspected and maintained to prevent deterioration.
3. **Rental Companies:** Work with rental companies and develop partnerships to ensure the clinic can obtain extra generators and equipment in case the generator fails to operate during an extreme heat event.
4. **Community Organizations or Businesses:** Work with local businesses, organizations, or health centers to identify backup cold chain options in case the supply gets too warm.
5. **Staff Members:** Identify who will oversee the implementation of each of these policies and ensure they are followed through.

## Emergency Power Sources

### Emergency Power Options



1. Work with an electrician to receive an evaluation of the possibility of installing generators or backup batteries and prices for the installation. An evaluation may be able to identify the right size of generators or batteries needed to run a portion of the facility or the entire facility, along with the price of labor required to complete the installation.
2. Generators
  - a. Gas/Diesel generators are the most affordable backup power source available. These can range from portable generators to industrial generators which can be installed into the ground and configured to turn on when the power grid fails.
    - i. Benefits: These are generally less expensive up-front and may be more reliable for large facilities.
    - ii. Drawbacks: Requires purchase and storage of combustible fuels, requires regular maintenance and refueling during extended power outages, and contributes to local air pollution.
  - b. Solar power systems are more expensive but more environmentally friendly, do not contribute to local air pollution, and can be more cost-effective in the long term. These can also range from small portable systems to larger stationary systems with panels and energy storage.
    - i. Benefits: These do not rely on fuel sources during prolonged power outages, and they do not contribute to local air pollution. These can often be used during non-emergency times to reduce energy costs.
    - ii. Drawbacks: More expensive up-front than fuel generators. Powering a full facility may require more space for solar panels than is available on a facility's roof.

### 3. Battery Storage

- a. Battery storage is necessary for solar power systems to be practical during power outages. Backup batteries can also be used without solar by charging batteries from grid power, however, during outages, recharging these systems will be unlikely until grid power is restored. While battery storage can be expensive up-front, the size and carrying capacity of battery systems are increasing while manufacturing costs have been decreasing over time.
  - i. Benefits: Quieter than a generator. Can be stationary or portable, does not rely on purchasing fuel, and does not emit pollutants.
  - ii. Drawbacks: Significant expense up front, especially to power a full facility.

### 4. Hybrid Systems

- a. A hybrid solar, battery, and fuel generator system may be a cost-effective way to ensure power to essential equipment.

### Procurement

1. Identify a purchasing schedule to buy gas/diesel generators (or replace old ones as they become outdated or inefficient), backup battery storage, and sustainable energy such as solar.
  - a. Create policies to set aside funds in a reasonable period for each large purchase over time.
  - b. Consider guidelines for generator specifics (such as energy output, size, weight, and other factors that could be critical to effectively powering your clinic).
2. Create policies for generator placement to encompass safety, such as away from windows, doors, air conditioning units, or any air intake for the facility to prevent carbon monoxide and other pollution from getting into the facility if it is a gas or diesel generator.
3. Create policies for generator placement to ensure the generator is easily accessible for maintenance but also remains cool, receives adequate airflow during days of extreme heat, and minimizes air pollution near-patient and staff areas.
4. Identify staff members to oversee the implementation of each of these policies and ensure they are followed through.



## Upkeep

1. Schedule annual maintenance and inspections for the clinic's emergency power sources.
  - a. Maintenance and upkeep are critical to ensuring equipment will turn on and run properly when needed.
  - b. Schedule maintenance during the off-season to save on costs.
2. Schedule a regular cycle to ensure the clinic's generator is running properly and continues operating.
  - a. It is optimal to run a generator monthly for at least 30 minutes to keep it functioning smoothly.
3. Identify staff members to oversee the implementation of each of these policies and ensure they are followed through.

## Refueling

1. Create a refueling schedule to ensure the generator(s) is ready to operate when least expected.

2. Identify personnel and/or vendors with the task of refueling the generator(s) and establishing a schedule to refuel during emergency operations.
3. Fuel Sources: Establish an agreement with suppliers to ensure fuel can be delivered or picked up during emergency operations or so fuel supplies can be held for your clinic's needs.
4. Identify staff members to oversee the implementation of each of these policies and ensure they are followed through.

### During a Power Outage

1. Implement policies to reduce energy demand, especially while on backup power.
  - a. Set thermostats to 24°C.
  - b. Install motion sensor lights.
  - c. Use LED bulbs throughout the facility (use less electricity and produce less heat).
  - d. Turn off and unplug all computers and monitors that are not in use.
  - e. Unplug appliances such as microwaves and coffeemakers.

**NOTES:**

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# Extreme Heat Immediate Response Checklist

## For Administrators

### Purpose

This Extreme Heat Immediate Response Checklist has been designed as a tool to help your facility take action when a heat wave has been forecast locally.

Use this document to track progress. The notes section at the bottom can also be used to track comments, anticipated completion dates, and other relevant information.

### Facility Preparedness

Done	Task	Assigned to
	Check all blinds or curtains are working and closed to keep the indoor temperature down.	
	Inspect all windows to verify that all windows are sealed appropriately to prevent heat from getting in or air conditioning from getting out.	
	Place fans in exam rooms and lobbies as needed to circulate cool air.	
	If patient/staff areas are humid, use dehumidifiers, if possible, as humid air can raise the felt temperature and affect people's ability to cool themselves.	
	Consider distributing water spray bottles for <a href="#">patients to wet their skin while in front of a fan</a> .	
	Provide safe drinking water for patients and staff.	
	Monitor indoor temperatures in each room (including staff break rooms) to ensure they stay below 27°C. Move patients or staff out of rooms that are too hot.	
	Prepare for stabilization/treatment of patients with acute heat stroke. This may include the following equipment: a tub or body bag for ice water immersion; a large supply of ice; a stretcher/bed; fans; and water spray.	

### Refrigeration and Cooling Supplies

Done	Task	Assigned to
	If possible, keep a supply of ice. Do not wait until ice runs out to request additional supplies, as there may be significant delays.	
	Monitor refrigerators/freezers in the morning and afternoon to ensure medications and vaccines are being kept at appropriate temperatures.	
	Have a plan for how to relocate medicine and vaccines if equipment fails. Review this plan with pre-identified staff who can carry it out if needed.	

## Emergency Power

Done	Task	Assigned to
	Monitor essential equipment and supplies, including generators and backup fuel. Make sure the generator actually works a regular schedule (weekly or monthly) or when heat waves are forecast, and that there are 72 hours of fuel available.	
	Ensure backup fuel is stored in a safe location, away from buildings and people, and out of hot areas that may cause a release of flammable vapors.	
	Contact suppliers in anticipation of needing critical supplies. Do not wait until supplies run out as there may be significant delays.	

## Operations

Done	Task	Assigned to
	Ensure heat-related patient education materials are available for all patients entering the facility. Prioritize immediate actions they can take, such as accessing cooling locations in the community and utilizing a fan + spray bottle to stay cool.	
	Provide staff with extra breaks and ways to stay cool and hydrated.	
	Consider using popsicles and activities to encourage safe patient behaviors. Often patients underestimate risk and can use motivation (such as activities or treats) to go to cooler spaces or take specific actions.	
	If indoor temperatures exceed a safe level for staff and patients, close operations or relocate staff to support other facilities in the area ( <b>See the “Operational Preparedness Guide”</b> for more details).	
	Regularly monitor the body temperature of highly vulnerable patients, particularly those who are non-verbal or have underlying conditions that prevent them from sensing how hot they are.	
	Contact local authorities to provide updates on facility operations, patient volumes, and any critical supply needs. Ensure the facility is listed as a priority facility for power restoration.	
	High-risk patients should be assessed daily for signs of heat-related illness. This can be done via telephone calls by clinic staff, scheduled clinic visits, or at-home visits by health workers, family members, or a combination. ( <b>See “Operational Preparedness Guide”</b> for information on identifying high-risk patients.)	

## NOTES:

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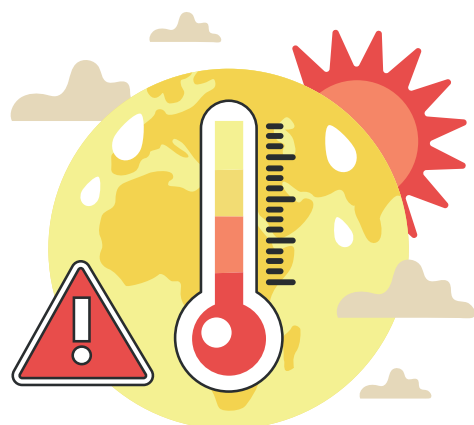
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# Extreme Heat Alert Plan and Communication Templates For Administrators

## Purpose

The purpose of this document is to provide frontline clinics with a strategy to maintain situational awareness and provide critical information to staff and patients to ensure essential operations continue during an extreme heat event.



## Heat Alert Plan

This Heat Alert Plan (HAP) should be part of a preparedness program that supports staff training and education, plan-focused exercises, and recurring plan reviews to identify areas for improvement/revision.

This plan, and other extreme heat resources in the toolkit, should be reviewed by the designated Heat Safety Officer (See “Operational Preparedness Guide” for details on the Heat Safety Officer role) at the start of the heat season, and whenever the plan is tested via exercises or an extreme heat event. This is necessary to identify needed revisions and ensure heat officer familiarity with these resources.

The response mechanism in this plan (See Section 4 and Heat Response Communication Templates) should be activated when an extreme heat event is in the forecast, as identified by the [Philippine Atmospheric, Geophysical and Astronomical Services Administration \(PAGASA\)](#).

### 1. Monitor emergency weather alerts for extreme heat events.

The primary and secondary Heat Safety Officers need to regularly monitor weather data via the [Philippine Atmospheric, Geophysical and Astronomical Services Administration \(PAGASA\)](#).

Heat index 5-day forecasts, which can more accurately predict impacts on health, can be found on the PAGASA website [here](#). Heat index forecasts with multiple days of orange (danger) and red (extreme danger) should be considered an extreme heat event.

### 2. Activate heat preparation activities when extreme heat is forecast.

When extreme heat is in the forecast, the Heat Safety Officer should:

- A. Notify the Heat-Safety Committee members to activate the predetermined heat response plans and begin use of the Heat Immediate Response Checklist in this toolkit.
- B. Review the Facility and Operational Preparedness Guide and identify any remaining actions needed.
- C. Follow the Heat Alert Checklist below to ensure appropriate communication of relevant forecast and clinic operational information.

### 3. Start implementing the Heat Alert Checklist procedures when an extreme heat event is in the 5-day forecast.

#### Heat Alert Checklist

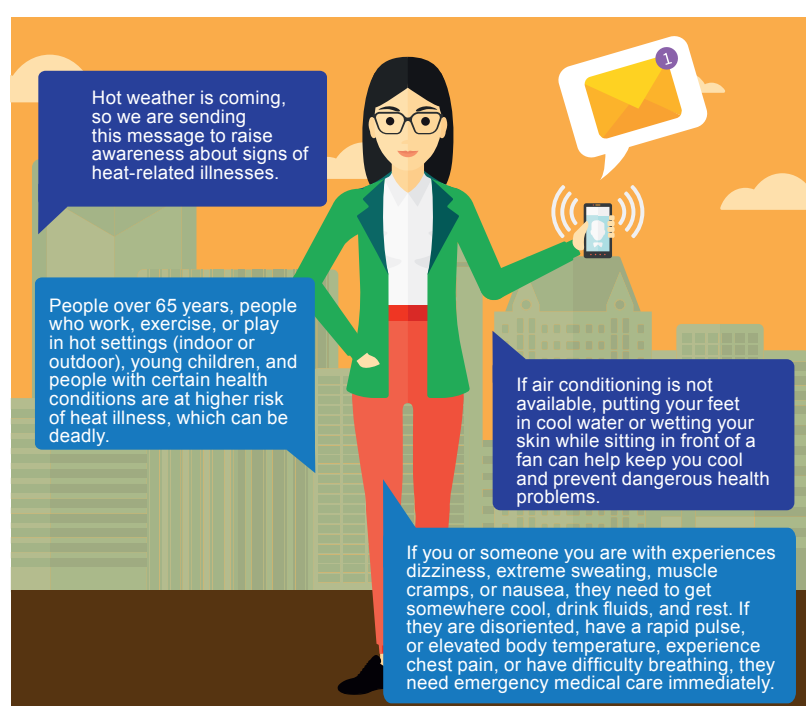
Done	Task	Assigned to
	Notify Heat Safety Committee members and clinic leadership	Heat Officer
	Notify clinic staff and share provider and patient toolkit resources	Heat Officer
	Notify appropriate Rural Health Unit and City Health Office Authorities of extreme heat plan activation and associated activities.	Heat Officer or Leadership
	Notify the clinic patient population of the extreme heat forecast. Provide heat-safety information ( <b>See Figure 2 of At-Risk Special Populations on page 11</b> ).	Provider and Administrator
	Notify high-risk patients of the extreme heat forecast and provide additional heat-safety information relevant to their condition ( <b>See Figure 2 of At-Risk Special Populations on page 11</b> ).	Provider and Administrator
	If patient appointments are postponed ( <b>See “Operational Preparedness Guide”</b> ), notify patients to reschedule.	Provider and Administrator
	Provide daily weather and preparedness action updates to the Heat Safety Committee, clinic leadership, and relevant staff.	Heat Officer
	Provide updates to patients if your clinic is closing, shifting hours of operation, or there are significant changes in the weather forecast.	Provider and Administrator
During Extreme Heat Event		
	Provide updates to patients if your clinic is closing, shifting hours of operation, or there are significant changes in the weather forecast.	Provider and Administrator
	Provide daily weather and preparedness action updates to the Heat Safety Committee, clinic leadership, and relevant staff.	Heat Officer
	Provide heat-safety information to the clinic patient population ( <b>See Figure 2 of At-Risk Special Populations on page 11</b> ).	Provider and Administrator
	Provide high-risk patients with heat-safety information.	Provider and Administrator
	Include links to condition-specific information ( <b>See Figure 2 of At-Risk Special Populations on page 11</b> ).	

## Communications Templates

### Start of the Heat Season

#### Phone, SMS, or email message

Effective communication is crucial for health centers and clinics to ensure the safety and well-being of their patients and staff during extreme heat events. This heat communication template document provides guidance and sample messages that can be used to disseminate important information and alerts before and during periods of extreme heat. You may copy and paste the text in the images.





## Social Media Post

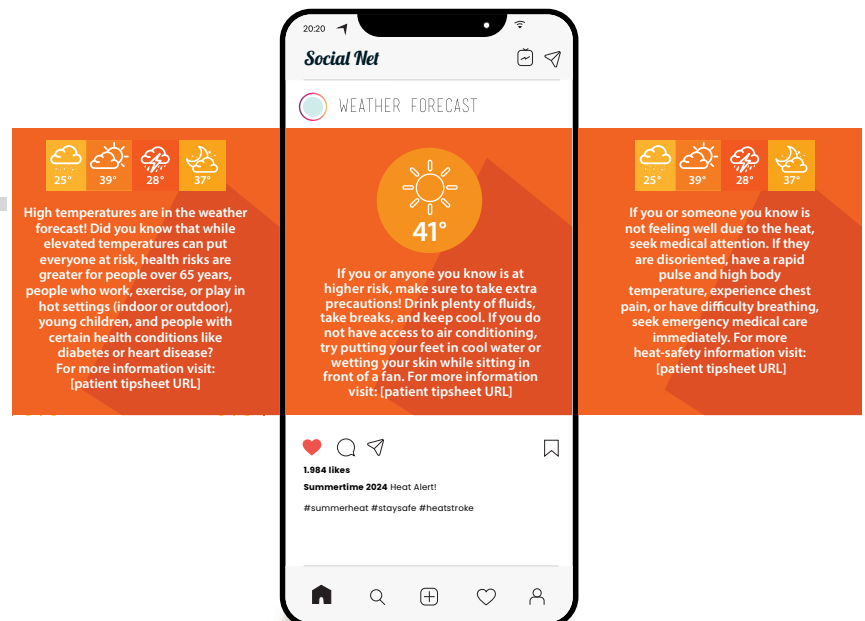


## When Extreme Heat is Forecast

### Phone, SMS, or email message



### Social Media Post



## NOTES:

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# Extreme Heat Recovery Checklist For Administrators

## Purpose

This checklist serves as a structured guide for your facility to navigate the recovery process following a heat wave. It outlines the necessary measures to restore normal operations and address any heat-related impacts that occurred.

Use this checklist to track progress toward the listed tasks. For any measures not yet addressed, utilize the notes section to detail a timeline for execution or to explain any obstacles preventing completion.

Done	Task	Assigned to
	Debrief with staff about the event, and provide opportunities to discuss personal experiences and operational activities. Offer additional mental health support for staff.	
	Keep appointments available for heat-associated emergent health concerns. Extreme heat can contribute to the exacerbation of health conditions even several days after the actual heat event.	
	Reschedule patients who missed appointments or whose appointments were postponed.	
	Check on medication and equipment that may have been affected by heat exposure. Plan for disposal, restocking, or repairs as necessary. This may be time-sensitive as additional extreme heat events may occur in the short term.	
	Review plans and processes internally. Identify opportunities to update and/or improve plans to address any challenges that arise. Update plans accordingly.	
	Participate in (or host) a community stakeholder forum (barangay-level) to review the broader response and any coordination or communication challenges that arose. Identify opportunities for improvement during the next extreme heat event and identify specific actors to carry out improvement actions.	
	Distribute extreme heat patient education and planning materials ( <b>See Patient Tip Sheet</b> ) as the event will be vivid in the patients' memories.	

## NOTES:

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