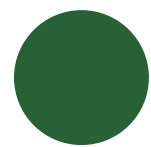




# **BECOME A CLIMATE HEALTH CHAMPION**

**Navigating Patient Conversations About Climate Change and Health**

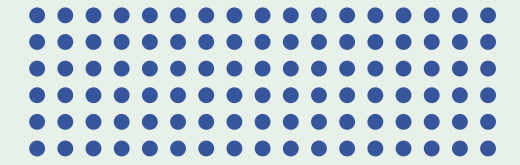


# Climate Health Conversations: Why They Matter

**Our patients are vulnerable** to the health impacts of climate change and we can help improve their resilience.

**The World Health Organization** recognizes climate change as the *greatest health threat of the century*.

*Note: This initiative uses the shortened phrase “climate health” to refer to the impacts of climate change on human health.*





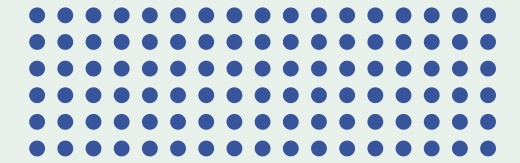
# Why YOU Should Become a Climate Champion

- **Health professionals** are seen as some of the **most trusted** leaders globally, including:
  - Doctors, Nurses, Pharmacists [1,2]
- 86% of healthcare providers **believe they should provide climate-health education** to their patients/the public [3].
- **68% of Americans trust their healthcare providers** as a source **for climate change information** - ecoAmerica survey, 2021 [4].
- A survey of 234 U.S. families at one U.S. clinic showed that **89% of participants better understood climate-change-related health risks** after a climate health conversation with their provider [5].

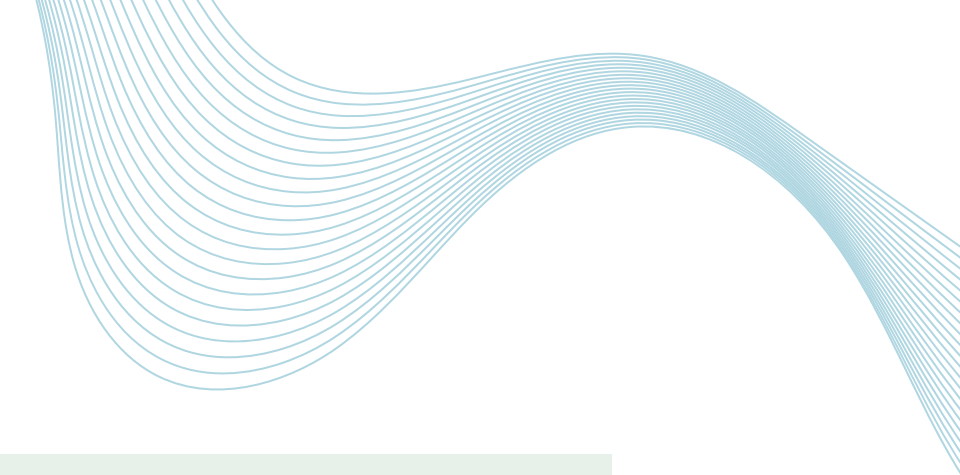
## YOUR ROLE

As a trusted messenger, you can improve climate health by:

- Raising awareness of climate change impacts
- Promoting preventative measures
- Tailoring care to climate risks
- Encouraging sustainable lifestyle choices







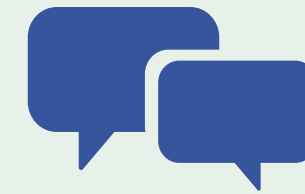
# Agenda



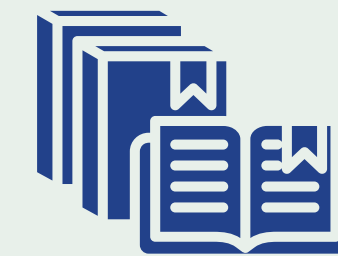
**Part I**  
**Climate Health**  
**Impacts**



**Part II**  
**Local Risks**



**Part III**  
**Climate Health**  
**Conversations**



**Part IV**  
**Resources**



# Poll Questions

## 1. What is your current role?

### Clinical:

- a. Primary Care Physician
- b. Specialist Physician (cardiologist, neurologist etc.)
- c. Nurse Practitioner/Physician Assistant
- d. Registered Nurse
- e. Pharmacist
- f. Allied Health Professional (physical therapist, respiratory therapist)
- g. Community Health Worker
- h. Non-clinical, based in a facility
- i. Non-clinical, Central Office



# Poll Questions

**2. Has the topic of climate change ever come up in an interaction with a patient?**

- a. No, never.
- b. Yes, I brought it up.
- c. Yes, the patient brought it up.

# Poll Questions

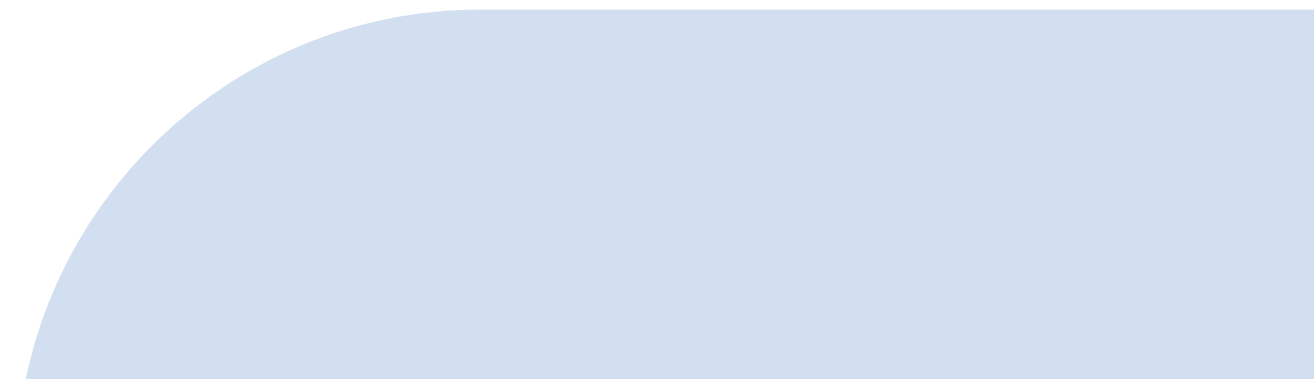
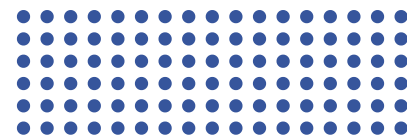
**3. How comfortable are you with the prospect of speaking to patients about climate change and its impact on health?**

- a. Uncomfortable
- b. Somewhat Uncomfortable
- c. Somewhat Comfortable
- d. Comfortable**



**PART I**

**CLIMATE HEALTH IMPACTS**  
**AN OVERVIEW**



# Foundations and Approach

## Climate Health Champions Program

**The Climate Health Champions Program is grounded in the latest scientific evidence.**

**Designed with the needs of a safety net health system in mind, the program focuses on mobilizing clinical interactions to help patients increase their resilience to the health impacts of climate change.**

The content of this course may include topics that some may find challenging to confront or discuss. We are here to support you, offer opportunities for reflection, and connect you to additional resources as needed.





# Introduction to the Health Effects of Climate Change from the CDC:

## Communicating the Health Effects of Climate Change

A TOOLKIT FOR PUBLIC HEALTH OUTREACH

National Center for Environmental Health  
Division of Environmental Hazards and Health Effects



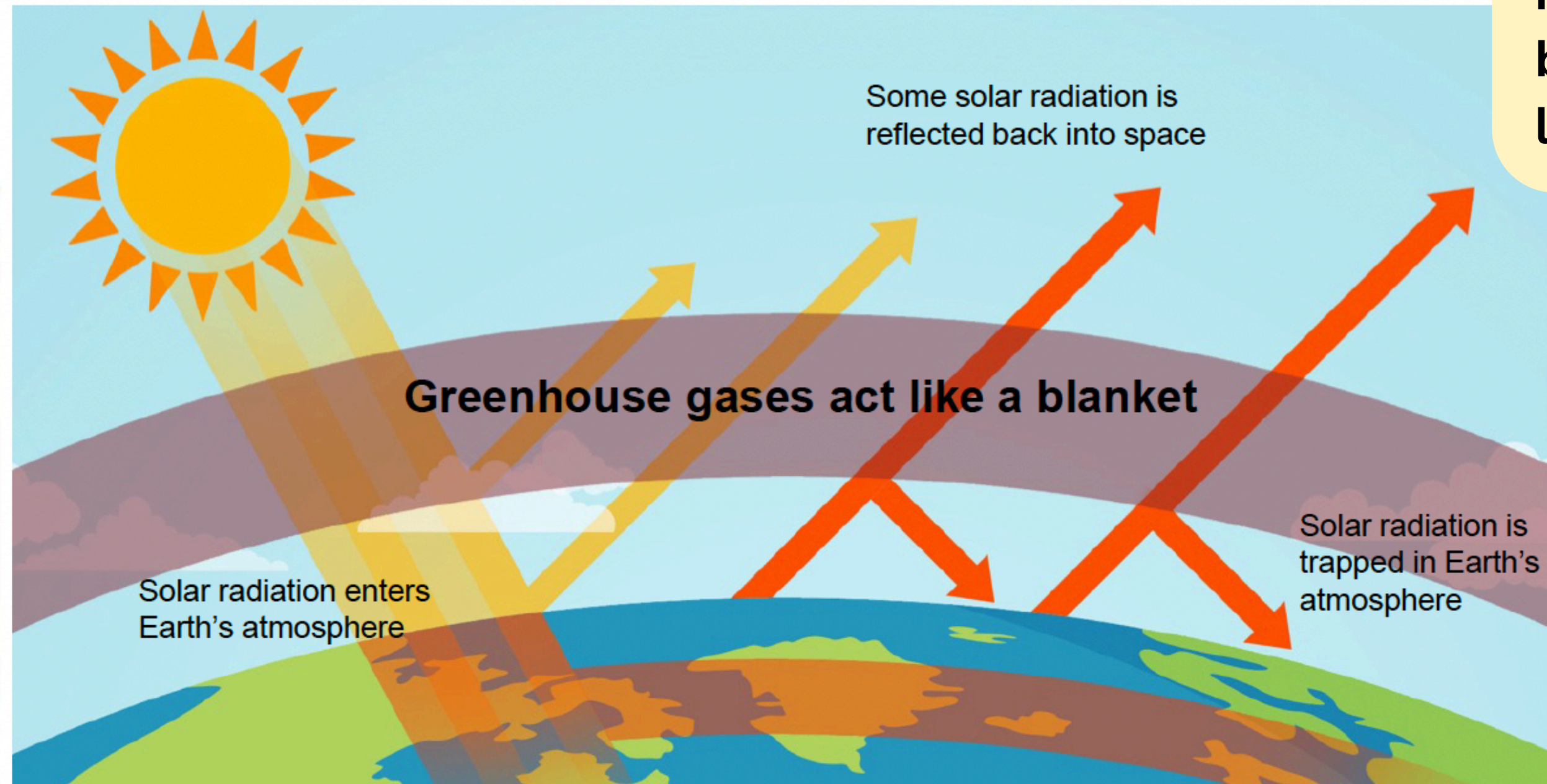
\*Additions are in yellow text boxes

Slide Credit: CDC [6]



# What is Climate Change?

Our climate is changing rapidly from the burning of fossil fuels, like oil, coal, and gas.



CDC

Human activity has produced so much pollution that the *warming blanket* has become a *smothering one*.



# How is Climate Change Affecting Health?

## Affecting Health Directly

Extreme Heat  
Air Pollution  
Extreme Weather

## Spreading Disease

Diseases Spread by Insects,  
Ticks, and Rodents  
Contaminated Water  
Contaminated Food

## Destroying & Disrupting Food Supplies

Hunger and Malnutrition

## Disrupting Well-Being

Mental Health Problems

Forced Migration



# How is Climate Change Affecting Health?

## Affecting Health Directly

- A Extreme Heat
- B Air Pollution
- C Extreme Weather

## Spreading Disease

- D Diseases Spread by Insects, Ticks, and Rodents
- E Contaminated Water
- F Contaminated Food

## Destroying & Disrupting Food Supplies

- H Hunger and Malnutrition

## Disrupting Well-Being

- I Mental Health Problems
- J Forced Migration



AFFECTING HEALTH DIRECTLY

# EXTREME HEAT

Higher heat, increased humidity, longer and more frequent heat waves can lead to:

dehydration and heatstroke

**More Vulnerable:** Outdoor workers, student athletes, people in cities, people without air conditioning, people with chronic diseases, pregnant individuals, older adults, and young children

**Additional:** Indoor workers and incarcerated people





AFFECTING HEALTH DIRECTLY

# AIR POLLUTION

Increased wildfires, smog, pollen, and mold can lead to:

asthma and allergy attacks

**More Vulnerable:** People with heart and respiratory conditions such as heart disease, asthma, or chronic lung disease



AFFECTING HEALTH DIRECTLY

# EXTREME WEATHER

Increased frequency and severity of heavy downpours, floods, droughts, and major storms can lead to:

injury, illness, displacement, and death

**More Vulnerable:** People who lack access to evacuation routes and people who can't use stairs when elevators are out of service, people in wheelchairs, older adults, the poor, and people with disabilities, particularly if they are unable to access elevators and evacuation routes, and non-English speakers.

Slide Credit: CDC





SPREADING DISEASE

# INSECTS, TICKS, AND RODENTS

Higher temperatures, changes in rain patterns, and disrupted ecosystems help spread:

diseases carried by  
insects, ticks, and rodents



**More Vulnerable:** People who spend more time outdoors in places where these insects and other disease-carriers live



SPREADING DISEASE

# CONTAMINATED WATER

Higher water temperatures, heavier downpours, rising sea levels, and more flooding help spread:

gastrointestinal illness, diseases from toxins in swimming areas and drinking

water

**More Vulnerable:** Children, the elderly, people with weakened immune systems, people in remote or low-income communities with inadequate water systems, and people in communities that are dependent on fish and shellfish

Slide Credit: CDC



A microscopic image showing several clusters of purple-stained bacteria, likely Gram-negative cocci, against a light blue background. The bacteria are arranged in small groups and chains.

SPREADING DISEASE

# CONTAMINATED FOOD

Increasing temperatures, humidity, and extreme weather events help spread:

illnesses from bacteria and toxins in food

**More Vulnerable:** Infants, young children, the elderly, the poor, agricultural workers, and people with weakened immune systems



# Mental Health

Exposure to climate-driven events such as loss of homes, wildfires, and extreme storms can increase the risk of:

Stress, Anxiety, PTSD, Depression

**More Vulnerable:** Indigenous Persons, Children & Older adults, Climate Migrants, and People Who Live or Work on Vulnerable Land





## Climate Change, Equity, and Environmental Justice

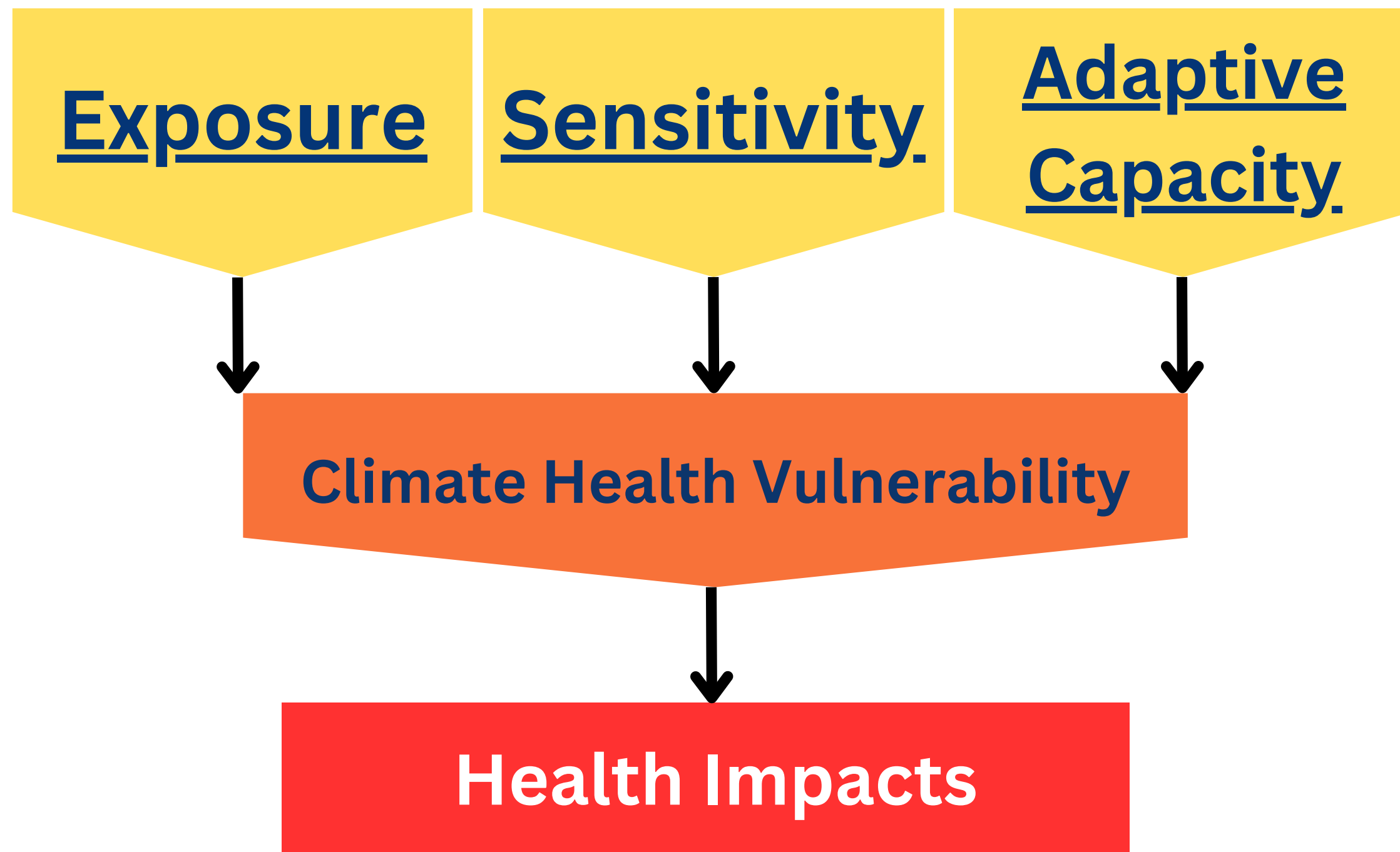
Often, these populations are less able to prepare for and recover from these events [7].



\*This list is not comprehensive\*



# Who is Vulnerable to the Health Impacts of Climate Change?



**Everyone is vulnerable to the health impacts of climate change.**

However,

- **exposure**
- **sensitivity**
- **adaptive capacity**

can vary, resulting in different levels of vulnerability and health impacts.



# Who is Vulnerable to the Health Impacts of Climate Change?

## Examples:

### Exposure

- **Outdoor workers** may have a high exposure to rising temperatures, as they likely have to **spend long periods of time outdoors** despite increased heat.



### Sensitivity

- **Children** whose lungs, brains, and immune systems are rapidly developing in the first years of life are more sensitive to air pollution, as the same level of pollutant **impacts them more** than others.

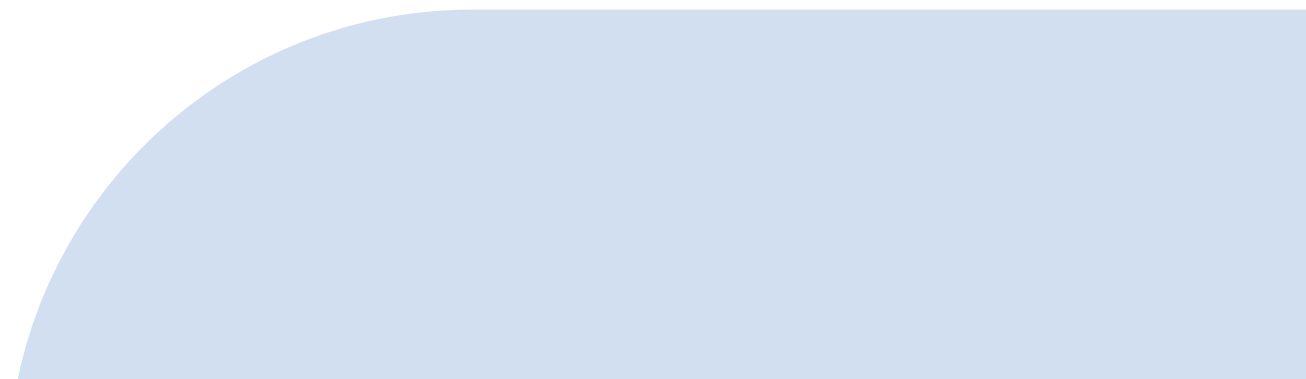
### Adaptive Capacity

- **People who have mobility issues** may have **challenges evacuating**, decreasing their adaptive capacity to extreme events.



**PART II**

**CLIMATE IMPACTS IN [INSERT  
LOCAL CITY OR TOWN]:  
UNDERSTANDING THE LOCAL  
EFFECTS**



## Heat Impact in **[Insert locale]**

On average, heat stress is the leading cause of weather-related deaths in the US [9].

**[Insert local city]** experiences a **significant heat island effect**, where urban areas are substantially hotter than their surroundings. Communities with **fewer trees** experience this effect more acutely.

**[Insert graphic here that demonstrates local heat impact (heat map, warming over the years, etcetera).]**



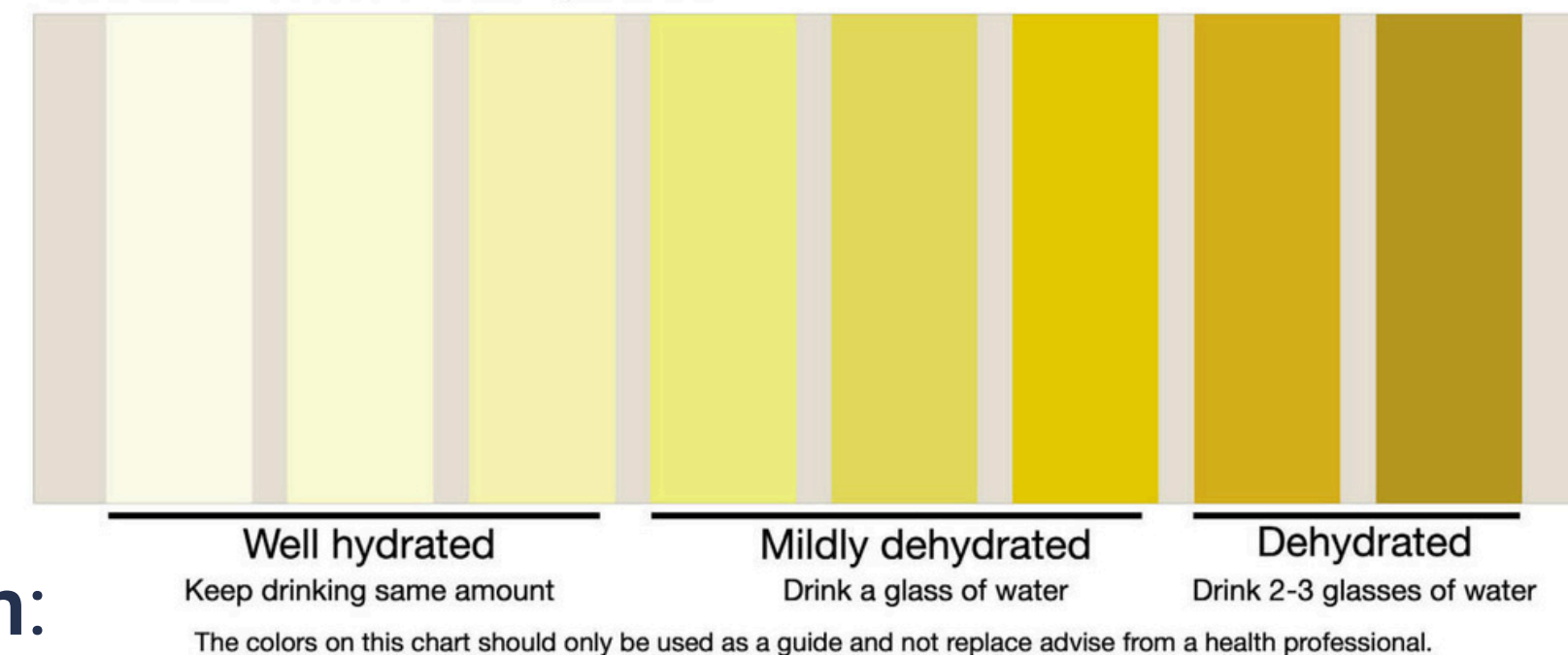
# Action Steps

## Heat

### Actionable Guidance:

- **A.** Educate patients on creating a **heat action plan**:
  - Use cooling centers/ stay in the shade
  - Use fans if indoor temperatures are <90F
  - Stay hydrated
  - Check urine color
- **B.** Educate patients on **symptoms** to look out for.
- **C.** Share resources like the [\[insert link to local cooling centers or energy assistance programs\]](#)
- **D.** Create a medication plan for hot weather, including keeping medications cool, managing dehydration risks of certain medications, and considering medication adjustments.
- **E.** Encourage checking on neighbors living alone.
- **F.** Explain how **poor air quality** can worsen heat-related health risks.

Urine color chart to assess hydration



# Air Quality in **[Insert locale]**

Higher temperatures, burning of fossil fuels, and frequent wildfires negatively impact air quality.

Ozone and PM2.5 cause **approximately [insert number of deaths in local city]**, along with thousands of asthma, heart, and lung-related emergency visits and hospitalizations **[insert source]**.





# Greenhouse Gas vs Particulate Pollution

Burning fossil fuels releases **TWO** types of pollution

## **Greenhouse Gas Pollution** - Drivers of climate change

These are pollutants that trap heat in the atmosphere.

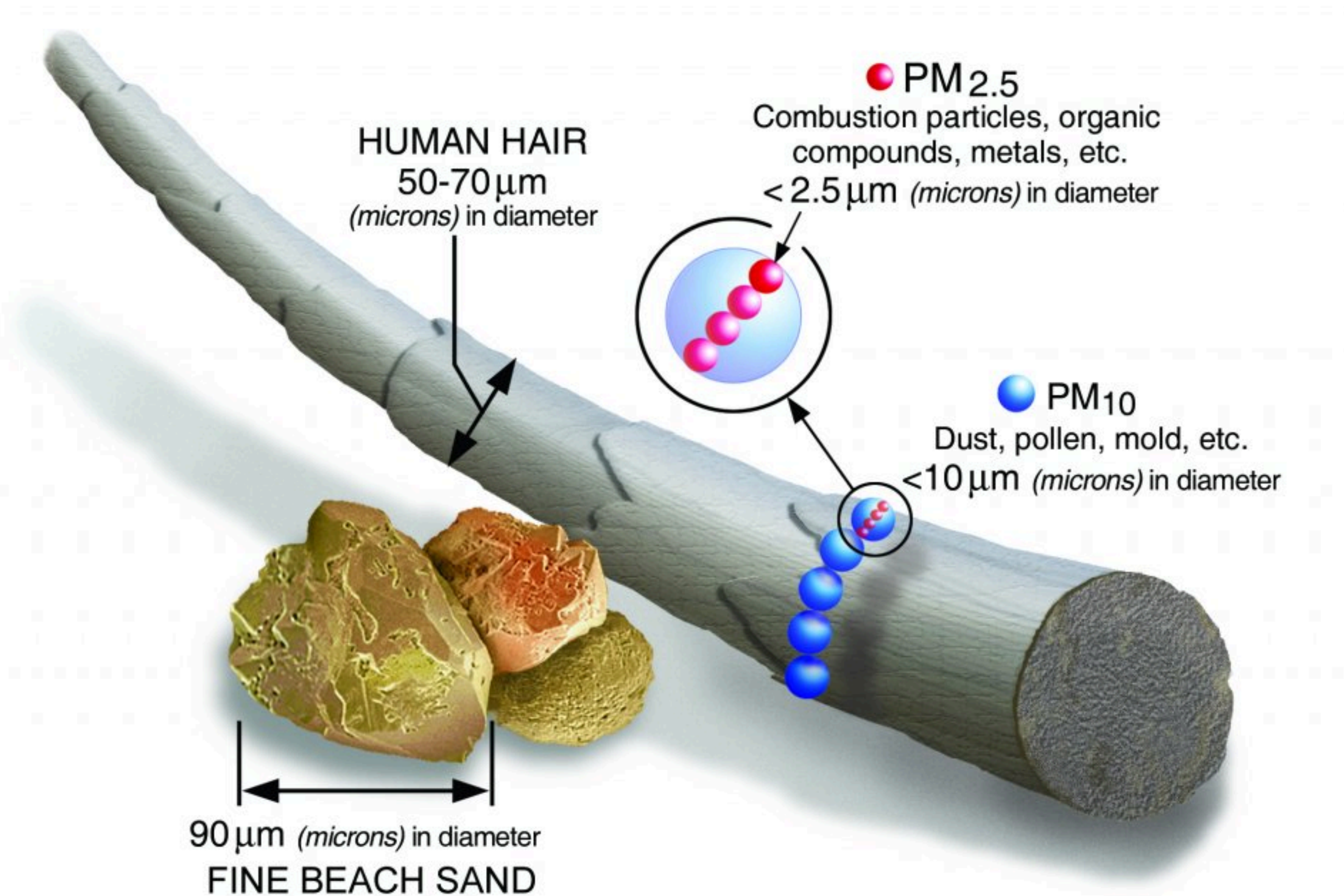
- Examples: Methane and Carbon Dioxide [10]

## **Particulate Pollution** - Directly impacts our health

Inhalation of these particulates can lead to or exacerbate health conditions such as asthma and heart and lung disease. They can also increase the risk of premature birth and other outcomes [11,12].

- Examples include: PM2.5 and PM10

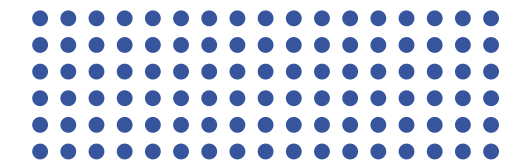






# Action Steps

## Air Quality



### Actionable Guidance:

- **A.** Assess risk and provide tailored guidance for pregnant people, children, those with asthma or other respiratory conditions
- **B.** Encourage monitoring air quality through EPA's AIRNow, EnviroFlash alerts, or many weather apps
- **C.** Advise limiting outdoor activities during high pollution periods.
  - If patients must go outdoors, advise them to use KN95 or N95 mask
- **D.** Help patients consider attaining a portable air purifier, particularly for vulnerable patients. If affordability is an issue, point them to Clean Air Agency's "[DIY Air Filter](#)" [13]
- **E.** Connect air pollution to personal choices (e.g., car use); suggest walking or biking as healthier alternatives.

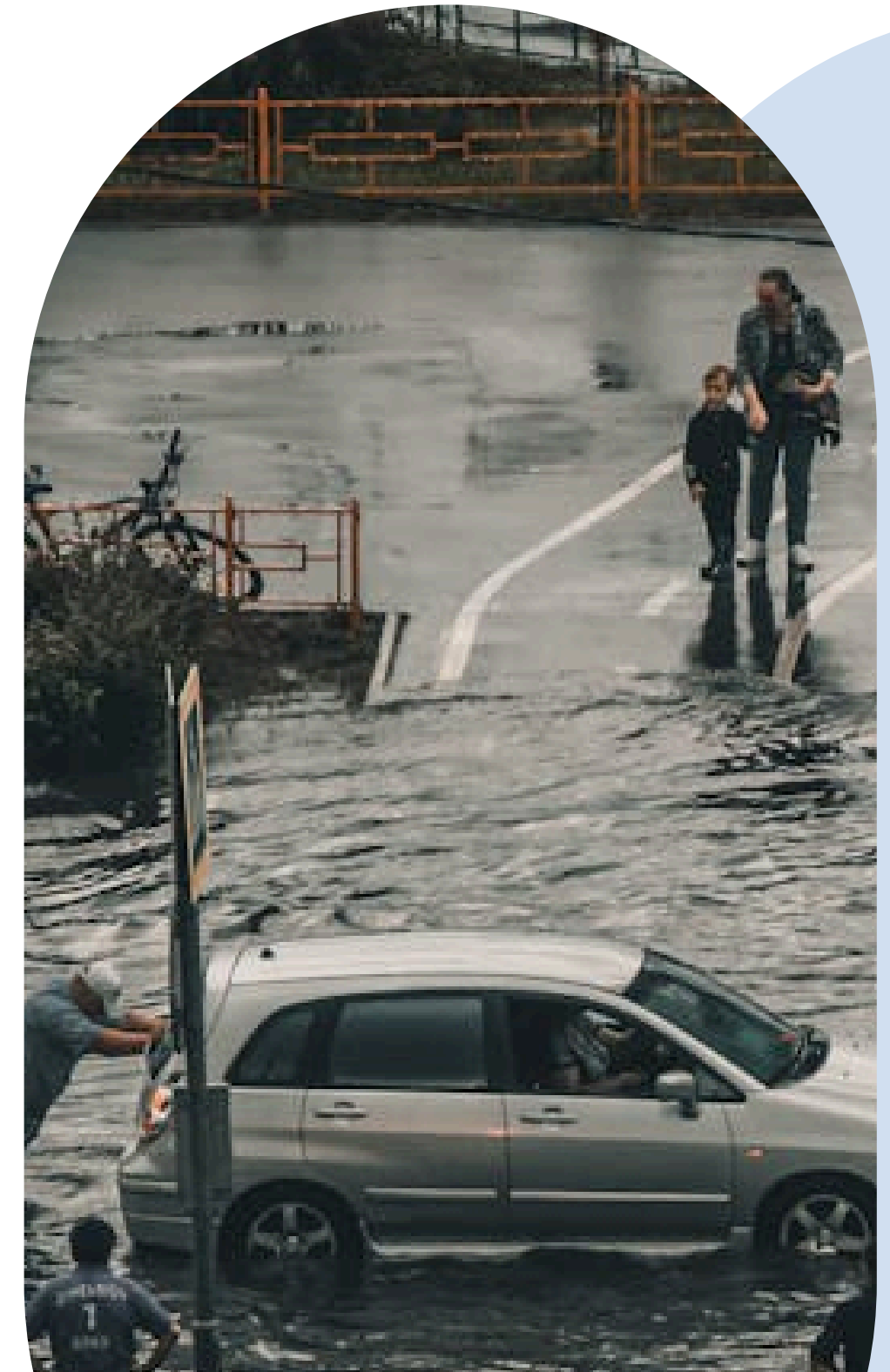
# Extreme Events in [insert locale]

Climate change increases the intensity of storms and hurricanes in the U.S.

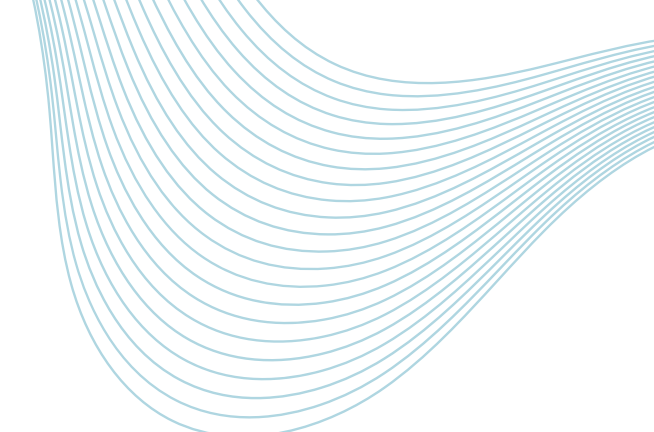
## CDC:

“Floods cause the second highest annual death rate among weather-related hazards, mainly due to drowning [14].”

[Insert local areas] are vulnerable to surges and flooding [source].







# Action Steps

## Extreme Events

### Actionable Guidance:

- Assess patients' evacuation likelihood and develop plans for accessing care, managing refrigerated medication, and ensuring medical devices during power outages.
- Advise post-flood precautions:
  - Avoid contaminated water
  - Stay away from standing water with possible downed power lines
  - Be cautious of mosquito-borne illness and ticks
  - Anything in the home that has been wet for more than 24 hours is at risk for mold and should be thrown out.

# Extreme Events: Power Outages

Extreme weather events such as high heat, storms, and high wind can cause power outages and/or disruptions

## What Patients Can do:

1. **Check** on people with disabilities and access/functional needs.
2. **Protect Appliances:** Unplug all appliances/electronics to prevent power surges.
3. **Food/Medication Safety:** Keep refrigerator/freezer doors closed as much as possible.
  - a. Refrigerators stay cold for 4 hours, full freezers for 48 hours.
  - b. Use the perishable food in the refrigerator and freezer first.
  - c. Some medications need to be refrigerated. If the power is out for a day or more, throw away any medication that should be refrigerated, unless the drug's label says otherwise [15].
4. **Stay indoors**, if possible. If you must go outside, stay away from downed and dangling power lines.

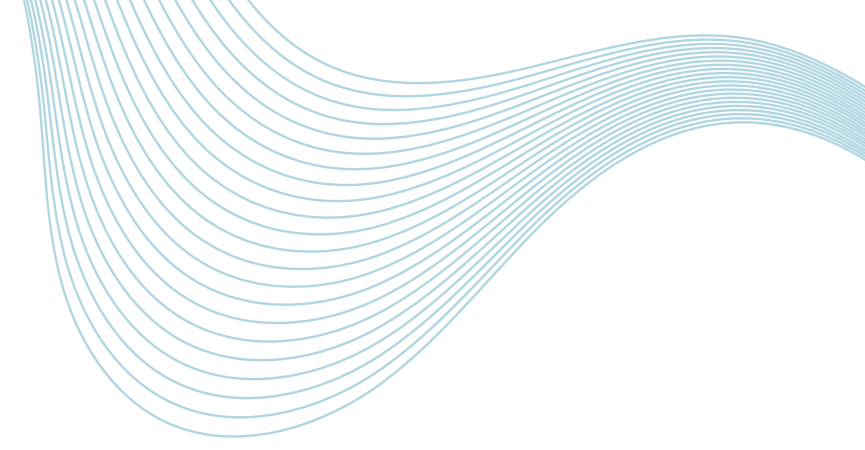


# Vector-borne Diseases in [insert locale]

Climate change significantly influences the spread of vector-borne illnesses by altering the environmental conditions in which they live and breed.

Some local, vector-borne transmissions in  
[insert locale] include:  
[insert examples]





# Action Steps

## Vector-Borne Diseases

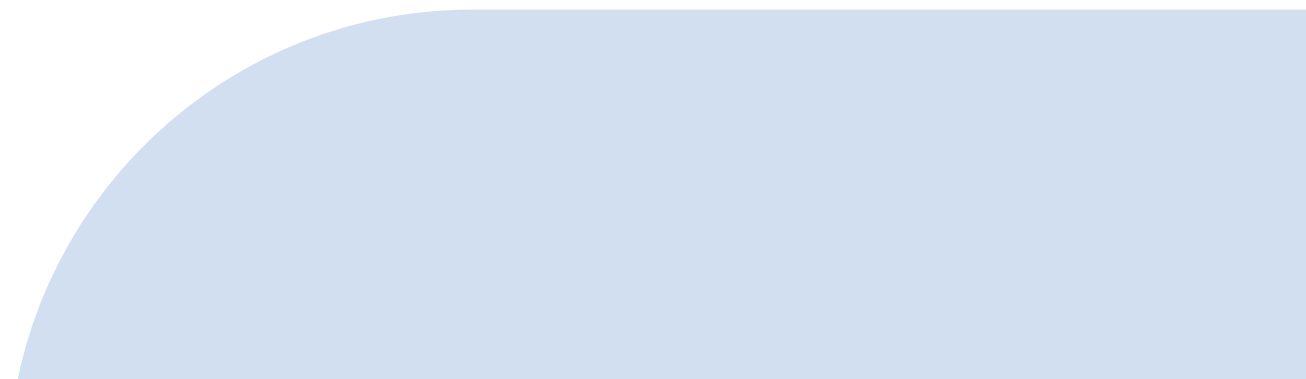
### Actionable Guidance:

- Advise patients to seek medical care if sick within 2-14 days after mosquito or tick exposure.
- Remind patients to:
  - Check for ticks
  - Use insect repellent
  - Wear long sleeves/pants
  - Avoid bushy or grassy areas
- Inform patients that standing water around the home attracts more mosquitoes.



**PART III**

**CLIMATE HEALTH CONVERSATIONS:  
EFFECTIVE COMMUNICATION STRATEGIES  
WHEN TALKING TO PATIENTS**



# Clinical Climate Conversations: Game Plan

**\*\* All of this information can be found in the Climate Health Champions Handbook**



## HOW TO COMMUNICATE: CLIMATE HEALTH

In the following pages, this handbook outlines seven key climate risks which affect patient health and healthcare delivery. Each section is structured to provide actionable guidance for clinicians. The format for each risk discussion is as follows:

1. **Lead with a Question:** Empathy-driven conversation starters designed to engage patients in meaningful discussions about their personal health issues
2. **Explain the *How* or *Why*:** The mechanisms behind the climate change's effect on the patients health
3. **Help Strategize a Plan:** Practical advice and key symptoms patients should monitor
4. **Consider Resources:** A list of helpful links for more information





## 1. Lead with a Question:

- “Have you noticed it feeling **hotter than usual** recently? How has that been affecting your daily routine?”
- “When it's really hot, do you ever feel dizzy, tired, or find it harder to breathe?”
- “If you are getting too hot at work and are starting to feel sick, **do you know some things to look out for?** Do you know your rights as a worker?” [17]

## 2. Simple *How* or *Why*:

- “In the NYC area, we are seeing **more hot days** than in the past because of climate change.”
- “In heat, your body has to **work harder to stay cool**. This can make it harder to breathe and put extra strain on your heart.”
- “For people with conditions like heart disease, high blood pressure, or asthma, this extra stress can affect your health.”

## Most Vulnerable to Heat Risks

- Outdoor and indoor workers
- Student athletes
- People in cities
- People without air conditioning
- People with chronic diseases
- Pregnant women
- Older adults
- Young children [14]
- Incarcerated people

## 3. Help Strategize a Plan:

**Explain Symptoms** - “During heatwaves, be vigilant for symptoms such as heavy sweating, muscle cramps, weakness, lightheadedness, headache, nausea, and vomiting, as these may indicate heat-related illnesses.”

**Educate** patients on how to create a heat action plan. For example:

- Utilizing cooling centers
- Staying in the shade
- Using fans if indoor temps are <90 degrees F
- Drinking fluids
- Checking urine color

**Develop** a medication plan for hot days, including keeping medications cool, managing dehydration risks of certain medications, and considering medication adjustments. Heat and medication guidance

**Note** that poor air quality can make heat risk worse [15,16]

## 4. Consider Resources:

- Use the CDC's Heat and Health Risk Screening to determine heat risk
- Direct patients to the free NYC Cooling Assistance Benefit for air conditioners and fans
- Advise patients to check on neighbors living alone and enroll in the NYC Be a Buddy system

Urine color chart to assess hydration



The colors on this chart should only be used as a guide and not replace advice from a health professional.



# Clinical Climate Conversations: Tips

**Keep Message Simple**

➤ Use plain language, avoid technical words/phrase

**Relate to Patient's Health**

➤ Relate climate conversations to the patient's health concerns

**Refer to local context**

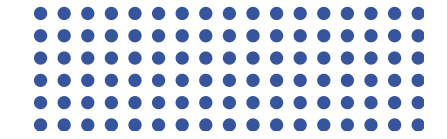
➤ Discuss the specific impacts on NYC communities

**Talk about the Benefits**

➤ Talk about the health benefits of climate action







# Clinical Climate Conversations: Tips

Empower Patients

> Empower patients to make good decisions about their health

Avoid political and/or polarizing language

> Such as references to politicians, or terms like 'climate crisis'

Weather Conversations

> Talk about climate change before and after extreme weather events

Use Narratives

> Tell stories to connect with people **\*if time allows\***



# Tailored Communication

Clinical Scenario: Respiratory Health Concerns related to Air Quality

**Keep Message Simple**

Use plain language, avoid technical words/phrases

**Relate to Patient's Health**

Relate climate conversations to the patient's health concerns

**Refer to Local Context**

Discuss the specific impacts on NYC communities

## Communication Examples:



**“The WHO reports that 99% of the world’s population regularly is exposed to air that exceeds WHO guideline limits and contains high levels of pollutants.”**



**“When you breathe in polluted air, tiny particles and harmful gases can get into your lungs and body. This is especially important for you because of your COPD. Let’s make a plan so that you can stay healthy.”**



# Clinical Climate Conversations: Handbook Guidance

Look to the Handbook for Four Step Communication Guidance on the Following  
Climate Health Risks:

- Heat
- Air Pollution
- Aeroallergens
- Extreme events, such as storms and flooding
- Vector-borne Diseases
- Water and Food Safety
- Mental Health

CLIMATE RISK: HEAT

**1. Lead with a Question:**

- "Have you noticed it feeling **hotter than usual** recently? How has that been affecting your daily routine?"
- "When it's really hot, do you ever feel dizzy, tired, or find it harder to breathe?"
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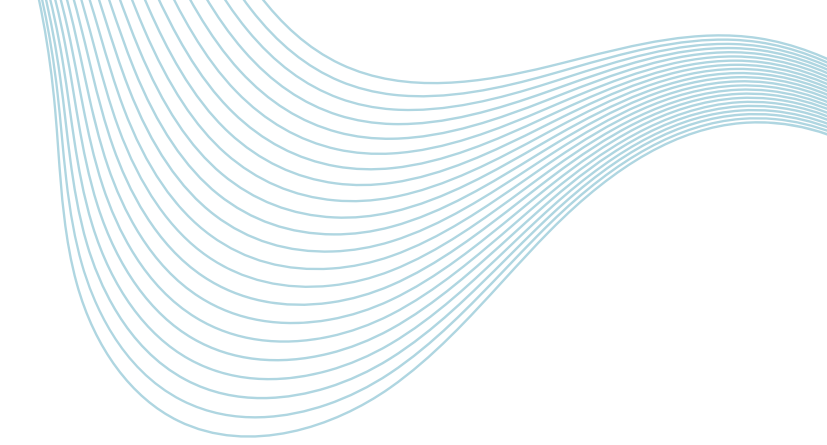
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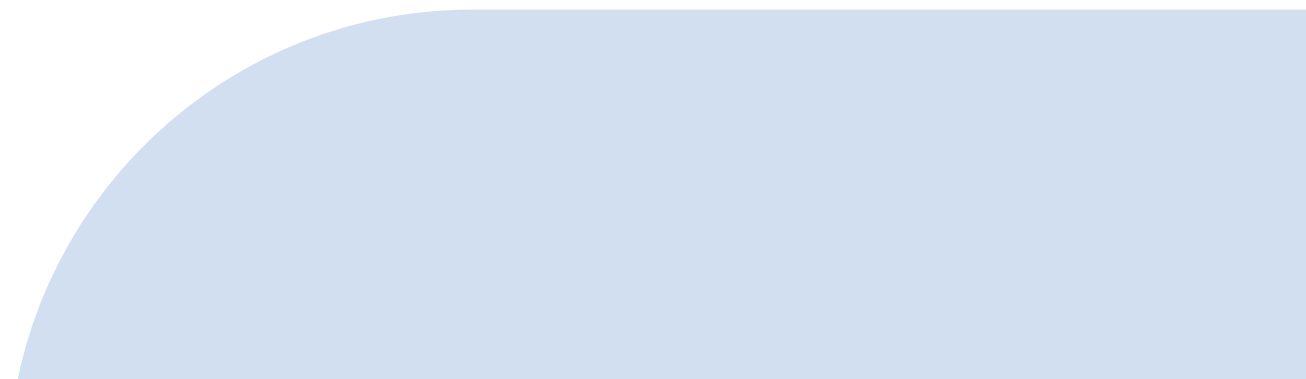
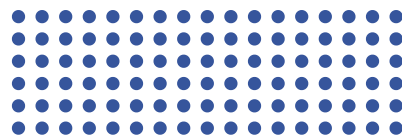
# **Tailored Communication**

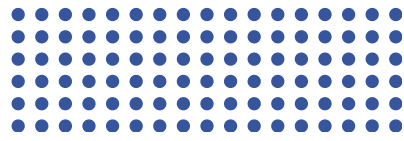
These strategies can also be used to engage colleagues, family members, and friends!



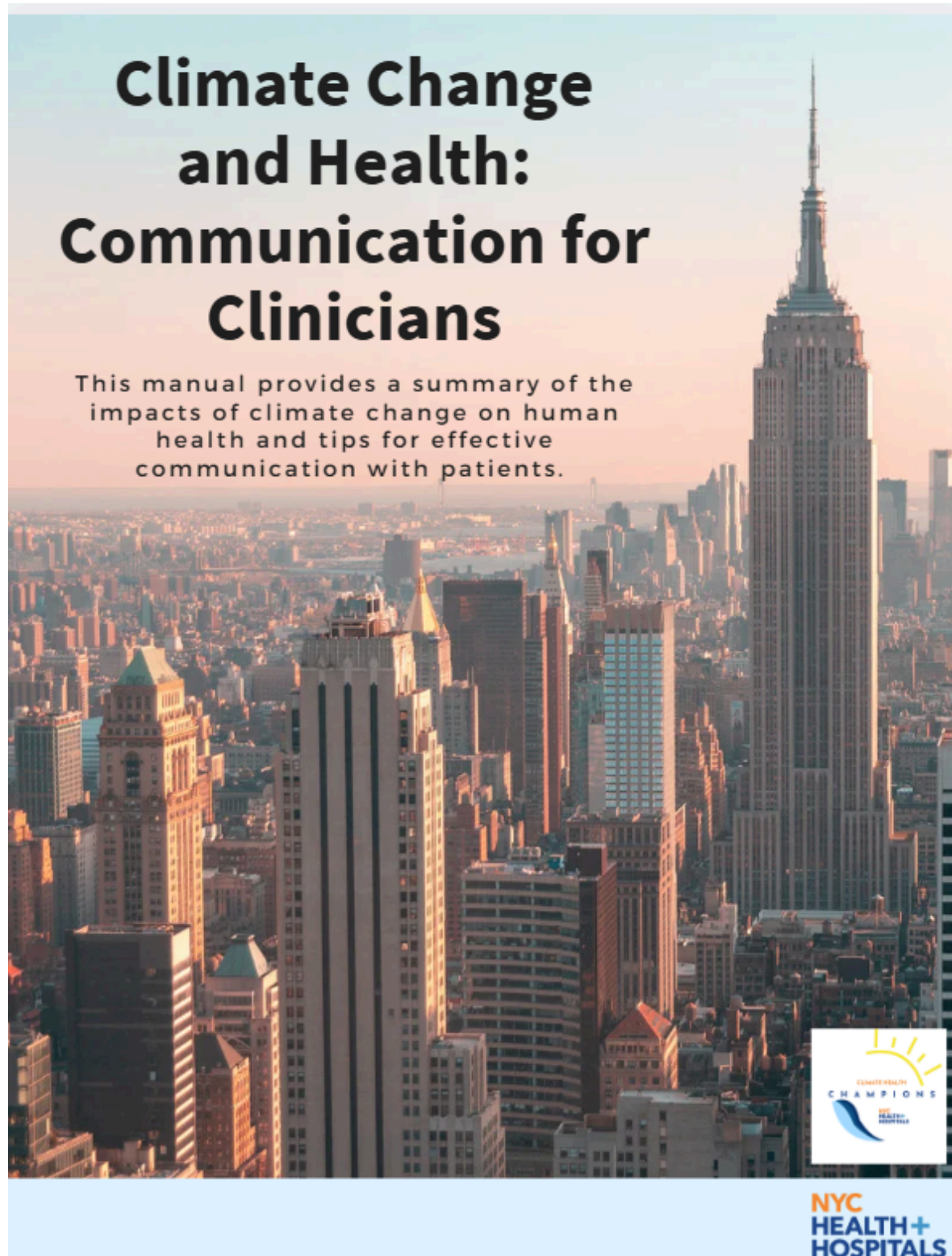
**PART IV**

**ADDITIONAL RESOURCES**





# Resources



[Climate Champions Handbook](#)



# Resources

## Patient Fact Sheets

Consider downloading these fact sheets to offer additional information to your patients.

US EPA's: **Climate Change and Children's Health and Well-Being in the United States**

Spanish versions available



US EPA's: **Climate Change and the Health of Pregnant Women**



Health Care Climate Council's **Extreme Heat: Climate Change is Affecting Your Health**



Americares's Climate Resilience Frontline Toolkit for **Patient Fact Sheets on Weather, Wildfires and Smoke, Floods, Hurricanes, and Extreme Heat**

Spanish versions available



## Additional Resources

### CLIMATE + HEALTH COMMUNICATIONS

- **Yale Program on Climate Communication:** articles, lesson plans, talking points, and other tools
- **EPA Climate Change and Health Factsheets:** health impacts for certain populations of concern
- **IPCC Headline Statements for Policymakers:** internationally relevant talking points for a concise narrative
- **WHO Toolkit:** tips for health professionals communicating about climate health
- **Americares Climate Resilience for Frontline Clinics Toolkit:** resources for providers, patients, and admin
- **NOAA Climate Media Resource Guide:** information on data sources, preparedness, equity, media, and more
- **ecoAmerica Connecting on Climate:** more detailed handbook for climate communications
- **George Mason University Center for Climate Change Communication:** research on American climate perceptions

### NATIONAL CLIMATE NEWS

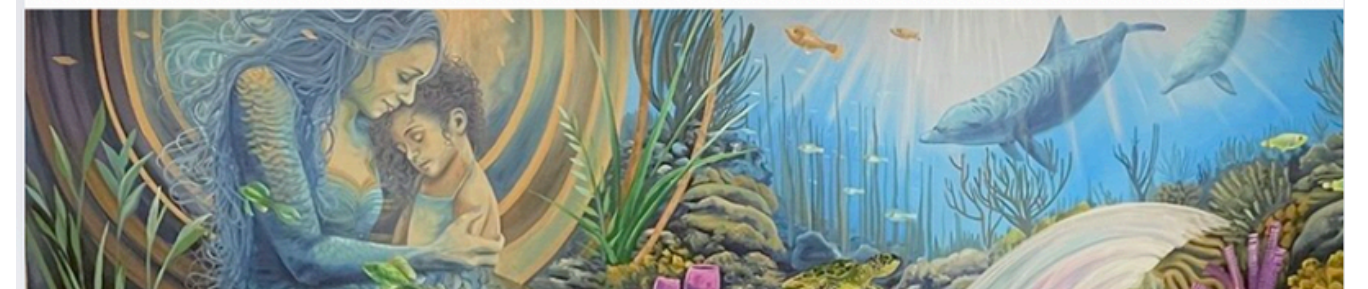
- **NCEI State of the Climate:** monthly recap of major climate events
- **Climate.gov:** the Global Climate Dashboard outlines changes in major indicators over time
- **Heat.gov:** heat and health information
- **AMA Climate Change News:** climate headlines that are most relevant to physicians
- **APHA Climate Change, Health, and Equity:** information to integrate climate into health equity practices

### LOCAL HAZARD INFORMATION

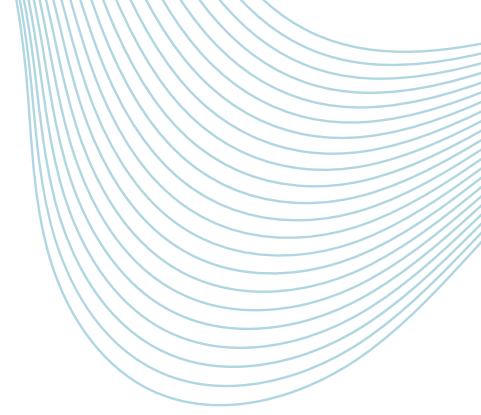
- **NotifyNYC:** offers emergency alerts via text, phone, email, and more
- **NYC Hurricane Evacuation Finder:** displays evacuation zone by address
- **Con Edison Outage Map:** identifies power outages and restoration timelines across the 5 boroughs
- **AirNow.gov:** provides hourly air quality updates and future forecasting
- **DOHMH Heat Vulnerability Index:** calculates which neighborhoods are at higher risk during heat events

### REFERRAL RESOURCES

- **311:** provides information on utility assistance, cooling centers, shelters, air quality, and more
- **HEAP Cooling Assistance:** offers financial assistance for Air Conditioning
- **ACCESS NYC:** screening system for benefit programs
- **Cooling Center Site:** maps all available cooling center locations across the city
- **Department of Homeless Services:** directs housing-insecure residents to case management resources







# **Next Steps: Climate Health Champions**

- You are now a Climate Health Champion!
- Make a commitment to try this out with three patients.
- Write a list of ways you could engage your patient population, first from memory and then supplementing with the resources.
- Choose some of the most simple and begin there.



**Many thanks to our  
Climate Health Champions Advisory Group:**

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# Certificate

**Use this [link](#) to download and create a personalized certificate.**

**Add your name and the date to the text boxes.**



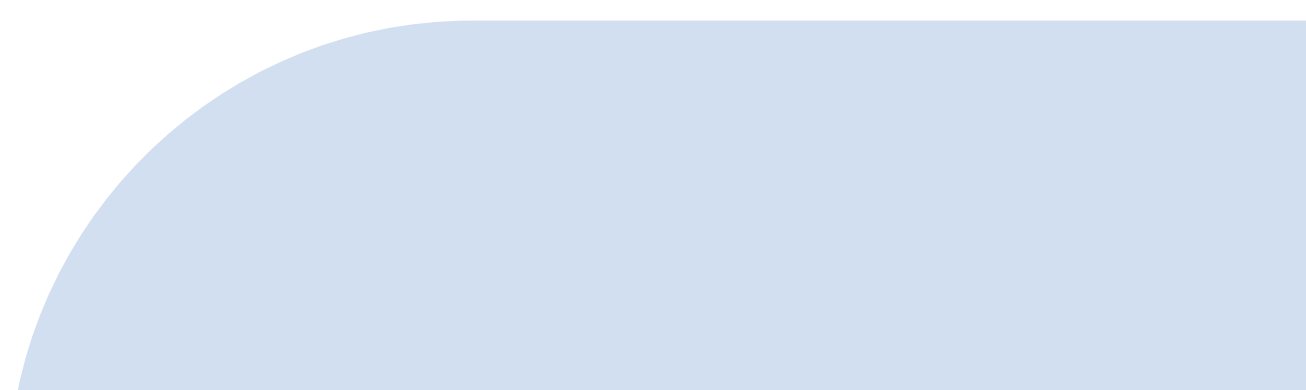


# Poll Questions

4. Now that you have taken this training, how comfortable are you the prospect with speaking to patients about climate change and its impact on health?

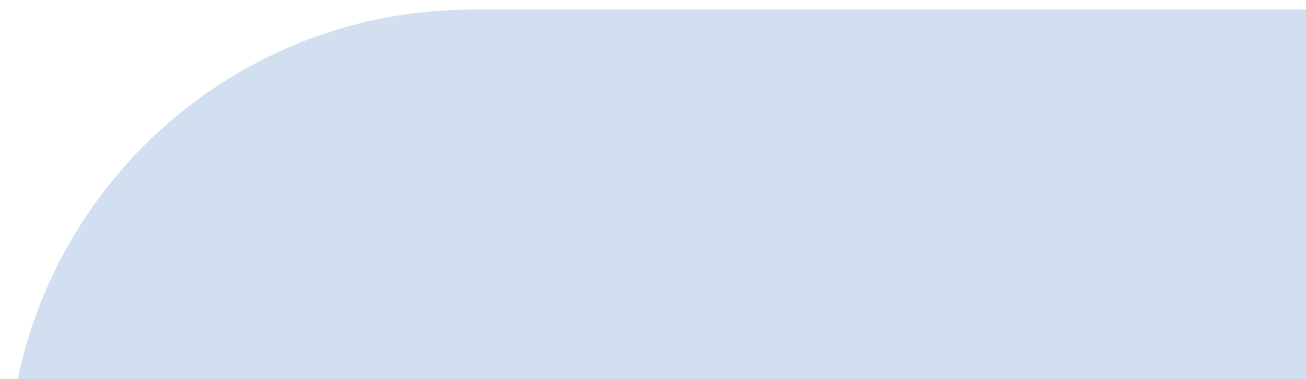
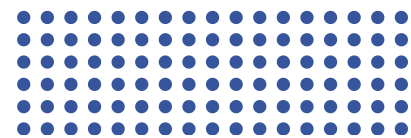
- Uncomfortable
- Somewhat uncomfortable
- Somewhat Comfortable
- Comfortable

**THANK YOU!**





# QUESTIONS?



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