## Welcome to our session

Mitigating Heat-related Health Risks in Arizona







### AZ COMMUNITY GRAND ROUNDS

## Session Speakers

## Eugene Livar, MD

Chief Heat Officer, Arizona Department of Health Services

## David M. Hondula, PhD

Director of Heat Response & Mitigation, City of Phoenix

## Samantha Johnson

Program Manager, Elaine AZ

### AZ COMMUNITY GRAND ROUNDS

## Financial Disclosure

All Planners and speakers/presenters of the training about to take place have no relevant financial relationship to disclose.

Arizona Alliance for Community Health Centers is accredited by the Arizona Medical Association to provide continuing medical education for physicians.

The Arizona Alliance for Community Health Centers Designates the Arizona Community Grand Rounds Mitigating Heat-Related Health Risks in Arizona educational activity for a maximum of 1 AMA PRA Category 1 Credits. Physicians should only claim credit commensurate with the extent of their participation in the activity.



# ARIZANA

DEPARTMENT OF -

## HEALTH SERVICES

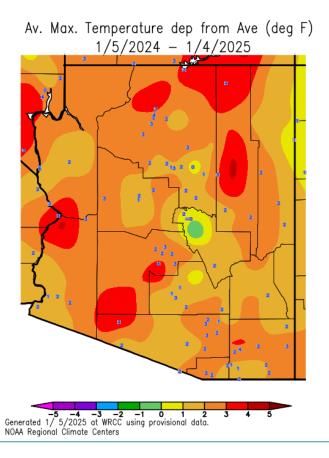
Mitigating Heat-related Health Risks in Arizona

Eugene Livar, MD

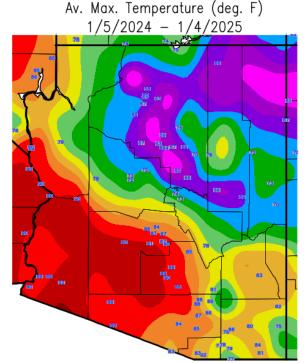
# Arizona weather wrapped: A broken record of broken records in Phoenix during 2024



Dec. 21, 2024, 6:02 a.m. MT











#### **CLIMATE DRIVERS**

- Increased temperatures
- Precipitation extremes
- · Extreme weather events
- Sea level rise

### ENVIRONMENTAL & INSTITUTIONAL CONTEXT

- Land-use change
- Ecosystem change
- Infrastructure condition
- Geography
- Agricultural production
   & livestock use

#### **EXPOSURE PATHWAYS**

- Extreme heat
- · Poor air quality
- Reduced food & water quality
- Changes in infectious agents
- Population displacement

#### **HEALTH OUTCOMES**

- · Heat-related illness
- Cardiopulmonary illness
- Food-, water-, & vector-borne disease
- Mental health consequences
   & stress

### SOCIAL & BEHAVIORAL CONTEXT

- Age & gender
- Race & ethnicity
- Poverty
- Housing & infrastructure
- Education
- Discrimination
- Access to care & community health infrastructure
- Preexisting health conditions



#### PRELIMINARY REPORT OF HEAT-RELATED ILLNESS (HRI) CASES IN 2024

#### **Emergency Department Visits(syndromic surveillance data)\***

Total number of heat-related illness emergency department visits in Arizona during 2024 is 5912



Approximately 68% of the heat-related illness emergency department visits by males



Most of the heat-related emergency department visits occurred in Maricopa, Pima and Pinal counties



55% of heat-related cases occurred among Non-Hispanic Whites & 28% among Hispanics



46% of the heat-related illness cases are seen in 18-44 years of age group



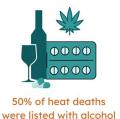
\*The data is from Heat surveillance dashboard that displays heat-related illness emergency department (ed) visit trends using syndromic surveillance data. The data is only updated during the heat season in Arizona each year. Data is provisional and will be updated every Sunday. A two week lag time is incorporated to allow for quality assurance.

#### **Preliminary Report of Heat-Related Death Cases in 2024**





48% of the residents lived in Arizona for 20 years or more



and/or drug use

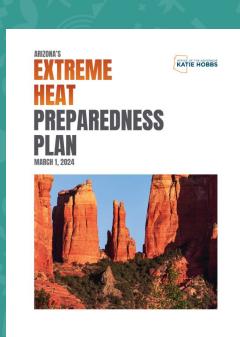
Last Updated 5.13.2025



# **2024 Governor's Extreme Heat**Preparedness Plan

#### **Short-term goals progress**

- Funding & Resources
- Shelter
- Energy
- Health
- Disaster Response



## 2025 heat plan and approaches

#### **Updated ADHS recommendations, findings, and strategies**

- Streamline efforts by leveraging existing frameworks and efficient resource allocation
- Continue collaboration with federal partners and statewide coordination
- Transition to online platform for communication & workgroups; task forces for specific projects for state partners and agencies
- Centralized state heat website
- Update ADHS heat strategies
- Focus on community and partner engagement
  - Prepare for Extreme Heat
  - Drive Heat Relief Activities
  - Foster Innovative Solutions
  - Reduce HRI and Deaths

### **Continue The Work**

- Release updated ADHS heat strategies
- Connect through online application Roundtable
- Focus goals and objectives of workgroups/task forces
- Heat.az.gov
- Connect with community partners and hold listening sessions
- Coordinate with partners to finalize toolkits
- Work towards recognition of heat as a natural disaster
- Bridge connections to potential diverse funding and in-kind support
- 3rd annual heat summit



## **Heat.az.gov**





#### HeatRisk

#### Home

This website is no longer being maintained, and no new data will be added.

Hot days can affect anyone. If you are pregnant, are a child or teen with asthma, or have a heart condition or other chronic health conditions, heat can make your health worse.

Enter your zip code below to get the *HeatRisk* for this week and actions you can take to keep you and your family safe.



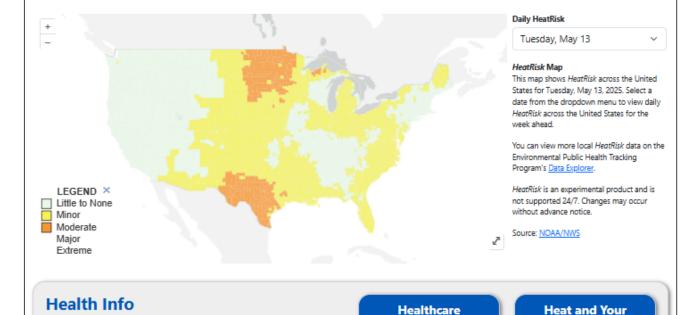
Health

Get Your Local HeatRisk

Heat and health guidelines, recommendations, and resources

Enter Zip Code





**Professionals** 

#### HeatRisk

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Enter your zip code below to get the *HeatRisk* for this week and actions you can take to keep you and your family safe.



#### Get Your Local HeatRisk

85007: Maricopa County, AZ



#### Today's HeatRisk



Minor

Tuesday, May 13, 2025 Source: NOAA/NWS Today's HeatRisk is Minor.

Today is a good day to be outside for most people. People who are very <u>sensitive to heat</u> may have health impacts, especially if the air quality is poor.

Check the air quality in your area before heading out.



#### Actions you can take to protect your health

- Stay hydrated.
- Stay cool.

If you are very sensitive to heat, consider additional ways to stay cool. Work with your doctor to see if you need to take additional health actions.

Check the air quality in your area before heading out.

Heat and Your Health

#### HeatRisk Forecast

Maricopa County, AZ

Wednesday	Thursday	Friday	Saturday	Sunday	Monday
May 14	May 15	May 16	May 17	May 18	May 19
Minor	Minor	Minor	Minor	Minor	Minor
Willion	Willion	WIIIIO	Willion	Willion	Willion







Yavapai

Yuma

Heat Season

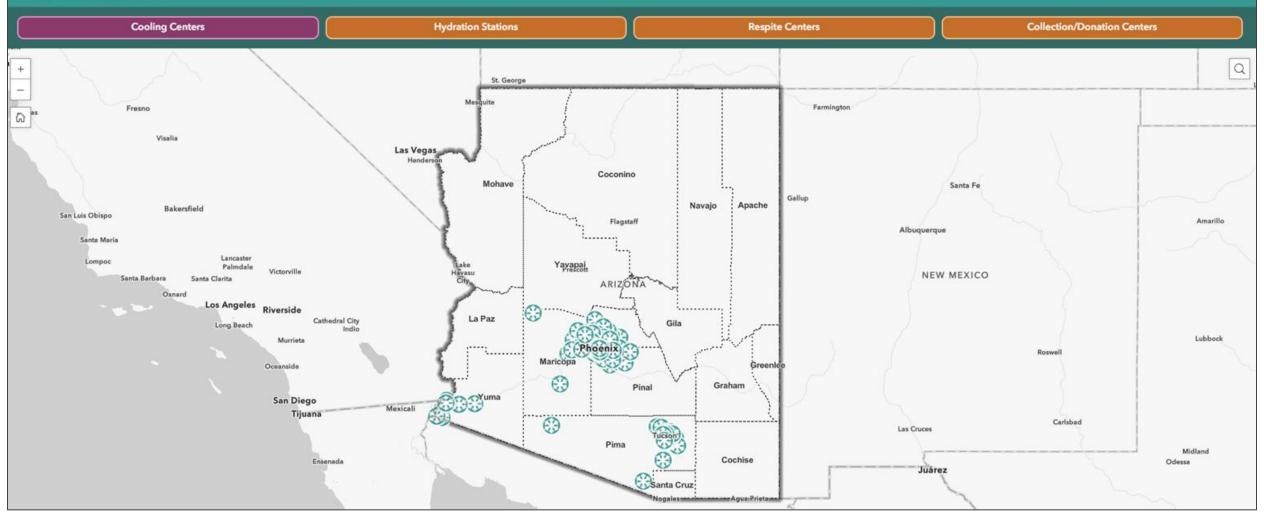
Heat Season





#### ARIZONA HEAT PREPAREDNESS NETWORK







# Heat and Medications Information Sheet for Health Care Providers

#### What is the concern?

Extreme heat temperatures may adversely impact patients on specific medications.

This document is intended to alert healthcare providers to the impact that ambient heat may have on patients taking certain medications and to provide recommendations.

## What do I need to be aware of?



Heat-related illness can affect everyone - no matter how long someone has lived in Arizona, their age, gender, gender identity, or health issues.



Heat-related illness is a serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke.



An individual's risk for heat-related illness is influenced by many factors including individual health, housing type, living conditions, and preexisting conditions (to name a few).

Health care providers are recommended to consult the Heat and Medications websites provided by the <u>Centers for Disease Control and Prevent (CDC)</u>, the <u>Arizona Department of Health Service (ADHS)</u> and the <u>Pima County Health Department (PCHD)</u> for more information.











#### Some factors that might increase a patient's risk of developing a heat-related illness include:

- · High levels of humidity
- Obesity
- Fever
- Dehydration
- · Heart disease
- Mental illness
- Poor circulation
   Sunburn
- Alcohol use
- Certain prescription and non-prescription medications and polypharmacy

Source: CDC Extreme Heat and Your Health page

#### The following populations may be at an even higher risk for heat-related illness:

- Children
- · Individuals 65+ years old
- Outdoor workers
- · Pregnant people
- Individuals with disabilities
- · Athletes
- · Individuals without air conditioning
- · Individuals who are living alone
- · Residents of mobile homes
- Individuals with chronic health conditions
- Individuals with substance use disorder/opioid use disorder

Taking certain medications increases the risk of adverse health outcomes for patients.

When individuals are on these types of medications extra education and precautions are necessary. Some medications will interfere with thermoregulation or fluid balance while other medications can increase skin sensitivity to sun exposure.

Included is a consolidated list of medications that increase risks from extreme heat exposure. These include certain cardiovascular medications, antiseizure medications, antibiotics, and other classes of medications.

## How can I help my patients stay safe during extreme heat?

- Ask patients:
  - · How do they keep cool in the summertime?
  - Do they have reliable transportation?
  - Do they rely on walking, biking, or public transportation?
- Do you have someone who can check in on you during periods of extreme heat?
- Provide recommendations on changes to fluid intake based on prescription medications.
- Assess the need to modify medications prescribed and/or their dosage to reduce heat risk.
- Understand what other factors (e.g., living conditions) patients may have that increase their risk of heat-related illness.
- Provide a list of symptoms patients can watch out for.
- Encourage patients to have a "buddy" plan to have a family member or friend check up on them.
- · If possible, offer water while patients wait for their appointments.
- Provide information on area cooling centers, financial support to offset electric costs, and other social services as needed

## What are other resources I can share with my patients?

- Arizona Poison Control information
  - List 1-800-222-1222
- ADHS Heat website: azdhs.gov/heat
- · Financial support for utility bill payments
  - Arizona Department of Economic Security, Low Income Home Energy Assistance Program
- Wildfireaz.org: Energy Assistance Wildfire AZ
- 2-1-1 Arizona: Rent and Utility Assistance 2-1-1 Arizona (21)arizona.org)
- Check with your County Public Health Department
- CommunityCares
- 988: 988lifeline.org/
- Opioid Assistance and Referral Line: 1-888-688-4222
- Dump the drugs. Safe disposal of medications: https://www.azdhs.gov/qis/dump-the-drugs-az/

This document was developed in collaboration with the ADHS, PCHD, SAPC, and the UArizona as part of the Arizona Heat Preparedness Network's Heat and Medications task force led by the SCORCH Center.



Was this information helpful?
Use the QR code to share your <u>feedback</u> with us.





















Certain medications can increase a person's sensitivity to heat. Heat can intensify the side effects of certain medications by putting stress on the body's natural cooling processes.





More tired than usual



Feeling Sweating more or less than usual unsteady







2025

Have questions or need support? uecesita ayuda? ? Jieue bleguntas o

Arizona Poison & Drug Information Center 1 (800) - 222 - 1222 FUNGUGUIGUIO Centro De

AZ Opioid Assistance & Referral Mental Health (OAR): azdhs.gov/oarline Crisis Line 1(888)-688-4222 988

Talk to your health care provider

and if you need to take extra precautions.

about how your medications may affect you

Prevent heat-related illness

(9AO) ZA eb sebioiqO Asistencia y Referencia para

de Salud Mental Linea de Crisis







relacionadas con el calor Prevenga las entermedades

si necesita tomar precauciones adicionales. sopre como sus medicamentos pueden atectarle y Hable con su proveedor de atención médica mareddo Sentirse

de lo normal gradat más o menos



musculares Calambres





Conozca los sintomas

sopre los procesos naturales de entriamiento del cuerpo. El calor briede intensiticar los efectos secundarios de ciertos medicamentos al ejercer presión ciertos medicamentos pueden aumentar la sensibilidad de una persona al calor.

Evite sobrecalentarse: Conozca sus medicinas



## Consolidated List of Medications Lista consolidada de medicamentos

**Antipsychotics** 

e e	antidepresivos
de salud n	Citalopram (Celexa) Desvenlafaxine (Pristiq) Duloxetine (Cymbalta) Escitalopram (Lexapro) Fluoxetine (Prozac)
ndiciones	Levomilnacipran (Fetzima) Paroxetine (Paxil, Pexeva) Sertraline (Zoloft) Venlafaxine (Effexor XR)

Beta Blockers

Antidepressants

Depression and Mood depresión y estado de Amitriptyline (Elavil) Nortriptyline (Pamelor) Doxepin (Sinequan) Clomipramine (Anafranil) Bupropion (Wellbutrin) Lithium (Mood Stabilizer)

**Lower Blood Pressure** 

Telmisartan (Micardis)

Valsartan (Diovan)

estimulantes [TDAH] antipsicóticos Haloperidol Olanzapine Ouetiapine Risperidone Mellaril (Thioridazine) Thorazine (Chlorpromazine) Compazine (Prochlorperazine) Novane (Thiothixene) Stelazine (Trifluoperazine) Prolixin (Fluphenazine)

Water Pills [Diuretics]

Amphetamine (Adderall) Armodafinil (Nuvigil) Atomoxetine (Strattera) Dextroamphetamine (Adderall, Dexedrine) Lisdexamfetamine (Vvvanse) Methamphetamine (Desoxyn) Methylphenidate (Ritalin, Concerta) Modafinil (Provigil) Calcium Channel

Stimulants [ADHD]

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Condition

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betabloqueador [ACE Inhibitors & ARBs] presión arterial baja Atenolol [inhibidores de la ECA y BRA] Metoprolol Propranolol Candesartan (Atacand) Captopril Englapril Irbesartan (Avapro) Lisinopril Losartan (Cozaar) Olmesartan (Benicar) Ramipril

pastillas de agua [diuréticos] **Blockers** bloqueadores del Acetazolamide canal de calcio Furosemide (Lasix) Hydrochlorothiazide Amlodipine Felodipine Nifedipine

Thyroid Replacement Parkinson's & **Antihistamines** Anti-seizure anticonvulsivo reémplazo de la tiroides antihistamínicos Overactive Bladder Carbamazepine Levothyroxine Parkinson & vejiga Diphenhydramine Oxcarbazepine (Benadryl) hiperactiva l'opiramate Benztropine (Cogentin) Doxylamine (Unisom) Diabetes Oxybutynin (Ditropan XL) Promethazine (Phenadoz) Insulin Vistaril (Hydroxyzine) Solifenacin (Vesicare) Carbidopa Levodopa (Sinemet) Donnatal (Belladonna alkaloids) Scopace/Maldemar (Scopolamine)

Medications Non-Steroidal Anti-Inflammatory Drugs NSAIDs Medicamentos antiinflamatorios no esteroideos [AINE] Acetaminophen Aspirin Ibuprofen

Naproxen

Antibiotics & Antiretroviral antibióticos y antirretrovirales

Doxycycline Indinavir Sulfonamides Other substances of high risk Otras sustancias de alto riesgo

Alcohol, Caffeine, Cocaine, Hallucinogens, MDMA and alternatives, Methamphetamine (non-prescribed), Amphetamine, Pseudoephedrine (Sudafed), Ephedra, Ephedrine (Akovaz)



Scan to find cooling centers A















# Let's Stay Safe and Beat the Heat Arizona!

- Stay safe/healthy
- Stay cool
- Stay informed
- Stay hydrated
- Be SunWise
- Stay Connected
  - Check on your family, friends, and neighbors







## Want to stay "heat" connected?

Extreme Heat Preparedness Network



Scan to join!

AZ HEAT@AZDHS.GOV



### Resources

- Arizona's Extreme Heat Preparedness Plan
- ADHS Recommendations and Findings for the Arizona Extreme Heat Preparedness Plan
- ADHS Heat Safety Webpage
- ADHS Heat-Related Illness and Heat Tier Dashboard
- Heat and Medications Information Sheet for Health Care Providers
  - Arizona Poison Control information 1-800-222-1222
- ADHS Sign Up for Heat Alerts
- CDC Heat Risk Tool
- CDC Heat & Health Tracker
- Heat.az.gov





# 

Thank you

**Heat.az.gov** 

ARIZONA COMMUNITY GRAND ROUNDS MAY 14, 2025

## City of Phoenix Heat Response Plan



## HEAT RESPONSE & MITIGATION



Shade structures
for public transit,
schools, pedestrians,
and public art



Tree planting, maintenance, and workforce programs



Reflective surface deployment on roofs and roads

## CITY OF PHOENIX HEAT RESPONSE PLAN



First Responders



Public Cool Space



Public Drinking Water



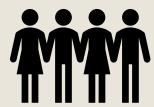
Cool and Safe Homes



Cool and Safe Mobility & Recreation



**Heat Safety** for Workers



Community Engagement & Outreach



Collaborate Across Departments

## COMMUNITY PARTNERSHIPS





























## CITY DEPARTMENT PARTNERSHIPS





























**OFFICE OF HOMELESS SOLUTIONS** 













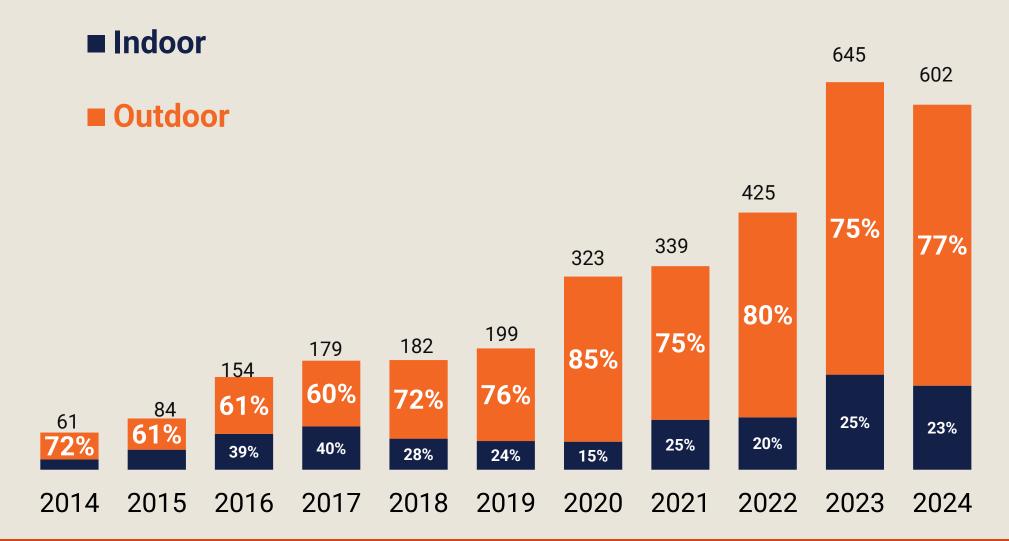






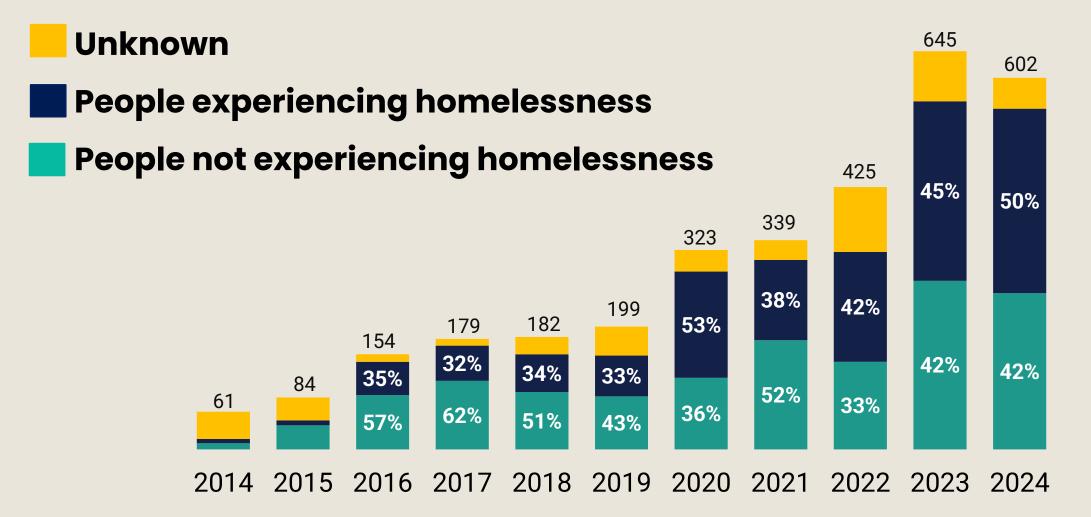


## HEAT-RELATED DEATHS BY PLACE OF INJURY



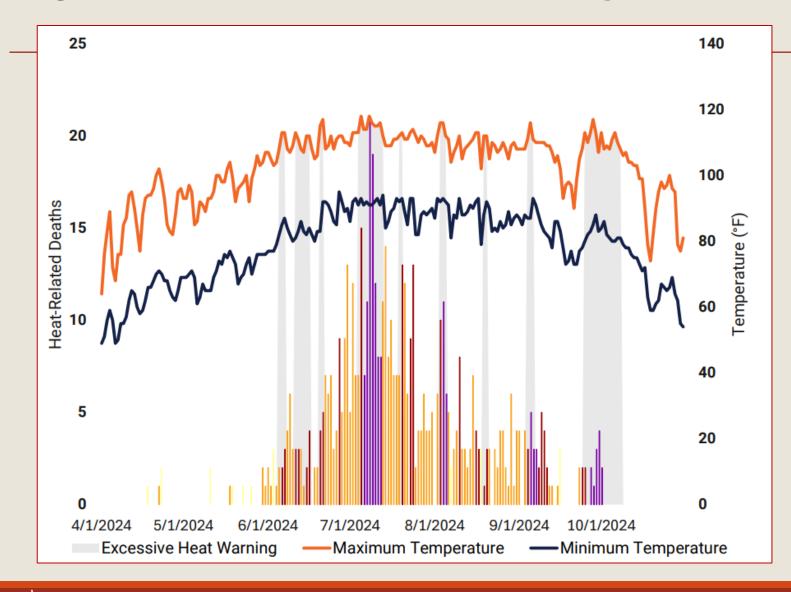


## 2024 LIVING SITUATION OF HEAT-RELATED DEATHS





## 2024 HEAT-RELATED DEATHS AND HEATRISK



### More than half of heatrelated deaths occurred on days with Moderate or Minor Heat Risk.

N	one	Minor	Moderate	Major	Extreme
No	risk.	Risk to those extremely sensitive to heat.	Risk to those sensitive to heat.	Risk to most people.	Risk to everyone.
4%		51%		24%	21%



## CITY OF PHOENIX HEAT RESPONSE PLAN



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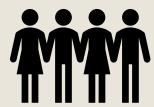
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## COLD WATER IMMERSION TREATMENT

- "Boots on the ground" initiative
- 311 patients benefited from the treatment
  - June (66)
  - July (151)
  - August (70)
- Seeing evidence this program is saving lives
- Sharing with local and national partners



## REVIEW OF 2024 HEAT RESPONSE

## 24/7 and Overnight Respite

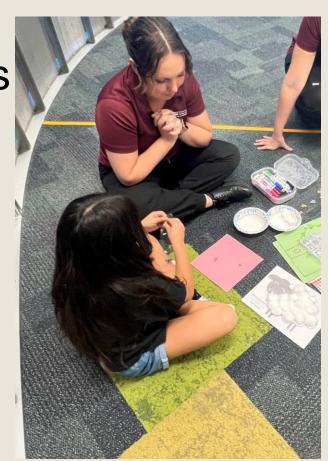
- Public library former café: 24/7
- Senior center: Overnight
- 28,000+ visits, with 5,332 unique visitors
- Supported by Office of Homeless Solutions, local behavioral health/navigation agency, health/medical services, and security staff



## REVIEW OF 2024 HEAT RESPONSE

## **Extended Hour Cooling Centers**

- Three Phoenix Public Library branch locations
- Sites were open until 10:00 p.m.
- Staff coordination with Library, CBI, and security
- Over 6,000 visits across all locations

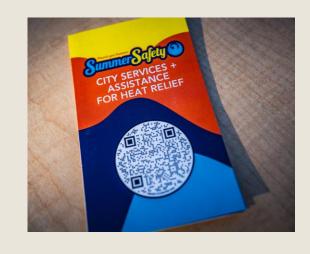


## REVIEW OF 2024 HEAT RESPONSE









Water Distribution Program

Heat Relief Community Grants

**Support for Major Events** 

**Communications** 

## 2024 REVIEW: HEALTH OUTCOMES

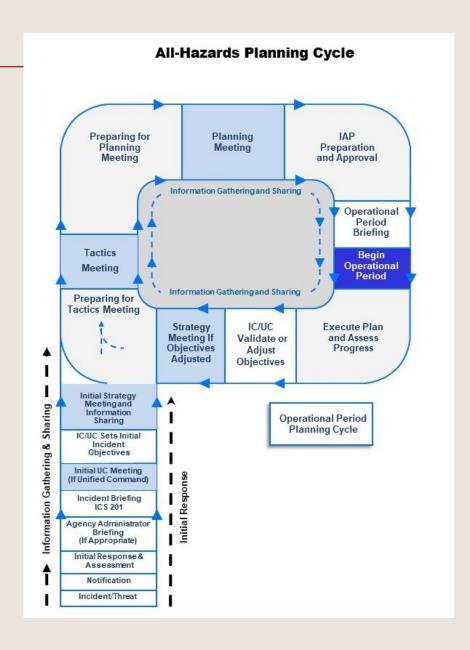
- Citywide 911 calls for heat emergencies decreased by 20% from 2023
- 25% reduction in calls within 1 mile of heat relief locations
- Heat-related deaths in Maricopa
   County declined for the first time in a decade
- 900+ residents connected to shelter, housing, and related services



## HEATREADY UNIFIED COMMAND

## Use of the Planning "P" - Heat <u>Season</u>

- Pre-planning and RWGs in Feb.-Apr.
- Operational period May 1 Sept. 30
   (extended operations last year into Oct.)
- Weekly incident cycles, daily meetings
- After-action report in fall and winter



## HEAT GOVERNANCE & PLANNING



"...participants...were uncertain of how heat preparedness and response aligns with their current responsibilities. Some emergency management professionals even perceived that heat was outside of their scope of work."

BAMS 2019

## CITY OF PHOENIX HEAT RESPONSE PLAN



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Public Cool Space



Public Drinking Water



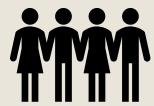
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Collaborate Across Departments

ARIZONA COMMUNITY GRAND ROUNDS MAY 14, 2025

# City of Phoenix Heat Response Plan





#### Elaine AZ | Heat Relief Program

#### **Elaine AZ: Overview**

- **Founded in 2019** with one van and a mission: to provide free, direct SDOH rides for vulnerable Arizonans.
- Today, our growing team of 8 operates a fleet of 4 vehicles.
- In 2024 alone, we provided 9,044 rides to 2,471 unique individuals—all at no cost to passengers.
- We support access to food, housing, healthcare, legal services, and more.
- Compassionate, timely transportation is the foundation of dignity and safety for the communities we serve.

## Early May – 98°F in Phoenix

#### **Heat Relief Story 1: Joshua & Clara**

#### **Situation:**

- A young couple, Joshua and Clara, called asking if heat relief rides were available, referred by 211.
- Walking the streets, one developed a migraine, the other had a nosebleed
- Turned away from a fast-food place due to loitering policies

#### Response:

- All drivers were booked, so our dispatcher personally stepped in
- Provided a ride to the Burton Barr Library (only open cooling center)

#### Impact:

- Clients were visibly affected by heat
- Immediate relief with AC
- Quote: "We didn't know what we would have done if Elaine weren't available."

## Mid August – 110°F in Phoenix

#### **Heat Relief Story 2: Tonya, Dee, and Marcus**

#### **Situation**

- On a 110° day, Tonya, Dee, and Marcus were sheltering under a bus stop, the only available shade, but were told they couldn't stay there.
- Dee, an older adult with mobility issues, was particularly struggling with the heat.
- They had a shopping cart with all their belongings, including a television.

#### Response

Our dispatcher arranged a same-day ride to a local community space offering air conditioning, food, and laundry services.

#### **Impact**

- The group was able to cool down, eat, and wash their clothes.
- Without transportation, they would have had nowhere safe to go.

## Late July – 115°F in Phoenix

Heat Relief Story 3: Mr. B, Ms. S, and Lucky

#### **Situation**

- Mr. B & Ms. S live in a park in central Phoenix with their dog Lucky.
- Mr. B had been offered a shelter bed, but he wasn't allowed to bring his girlfriend or their dog
- Hoping for a better option, he tried for several weeks to work through the system- but ultimately, he chose to give up the shelter placement and return to the park to stay with his small family.

#### Response

 When called, we provided immediate transportation to a cooling center, ensuring Lucky, Mr. B, and Ms. S could escape the worst of the heat.

#### **Impact**

 Mr. B and Ms. S have relied on Elaine AZ for 10 rides over the past year for heat relief, medical visits, and attempts at securing stable housing.

## Late July – 115°F in Phoenix

#### Heat Relief Story 4: Ms. L

#### **Situation**

- Ms. L, a senior living alone in North Phoenix, called requesting a ride to access legal services.
- During the intake, she disclosed that her utilities had been shut off and that she had previously suffered a traumatic brain injury (TBI).

#### Response

- We provided an immediate ride to a fast food restaurant so she could cool down safely.
- Recognizing the complexity of her situation, we referred her to the Arizona Brain Injury Alliance for specialized support.
- We maintained contact with her for several weeks to monitor her safety and progress.

#### **Impact**

 Ms. L was connected to the additional services she needed, and we were relieved to learn her air conditioning was eventually restored.

## Late June - 117°F in Phoenix

#### **Heat Relief Story 5: Douglas**

#### **Situation**

• Just after closing time, a man wandered into the back lot of the **Key Campus**—right outside our office. He was visibly overheated and distressed, trying to find the shelter entrance before curfew. Confused and desperate, he sat on the curb and called **911**, struggling to describe his location.

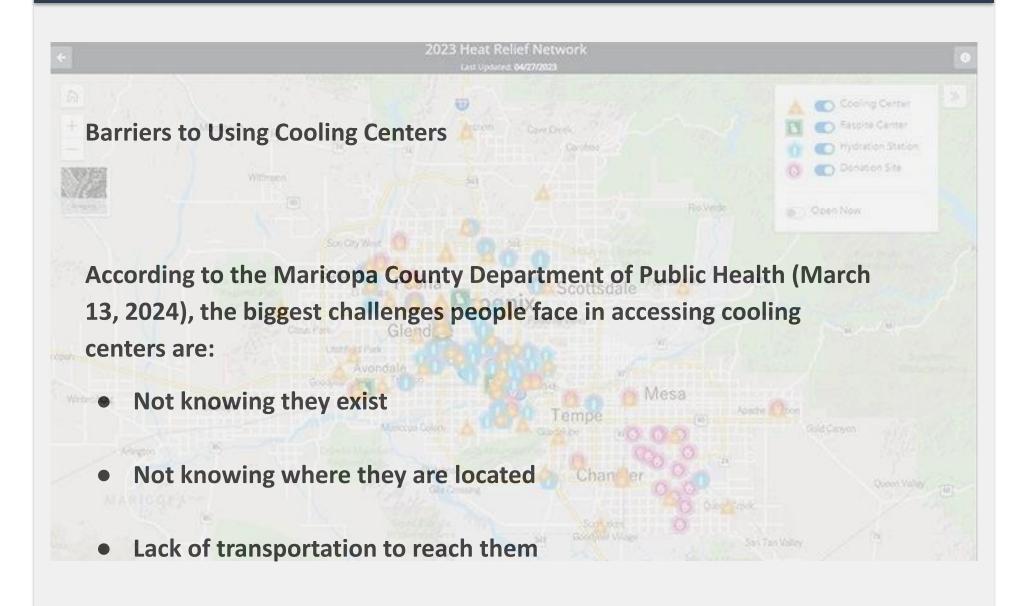
#### Response

 Because he happened to land right outside our office, we were able to step in immediately. Though it was after-hours, we made an exception and gave him a quick ride—just six blocks—to the shelter door.

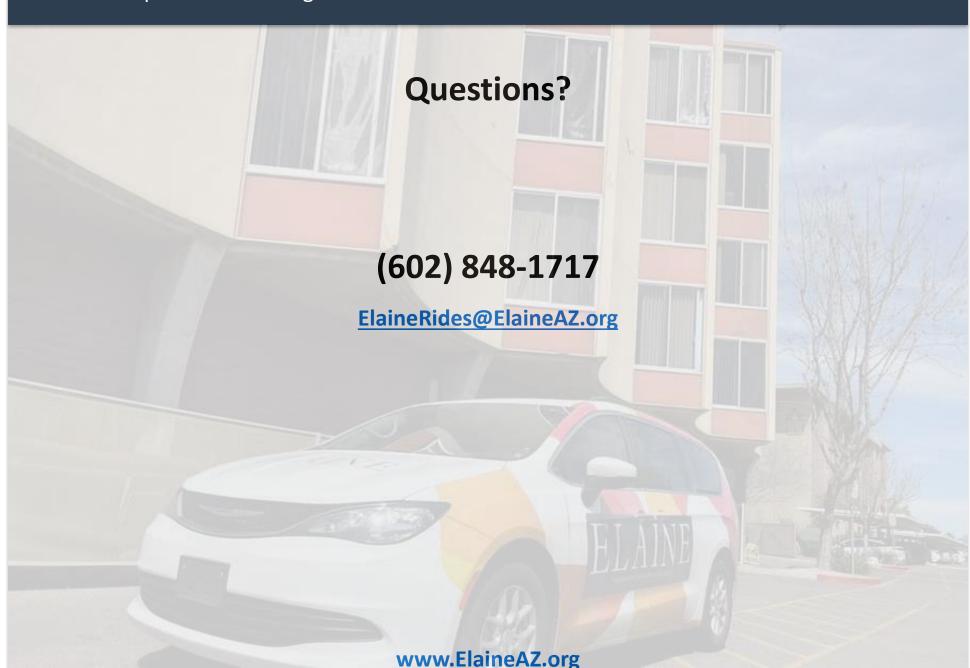
#### **Impact**

What could have turned into an avoidable emergency was safely redirected.
 Thanks to timing and proximity, he made it to shelter before curfew, avoiding both the heat and an unnecessary 911 response.

## **Summer – 100+°F in Phoenix**



### Elaine AZ | Heat Relief Program



## AZ COMMUNITY GRAND ROUNDS

# Thank you

Please complete this survey for feedback and for certificate of attendance for continuing education credits.







