

Health Impacts of Heat on New Mexicans

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**Legislative Health and Human Services Committee
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Las Cruces, New Mexico**

HEAT is the **leading cause of death among all hazardous weather conditions** in the US



Sources:

National Weather Service:

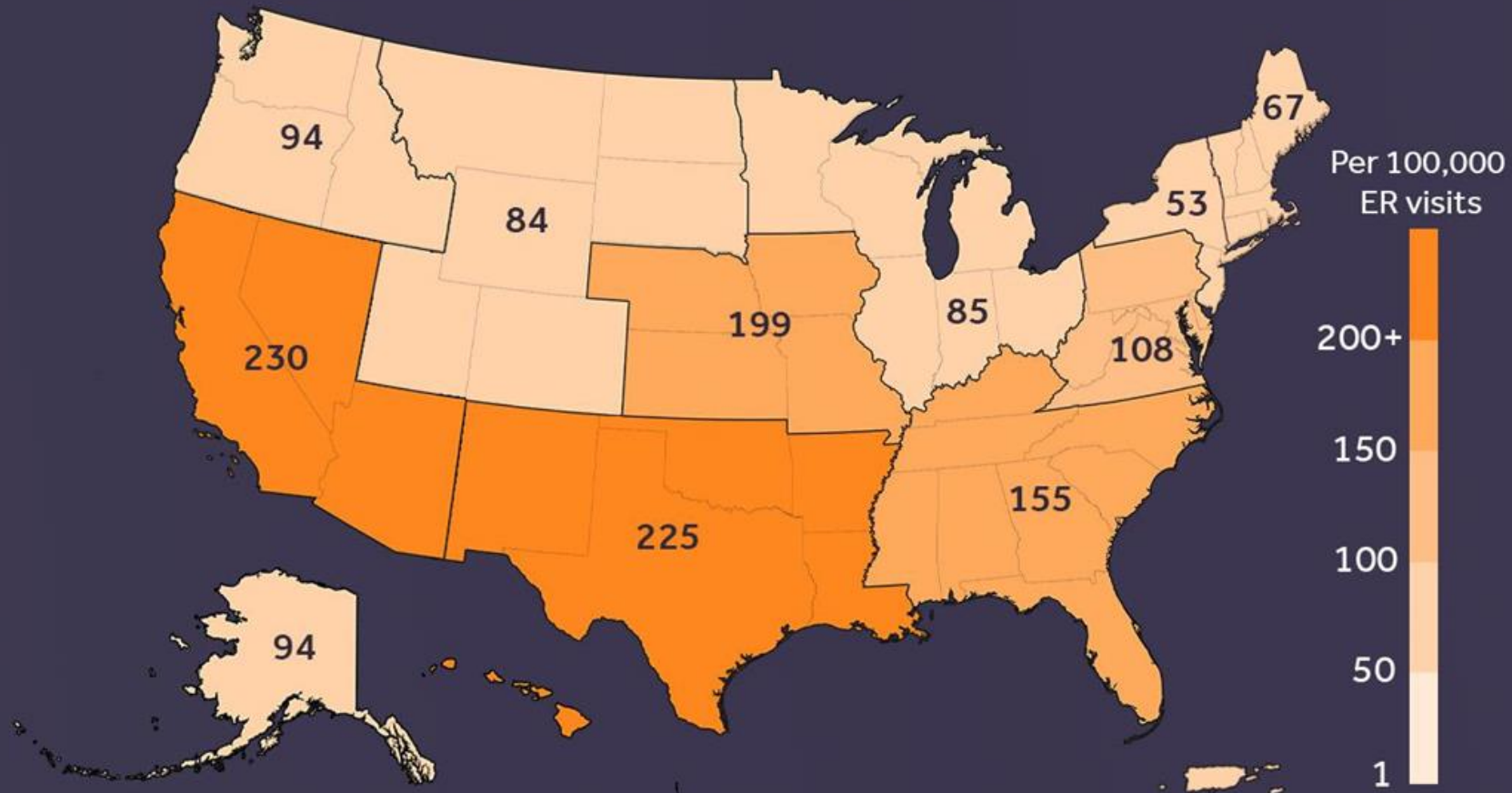
www.weather.gov/mkx/heatwaves

NPR: Comic: How Excessive Heat Kills and How to Stay Safe:

<https://www.npr.org/2026/06/13/g-s1-126350/heat-wave-safety-weather-heatstroke>

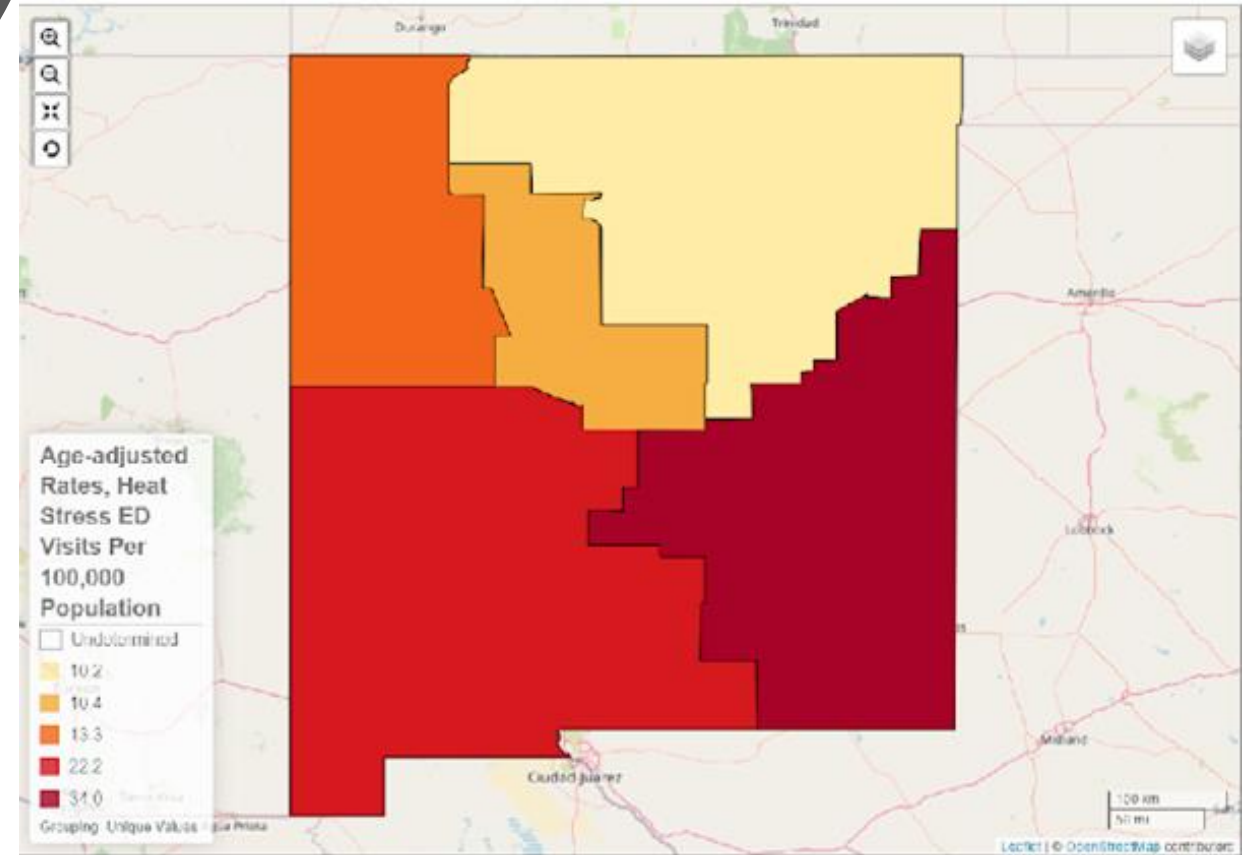
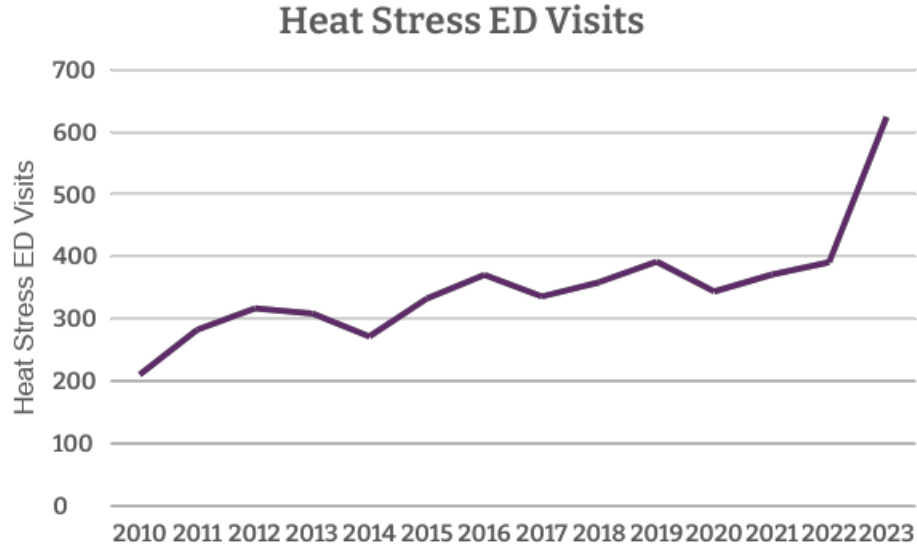
HEAT-RELATED EMERGENCY ROOM VISITS

Average daily visit rate, 2018-2025



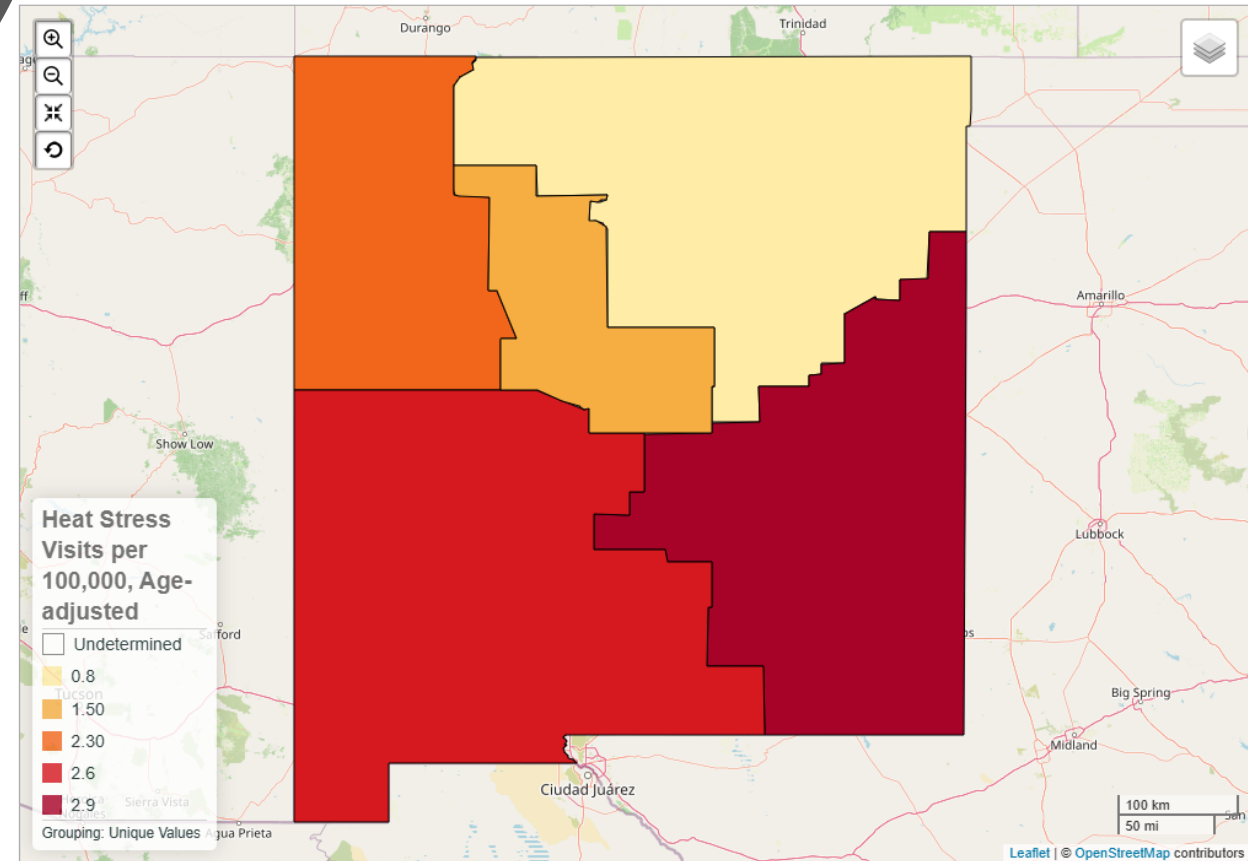
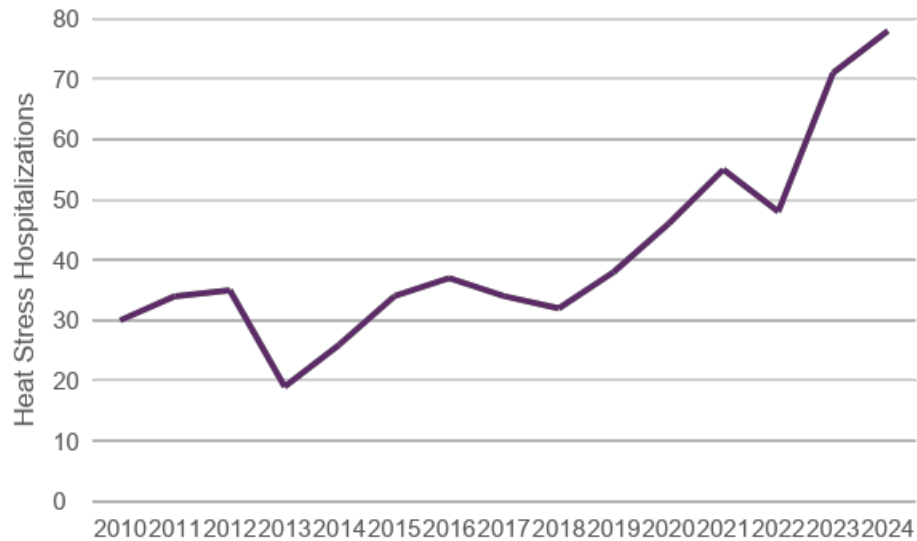
Average daily rates of heat-related emergency department ("ER") visits during 2018-2025 (April-October) in 10 U.S. Dept. of HHS regions. AK, HI, PR not to scale.
Source: Young et al., 2026.

Heat Stress ED Visits, 2010-2023



ED visits due to heat stress doubled between early 2010s and 2023.
The southeast and southwest regions experience the highest rate of heat stress ED visits.

Heat Stress Hospitalizations, 2010-2024



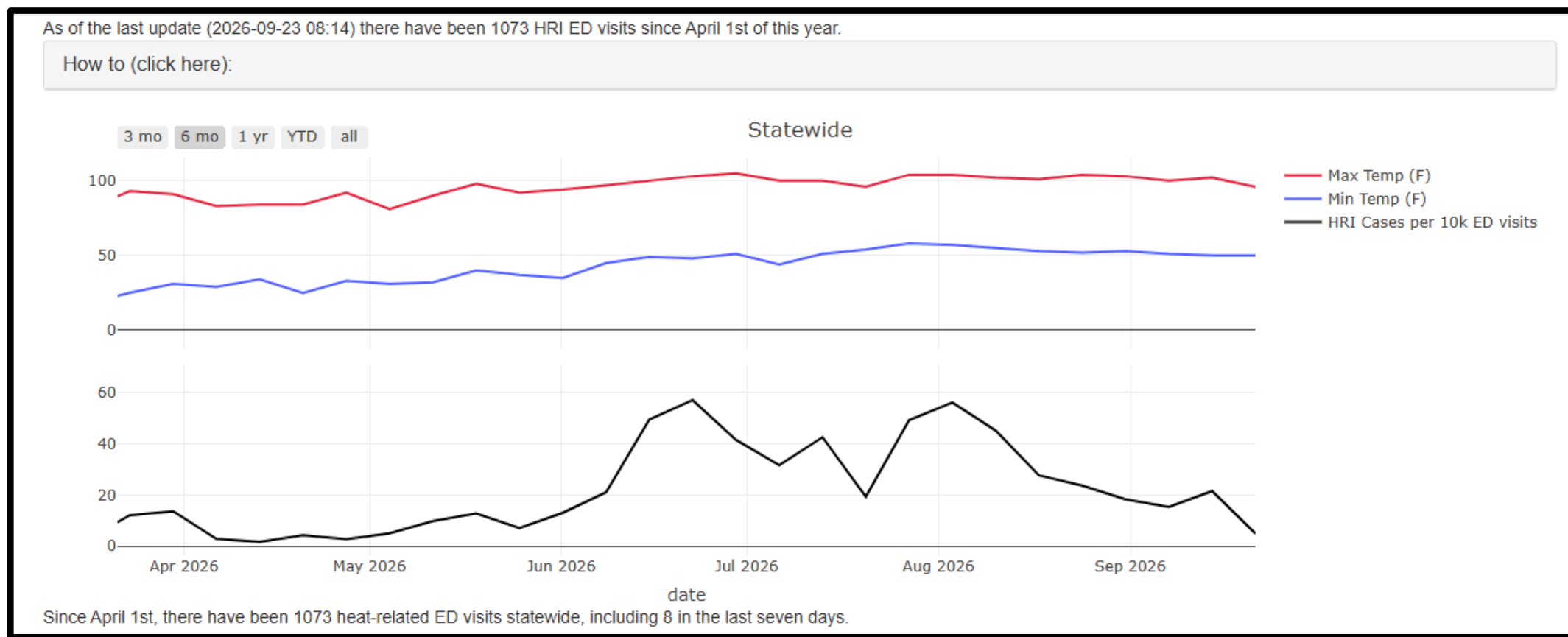
Heat stress hospitalizations doubled from early 2010s to 2023-2024.

The southeast and northwest regions experience the highest rates of heat stress hospitalizations.

Exposure to Heat: Health Effects

Since April 1st of this year, 1073 New Mexicans have visited statewide emergency rooms for heat-related illnesses.

“We have already surpassed last summer’s total heat-related emergency department visits,” said **Chelsea Langer**, chief of the New Mexico Department of Health’s (NMDOH) Environmental Health Epidemiology Bureau. “Anyone can be affected, but children, adults over 65, outdoor workers and people with chronic conditions are more susceptible and should take extra care when it’s hot.”



(Source: New Mexico Public Health Data Portal – Heat Related Illnesses <https://nmdoh-reports.shinyapps.io/HeatRelatedIllnessDashboard/>)

Who is most at risk?

Young children, whose bodies are still learning to regulate temperature



Older folks, who may have a reduced ability to sweat, and people with chronic conditions like heart disease

People who do strenuous physical activity outdoors



Pregnant women, whose bodies have to work harder to regulate temperature

But know that even young, healthy people can succumb to extreme heat.

Source: NPR Comic: How excessive heat kills and how to stay safe

<https://www.npr.org/2026/06/13/g-s1-126350/heat-wave-safety-weather-heatstroke>

Source: Heat-Related Illness: A Clinician's Guide, published by the Migrant Clinicians Network
<https://www.migrantclinician.org/resource/heat-related-illness-clinicians-guide-2026.html>

 HEAT CRAMPS	 HEAT EXHAUSTION	 RHABDOMYOLYSIS/ RHABDO (Rapid breakdown of muscle)	 HEAT STROKE
▼ SYMPTOMS ▼			
• Muscle cramps, pain, or spasms in the abdomen, arms or legs.	• Headache • Rapid heartbeat • Heavy sweating • Extreme weakness or fatigue • Dizziness • Nausea, vomiting • Irritability • Fast, shallow breathing • Slightly elevated body temperature	• Severe muscle cramps* • Very dark, tea-colored urine • Weakness • Swelling • May be asymptomatic	• High body temperature • Confusion • Loss of coordination (ataxia) • Hot, dry skin or profuse sweating • Throbbing headache • Seizures, coma

Heat Stress in Workers

Environmental heat
+
Metabolic heat from muscular work
+
Physical barriers



- Greater heat strain
- Hyperthermia (*100.4°F)

Increased risk

- » Heat-related illnesses (including death)
- » AKI: Acute kidney injury
- » CKD: Chronic kidney disease
- » Accidents
- » Reduced productivity

AKI: Acute Kidney Injury
CKD: Chronic Kidney Disease



Poor air quality
(wildfire smoke,
pollution)



Co-exposure to heat and wildfire smoke is worse for health than either of them alone.

Chronic diseases including asthma, other lung diseases, and cardiovascular diseases, may be triggered by smoke. These same conditions may be exacerbated by heat stress.

Use of N95 masks to avoid smoke may increase risk of HRI. Smoke may travel hundreds of miles away. Workers across the US and very far from forests are now experiencing smoke exposure more frequently as fires increase in duration and location.¹⁸

**Exposure to
pesticides**



Certain pesticides may interfere with thermoregulation or organ function. For example, organophosphates inhibit acetylcholinesterase, which can result in dysregulated sweating and heart rates.

Use of PPE to avoid pesticides may increase risk of HRI. Some pesticide exposure symptoms mirror HRI symptoms.

Substandard or unstable housing 	Structure deficiencies like poor insulation and drafty windows lead to outdoor exposures like poor air quality and indoor exposures like mold. Even with air conditioning, substandard housing may not stay cool due to compromised thermal efficiency.	“Describe your housing. Does it keep your air clean and cool?”
Lack of air conditioning/inability to cool at home	Many workers arrive at work dehydrated the next day because of insufficient cooling at night.	“Do you have air conditioning? How do you stay cool at home/after work?”
Limited access to clean, cool water	Prevents workers from taking frequent water breaks.	“Where do you get water during the day? In the evening? Is your water clean and cool?”
High humidity	Reduces sweat evaporation from the body. 	“Here’s how to check the wet bulb temperature before you go to work.” Use the HeatRisk tool: ephtracking.cdc.gov/Applications/HeatRisk/
Clothing & PPE	Traps heat against the body, reduces sweat evaporation from the body. 	“What clothes do you wear to work? Is it loose fitting? How do you protect your skin and face? Do you know what material your clothing is?”

Source: Heat-Related Illness: A Clinician's Guide, published by the Migrant Clinicians Network
<https://www.migrantclinician.org/resource/heat-related-illness-clinicians-guide-2026.html>

Piece-rate compensation	Piece-rate is associated with a greater risk of HRI. Workers may be less likely to take rest/shade/water breaks when their pay will drop.		"Do you get paid by the hour or by how much you pick?"
Length of time spent outdoors	More hours correspond to greater risk.	 	"How many hours a day do you work, and which hours are they?"
Shade access while working	Access to shade during work hours, not just on breaks or after work, reduces risk.		"How many hours a day do you work in the sun? Are there any options to work in the shade?"
Transportation schedules that extend heat exposure	Workers may be transported back to worker housing in unconditioned vehicles (e.g., long rides without cooling)		"Do you get a chance to cool off right after work ends?"
Increasing number of hot days	The annual frequency of heat waves has tripled. Heat waves have both increased in frequency and in intensity. ¹⁹		
High nighttime temperatures	Growing frequency of hot nights decreases a worker's ability to cool overnight.		"Do you have air conditioning? Do you have fans in the house? Do they keep you cool?"
Post-disaster environments	After a disaster like a storm, flood, or wildfire, health services may be interrupted, medications may be impacted by heat without cooling, and agricultural workers may experience other occupational exposures like mold or unsafe water.		

Source: Heat-Related Illness: A Clinician’s Guide, published by the Migrant Clinicians Network
<https://www.migrantclinician.org/resource/heat-related-illness-clinicians-guide-2026.html>

Table 5 Social conditions that may increase workers’ risk of heat-related illness

**Fear of losing job or retaliation
by asking for water/rest/shade**

**Lack of awareness of medication
interactions**

**Substance use
including alcohol**

**Arrival to new work environments
with immediate full workload***

**Limited ability to pace work or request
lighter duties during adjustment period***

**Limited access to safety
information that is low-
literacy and in their
preferred language**

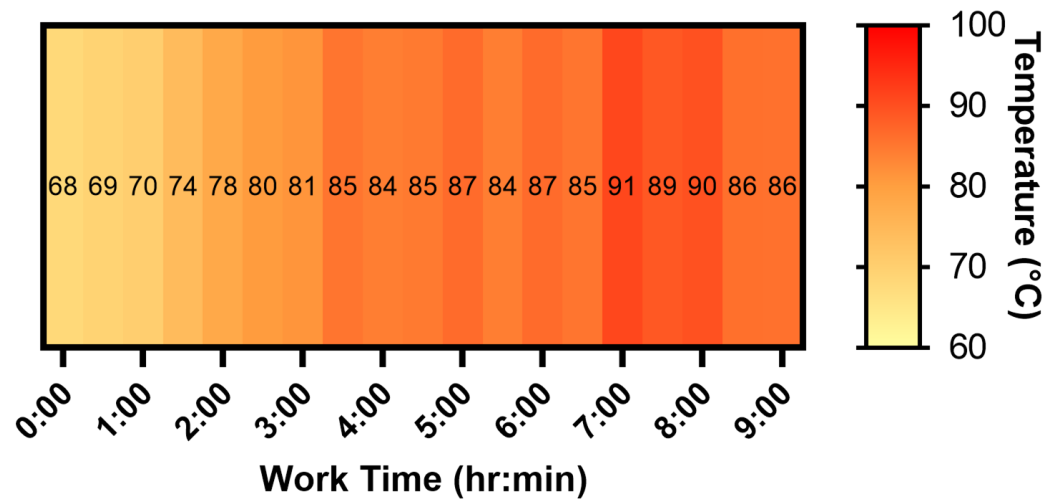
Language barriers

Poor access to health care

**Lack of awareness of
other health risks**



Heat Index



Annals of Work Exposures and Health, 2025, **69**, 225–229
<https://doi.org/10.1093/annweh/wxae097>
Advance access publication 11 December 2024
Short Communication

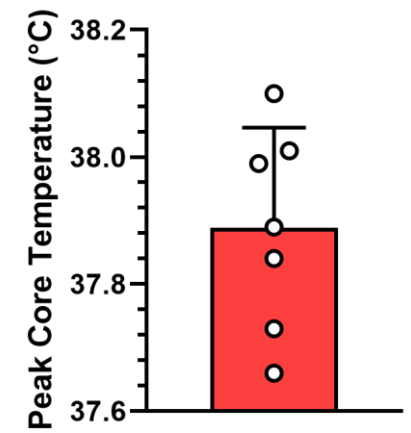
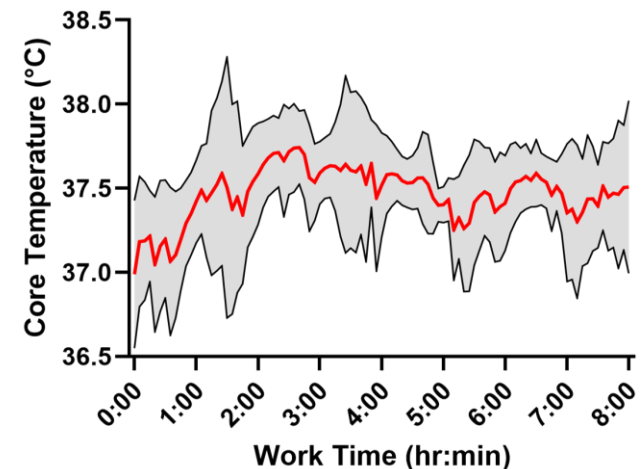


The Chartered Society for Worker Health Protection



Heat strain in road construction workers during the summer in New Mexico: a preliminary study

Jonathan W. Specht^{1,*}, Serena Garcia¹, David H. Wegman^{2,3}, Jason Glaser², Zachary J. Schlader^{2,4}, Fabiano T. Amorim^{1,2}



2 of 7 (29%) of workers reached a core temperature of > 38°C (100.4 °F)

Heat Stroke First Aid Protocols for People Experiencing Homelessness and People Who Use Substances

An Evidence Review for
Bystander Training

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HEALTHY CLIMATE
NEW MEXICO

Health Professionals for Climate Action

Heat Exposure Among People Who Use Drugs (PWUD)

High temperatures + drugs/medications can:

- Reduce the body's ability to control its own temperature
- Increase internal body temperature
- Make it difficult to recognize symptoms of overheating and dehydration
- Can cause excess sweating

A Reinforcing Cycle

- Extreme heat worsens existing mental health conditions and substance use disorders (*Noor et al., 2025*)
- Untreated mental illness and substance use disorder increase the risk of becoming homeless — closing a feedback loop (*Bezgrebelna et al., 2021*)
- The chronic stress of outdoor living is amplified by increasingly unpredictable climate conditions (*Bezgrebelna et al., 2021*)

Substance Use & Heat: A Lethal Intersection

- Stimulants, especially methamphetamine, raise core body temperature — particularly dangerous during heat events (*Noor et al., 2025*)
- Cocaine overdose deaths rise significantly as ambient temperature increases (*Noor et al., 2025*)
- Alcohol impairs sweating and judgment; opioids suppress respiratory response (*Noor et al., 2025*)

Heat Exposure Among People Experiencing Homelessness

10×

Higher emergency department risk for heat illness compared to housed individuals (*Noor et al., 2025*)

Compounding Vulnerabilities

- 91% of unhoused Americans live in urban/suburban heat islands (*Bezgrebelna et al., 2021*)
- No access to air conditioning, shade, or refrigeration (*Noor et al., 2025*)
- Chronic disease, mental illness, and substance use disorders co-occur at high rates (*Noor et al., 2025*)
- Psychiatric medications (antipsychotics, antidepressants, beta-blockers) impair the body's ability to regulate temperature (*Noor et al., 2025*)

Homelessness & Substance Use in Extreme Heat: A Lethal Intersection

- Arizona's heat-related death analysis found that substance use was involved in 87% of heat related deaths among homeless individuals in 2022 and 89% in 2023, with methamphetamine detected in 93% of drug-involved cases.

Structural Barriers to Safety

- Cooling centers often require ID, prohibit pets or belongings, or exclude people using substances (*Noor et al., 2025*)
- Heat alerts do not reliably reach the most vulnerable populations (*Bezgrebelna et al., 2021*)
- Inability to afford cooling is a structural risk factor for both homelessness and heat illness (*Bezgrebelna et al., 2021*)
- Lower-income, racialized neighborhoods have less tree canopy — creating an unequal heat burden (*Bezgrebelna et al., 2021*)

Interventions needed: Heat-health warning systems, inclusive cooling centers, on-site harm reduction services, built environment improvements, and permanent supportive housing (*Bezgrebelna et al., 2021; Noor et al., 2025*)

Extreme Heat Is Especially Dangerous for People with Serious Mental Illness

During the 2021 British Columbia Heat Dome...

People with schizophrenia made up **16%** of heat deaths — despite being less than **1%** of the population. That is a roughly **16× disproportionate death toll**.

How can Medications Sometimes Make Extreme Heat More Dangerous?

Many common psychiatric medications, including antipsychotics and antidepressants, interfere with the body's ability to cool itself. They can reduce sweating, alter heart rate, and impair the brain's own temperature-regulation signals. During a heat wave, this means the body cannot respond the way it needs to. (Noor et al., 2025)

"Most deaths occurred indoors and alone." Taking medication as prescribed may itself have been a risk factor. (Chen et al., 2025 — Chen, X., et al. *Scientific Reports*, 15. <https://doi.org/10.1038/s41598-025-17591-0>)

What Does the Research Show?

- People on **two or more antipsychotic medications at once** had more than 4 times the risk of dying during the heat event (Chen et al., 2025)
- Even on a **single antipsychotic**, risk was more than double (Chen et al., 2025)
- **Poverty independently doubled the risk** — as much as the medication effect. Heat deaths are not just a medical problem; they are a poverty problem (Chen et al., 2025)
- Survivors described heat **worsening hallucinations, paranoia, and psychosis** — making it harder to recognize the danger or seek help (Yoon et al., 2024)

What This Means for Policy

- Cooling access must be available to people with serious mental illness — including those on psychiatric medication (Noor et al., 2025)
- Heat early warning systems should reach mental health providers and residential programs (Noor et al., 2025)
- Poverty and housing instability amplify medication-related heat risk — these cannot be addressed in isolation (Chen et al., 2025)

Climate Anxiety & Ecological Grief

Defining the Constructs

Ecological Grief

Grief over the loss of natural places, species, and ecosystems, whether losses are already experienced or feared for the future. Often felt privately, without social recognition (*Cunsolo & Ellis, 2018*)

Solastalgia

The feeling of missing home while still living there. A sense of loss when a familiar environment has been damaged or changed beyond recognition (*Albrecht, 2007, as cited in Cunsolo & Ellis, 2018*)

Moral Injury

The distress that comes from witnessing something deeply wrong and feeling unable to stop it. When governments fail to act on climate, young people experience this as a betrayal — not a personal disorder (*Hickman et al., 2021*)

Grief Can Also Motivate

When people are given space to name and process climate grief, it connects them to what they value, and can fuel meaningful action rather than despair (*Olsen et al., 2025*)

Scale of Distress Among Young People (Global & US)

84%

at least moderately worried, surveyed across 10 countries, 10,000 young people (*Hickman et al., 2021*)

85%

at least moderately worried, US youth ages 16–25, all 50 states (*Lewandowski et al., 2024*)

76%

say "the future is frightening" (*Hickman et al., 2021; Lewandowski et al., 2024*)

43%

say climate feelings interfere with daily life (*Hickman et al., 2021; Lewandowski et al., 2024*)

Key Implications

- The more extreme weather events a young person has lived through, the stronger their distress, a direct response to lived experience, not abstract worry (*Lewandowski et al., 2024*)
- This crosses party lines, young Republicans and Democrats alike report significant worry, fear, and grief (*Lewandowski et al., 2024*)
- Ecological grief is widely felt but rarely acknowledged, but when named and validated, it becomes a source of meaning and action rather than silent despair (*Olsen et al., 2025; Cunsolo & Ellis, 2018*)
- Clinicians need grief-informed, community-based approaches; the goal is not to eliminate these feelings, but to help people carry them without being paralyzed (*Olsen et al., 2025*)

References

EXTREME HEAT & PSYCHIATRIC MEDICATIONS

Chen, X., et al. (2025). Heat-related mortality risk among people with schizophrenia: A population-based case-crossover study of the 2021 British Columbia heat dome. *Scientific Reports*, 15. <https://doi.org/10.1038/s41598-025-17591-0>

Noor, S., et al. (2025). Extreme heat and mental health: Intersecting vulnerabilities among unhoused populations. *Journal of Urban Health*.

Yoon, J., et al. (2024). Lived experiences of extreme heat among people with serious mental illness. *International Journal of Environmental Research and Public Health*.

HEAT & HOMELESSNESS

Bezgrebelna, M., et al. (2021). Climate change, weather, housing precarity, and homelessness: A systematic review of reviews. *International Journal of Environmental Research and Public Health*, 18(5), 1725. <https://doi.org/10.3390/ijerph18051725>

Noor, S., et al. (2025). Extreme heat and mental health: Intersecting vulnerabilities among unhoused populations. *Journal of Urban Health*.

Morrison Institute for Public Policy, Arizona State University. Arizona's heat-related death white paper: full report [Internet]. Tempe (AZ): Arizona State University; 2024 [cited 2025 Oct 3]. Available from: <https://www.mapazdashboard.arizona.edu/article/arizonas-heat-related-death-white-paper-full-report>

CLIMATE ANXIETY & ECOLOGICAL GRIEF

Cunsolo, A., & Ellis, N. R. (2018). Ecological grief as a mental health response to climate change-related loss. *Nature Climate Change*, 8, 275–281. <https://doi.org/10.1038/s41558-018-0092-2>

Hickman, C., et al. (2021). Climate anxiety in children and young people and their beliefs about government responses to climate change: A global survey. *The Lancet Planetary Health*, 5(12), e863–e873. [https://doi.org/10.1016/S2542-5196\(21\)00278-3](https://doi.org/10.1016/S2542-5196(21)00278-3)

Lewandowski, R. E., et al. (2024). Climate anxiety and its correlates among US youth. *The Lancet Planetary Health*.

Olsen, M., et al. (2025). Ecological grief and its potential to motivate climate action. *Ecology & Society*.

Impacts of Heat on Pregnancy

- One day of high heat can increase the risk of high blood pressure related disorders and complications during pregnancy
- Pregnant people require more liquids to stay hydrated, which means they can become dehydrated more easily. On very hot days, dehydration can mean trouble cooling through sweating
- People who are pregnant experience heat exhaustion, heat stroke, or other heat-related illness more easily than people who are not pregnant. This is because the body of someone who is pregnant must work harder to cool down both herself and her developing baby
- A pregnant woman's circulation helps protect her developing baby, but when working in hot or physically demanding conditions, her internal body temperature may rise.
- During times of high heat, there are increased rates of stillbirth and more premature and lower birth weight babies
- When women are pregnant, they are in a period of vulnerability, meaning that events that occur during their pregnancy can affect their health later in life such as cardiovascular disease and other chronic illnesses

Sources: <https://www.epa.gov/children/heat-and-pregnancy>

<https://developingchild.harvard.edu/resource-guides/guide-extreme-heat-and-early-childhood-development/>

Impacts of Heat on Children

- Children are more likely to become dehydrated than adults because they can lose fluids more quickly (they have a smaller body mass to surface area)
- Children play outside more than adults, and may be at greater risk of heat stroke and exhaustion because they might not drink enough water or limit exertion in the heat.
- Heat is linked to slower cognitive function and reduced ability to concentrate
- Heat disrupts sleep quality in children – and this affects growth and development, sleep habits, obesity, emotional and behavioral challenges in childhood, disrupted language development, less problem solving skills
- In high heat, children's brains activate the stress response system – disrupting development of emotional and behavioral health over time
- Compounding effects with structural determinants of health, nutrition, housing, and more

Source: <https://www.epa.gov/children/heat-and-pregnancy>

<https://developingchild.harvard.edu/resource-guides/guide-extreme-heat-and-early-childhood-development/>

Impacts of Heat on Elders

- It can be hard for even healthy older adults to tell when it's too hot or if they're dehydrated
- Older bodies hold more heat than younger ones when the temperatures climb
- Older peoples' sweat glands release less sweat
- The heart does not circulate blood as well, so less heat is released from vessels in the skin
- Systems from cardiovascular to immune struggle to compensate
- Chronic health conditions require medications, some of which contribute to heat intolerance
- Cognitive decline worsens
- Having A/C at home isn't enough if someone cannot afford to run it
- Older adults with mobility issues or who lack social networks are less able to access resources
- Aging in place in New Mexico – a trend towards elders living alone, not having family nearby

Potential Solutions for New Mexico

- Improving our understanding and tracking of the impacts of heat on the health of New Mexicans (State Climate and Health Program)
- Resourcing health interventions in emergency preparedness and planning so we can reduce heat-related impacts (Extreme Weather Resilience Fund)
- Helping our state agencies, cities and counties plan and respond to heat impacts in a coordinated way (Chief Heat and Wildfire Smoke Officer)