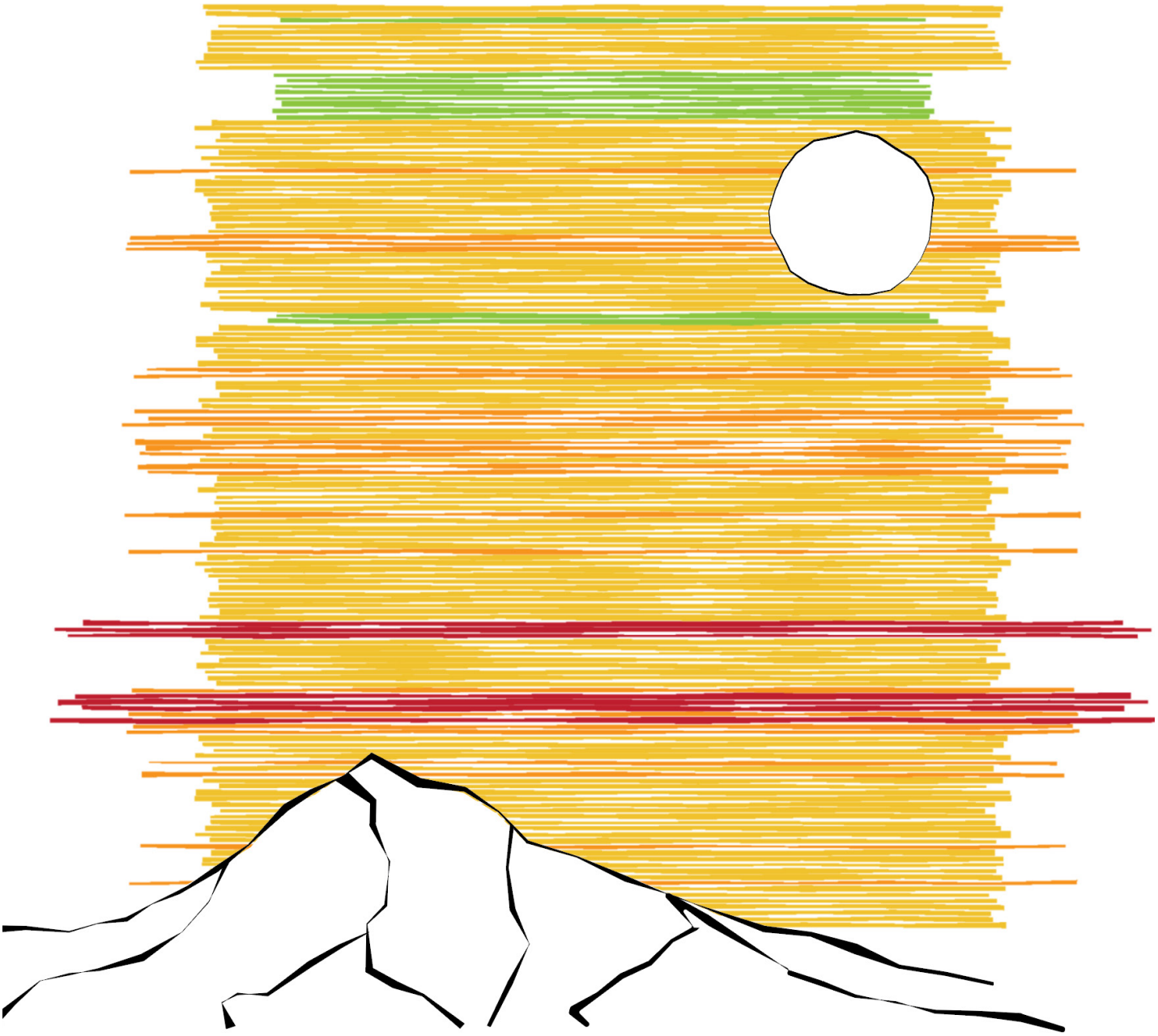
SEASONAL HAZARD BRIEF

Heat-Related Illness

Drowning and Submersion

Summer 2025



Multnomah County
Health Department

About

Remembrance

Four community members died this past summer due to heat-related causes or drownings. We remember that behind this number are real people—our neighbors, friends, and loved ones. By sharing the insights in this report, we hope to honor their memory by supporting actionable, community-wide steps to ensure everyone is kept safe in the future.

Land Acknowledgement

This brief was developed and written on the ancestral lands of the Multnomah, Kathlamet, Clackamas, Chinook, Tualatin Kalapuya, Molalla, and others. We honor the enduring stewardship of these Indigenous peoples and acknowledge that the health of the land and our communities are inseparable.

Review and Contributions

Multnomah County

Environmental Health Services

Community Epidemiology Services

Office of Emergency Management

Oregon Health Authority

Acute and Communicable Disease

Emergency Medical Services and Trauma Systems Section

National Weather Service

Portland Weather Forecast Office

Coalition of Communities of Color

Research Justice Institute

Citation

Multnomah County Health Department (2026). Summer 2025 Seasonal Hazard Brief. Multnomah County, OR. Environmental Health Services.

Additional Information

Data tables for this brief, as well as previous editions, are available at: https://multco.us/info/climate-and-health

For additional questions, contact pressoffice@multco.us

This is a revised version, July 22, 2026.

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Summary

Extreme heat remains a critical public health threat in Multnomah County. This report combines multiple sources of public health data to evaluate the health impacts of summer hazards. It describes trends in heat-related illness and drowning outcomes from May 1st 2025 through September 30th 2025 (Summer 2025), and compares them to the previous summer and past five years. Findings are used to outline strategies to promote safety and resilience.

Key takeaways from the report include:

Summer 2025 tied for the second-warmest on record locally, but there were **fewer days of dangerous heat above 90°F compared to the past five years**.

Compared to last summer, 90°F+ days dropped by almost a third, and there were slightly fewer nights above 65°F. The season also had fewer days reaching a HeatRisk index of "2 - Moderate" or higher, and fewer multi-day events with consecutive high HeatRisk days.

Compared to last summer (2024):

There were **fewer deaths and hospitalizations related to heat and drowning**.

There were **more emergency department and urgent care visits and emergency medical service encounters.**

There were two deaths related to heat and one drowning death. Heat-related hospital admissions decreased, and the average length of those stays were cut in half.

Despite fewer days of dangerous heat, there were slight increases in heat-related illness emergency room and urgent care (ED/UC) visits and emergency medical service encounters. The largest increases were among adults ages 45-64.

Planning must balance worst-case scenario preparations with **everyday community resilience**.

This summer, 15% (n=26) of heat-related visits stemmed from sports, community events, and outdoor recreation. Coming together, enjoying fun activities, and staying active are all signs of a healthy and strong community. This highlights the need to build heat-resilient community spaces, worksites, and recreational areas so everyone can safely enjoy these activities.

See page 19 for details.

Trend Overview

This table compares health events from Summer 2025 (May–September) to last summer and the five-year average (2020–2024). Up or down arrows show a change of more than 10%.

To make sure these trends are reliable, we only use arrows when comparing at least one number greater than 20. While some numbers are too small for a trend arrow, any decrease in harm or loss of life is important.

Outcome Type	Outcome	Summer 2025	Summer 2020-2024 Average	
Environmental Conditions	**Days above 90°F**	19	21	↓ *10% decrease*
	Nights above 65°F	10	12	
Heat-related Illness (HRI)	**Emergency Medical Service Encounters**	163	151	
	Emergency Room / Urgent Care Visits	183	157	↑ *19% increase*
	Hospital Stays	15	24	↓ *38% decrease*
	Deaths	2*	18**	***Skewed by 2021 heat dome; 2022-24 average = 5*
Submersion and Drowning	**Emergency Room / Urgent Care Visits**	18	17	
	Deaths	1	3	

* See page 19 for details.

**The high count of deaths during the 2021 heat dome (n=75) skews this average. Deaths in 2025 also decreased compared to the average of the past 3 years (2022-2024) of 5 deaths.

Introduction

Purpose

Illness and injury related to extreme heat remain a concern in Multnomah County. Rising temperatures and systemic, preventable factors drive heat-related illness (HRI) and create inequitable exposure.

This brief combines data on weather, illness, injury, and mortality from multiple sources to summarize the health impacts of summer hazards and help inform action to reduce future harms. In this brief, we:

Look at health outcomes for Summer 2025

We use four types of data to see who was affected by heat illness and drowning this past summer:

- ESSENCE: Emergency room and urgent care visits
- EMS Deployments: Emergency medical service encounters
- OHA Hospitalization Discharge Data: Hospital stays
- Vital Records: Deaths

Find who is affected most by summer hazards

We see if some groups are affected by heat and drowning more than others. This includes looking at details like age, sex, race, location, and context so we know who needs the most support and under what conditions.

This helps us meet state requirements to find who is affected most by heat to plan for interventions.

Suggest ways to build community resilience

Using what we learned from the data, we suggest ways to build resilience. We use two public health models:

- *The Health Impact Pyramid:* This helps us find solutions that work for individuals, groups, and whole communities.
- *The Climate Vulnerability Model:* This helps us find ways to keep people away from danger and help them adapt to summer hazards.

Methods

Below are explanations for choices made and limitations faced in creating this brief. They highlight the limitations of quantitative data. There is also a need for qualitative research on social and environmental factors that drive inequities related to summer hazards.

- **Race is included as a demographic subgroup in this brief because it is a social construct.** Racism influences outcomes. We include race as a category in this report because it is a common way society groups and measures people. However, race is not a biological fact. It is an idea created by society. A person's race does not naturally predict what happens to them. Instead, racism (how people are treated based on their race) is what actually changes outcomes. Racism and colonialism shape lived experiences and environmental exposures (Carroll et al., 2022; Paradies et al., 2015). The broad race and ethnicity categories in this brief are consistent with those used in the data sources. However, these categories do not reflect the diversity within these communities.
- **This brief relies on mostly quantitative data, which has limitations.** It provides a broad overview. Yet, it doesn't capture all personal experiences or contexts that affect outcomes. When available, we used qualitative information from triage notes. These help to describe exposures and contributing factors. In general, however, these data are collected using Western approaches. They tend to focus on numbers, problems instead of strengths, and the individual rather than the connection between individuals, communities, nature and place. We acknowledge the need for expanded methods to capture strengths and stories.

Further details on data used are in Appendix A.

Acronyms used in this brief:

ED/UC: Emergency Department and Urgent Care

EMS: Emergency Medical Services

ESSENCE: Electronic Surveillance System for the Early Notification of Community-Based Epidemics

HRI: Heat-Related Illness

HDD: Hospital Discharge Data

OHA: Oregon Health Authority

Weather Conditions

Season Overview

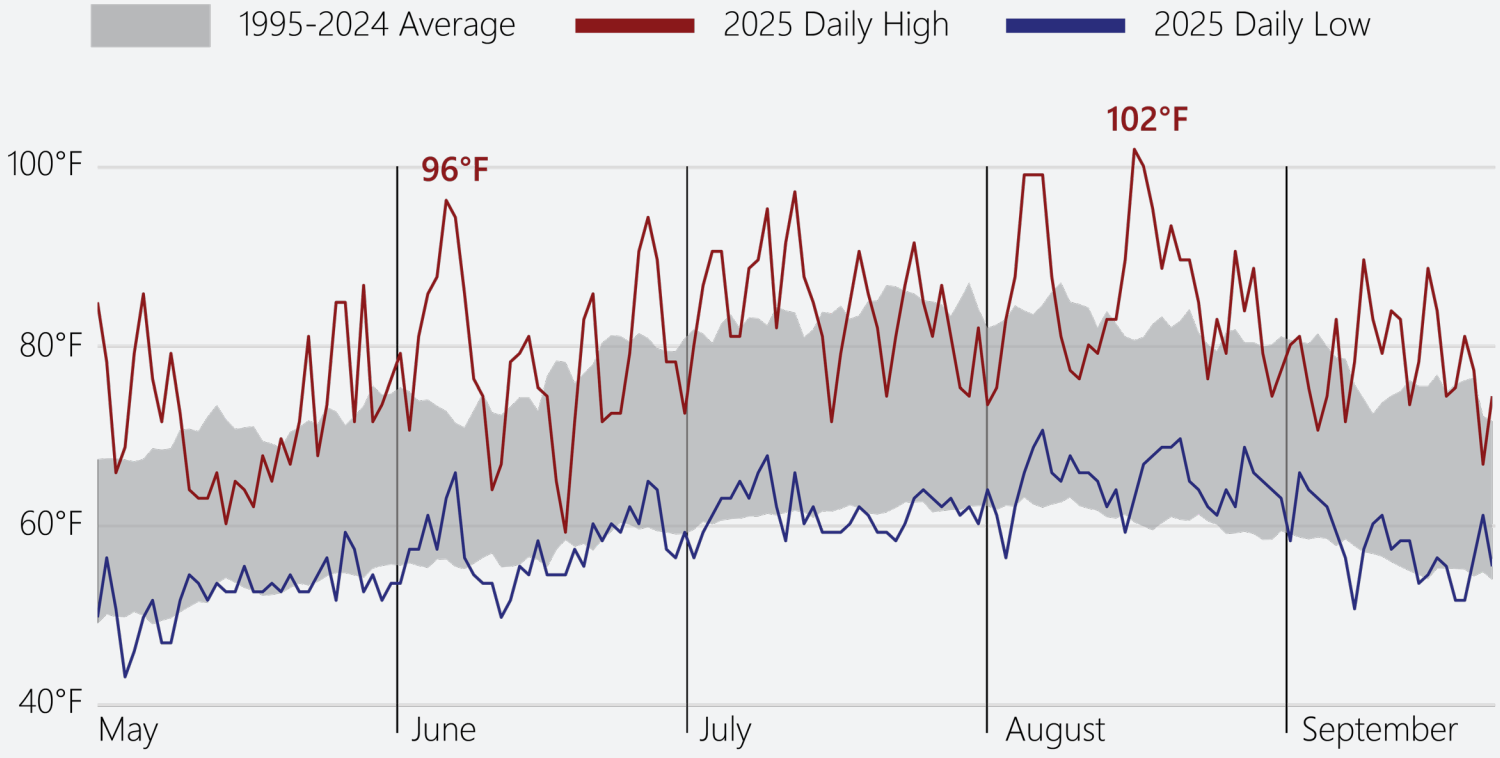
The summer of 2025 was historically warm, ultimately tying for the second-warmest year on record. The average summer daily high in 2025 was 79°F, which is two degrees warmer than the 30-year historical average. However, there were fewer days of extreme heat (90°F+ or 2+ HeatRisk) than the previous summer.

- **May** began the season with warm, dry days that reached the mid-80s.
- **June** brought the first notable heat spike, hitting a daily record of 96°F early in the month.
- **July** stayed consistently warm and dry throughout. Temperatures peaked at 97°F.
- The most extreme heat arrived in **August**, which was the third-warmest on record. There were multiple heatwaves, including a three-day stretch of 99°F days and a record high of 102°F.
- Heat continued through **September**, which ranked as the second-warmest on record (NWS PDX, 2026).

FIGURE 1

On average, daily high temperatures were two degrees warmer than the 30-year average. There were record-breaking highs both early in the summer during June, and late in the season during August.

Daily temperature highs and lows in summer 2025 compared to 30-year historical average, NWS.



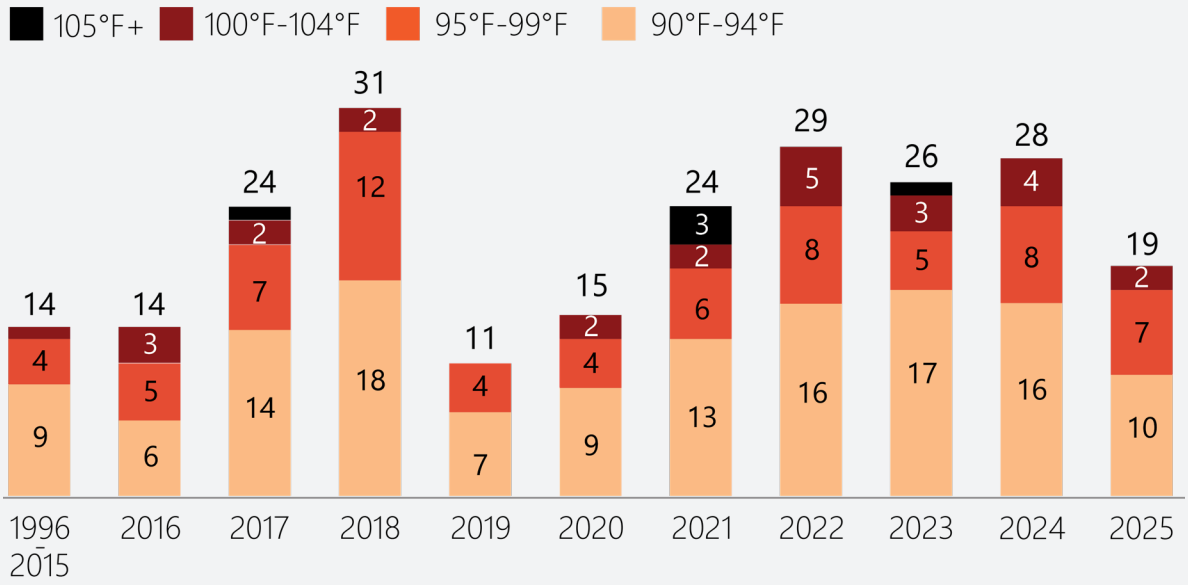
Temperature Trends

It's harder for the body to keep cool when temperatures get above 90°F. In summer 2025, there were 19 days over 90°F, and nine days at and above 95°F. This was fewer days above 90°F than the previous four years, but still about four days more than the average between 1996 and 2015.

FIGURE 2

There were fewer days above 90°F in 2025 compared to the past four years.

Count of summer days by daily maximum temperature, 1996-2015 average vs. 2016-2025, NWS

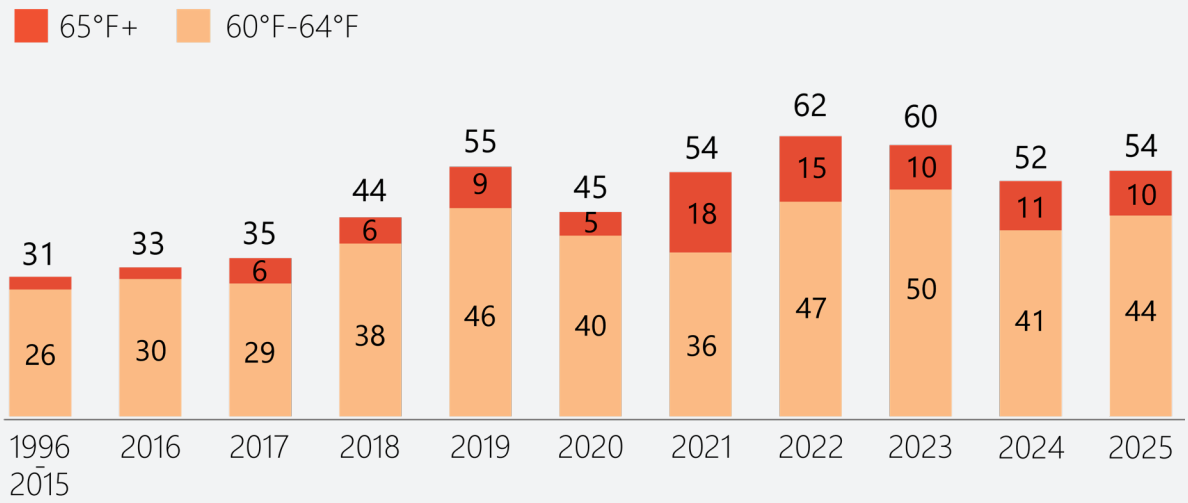


Nighttime temperatures are remaining higher than normal. Over the past 30 years, Multnomah County averaged only 36 nights above 60°F, but there were 54 in summer 2025. There were 10 nights that stayed above 65°F, which is exactly twice the historical average. Because lower nighttime temperatures provide relief from hot days, the increase in warm nights is a concerning trend.

FIGURE 3

There were 10 days in 2025 with lowest temperatures above 65°F, which is similar to the past two years, but still three times the average from 1996-2015.

Count of summer days by daily low temperature, 1996-2015 average vs. 2016-2025, NWS



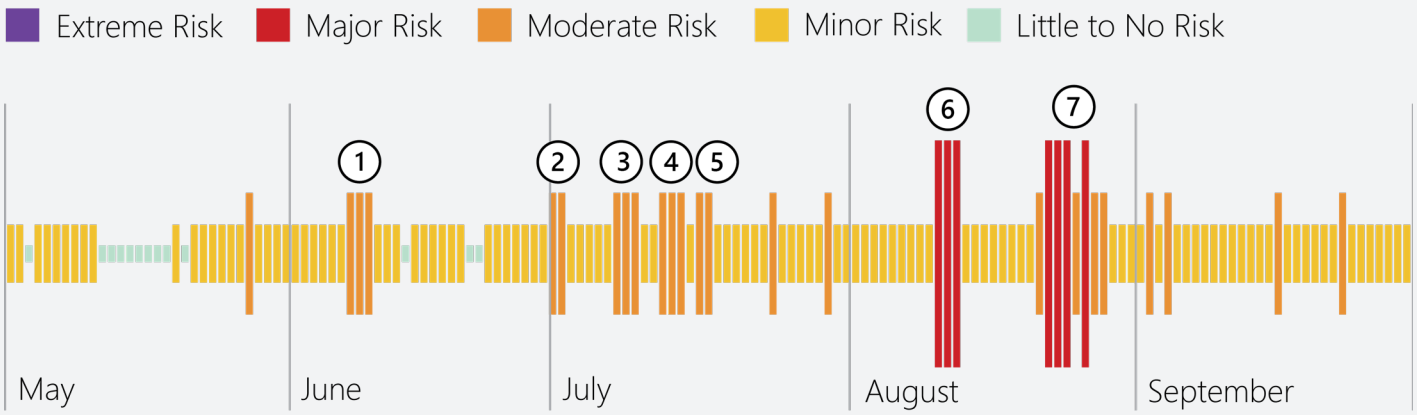
HeatRisk Trends

The National Weather Service uses a color and number system called HeatRisk to predict how dangerous the heat will be. It looks at daily highs, overnight lows, humidity, the time of year, and how long the heat will last to figure out the daily health risks. The system shows who is in danger at each level and shares steps they can take to stay safe. This is especially helpful for heat-sensitive groups like older adults, young children, outdoor workers, and people without air conditioning because they can be affected by heat much faster than others.

FIGURE 4

Five heat events with moderate risk occurred throughout June and July, and two heat events with high risk occurred in August.

Daily HeatRisk Index, May - Sept 2025, NWS

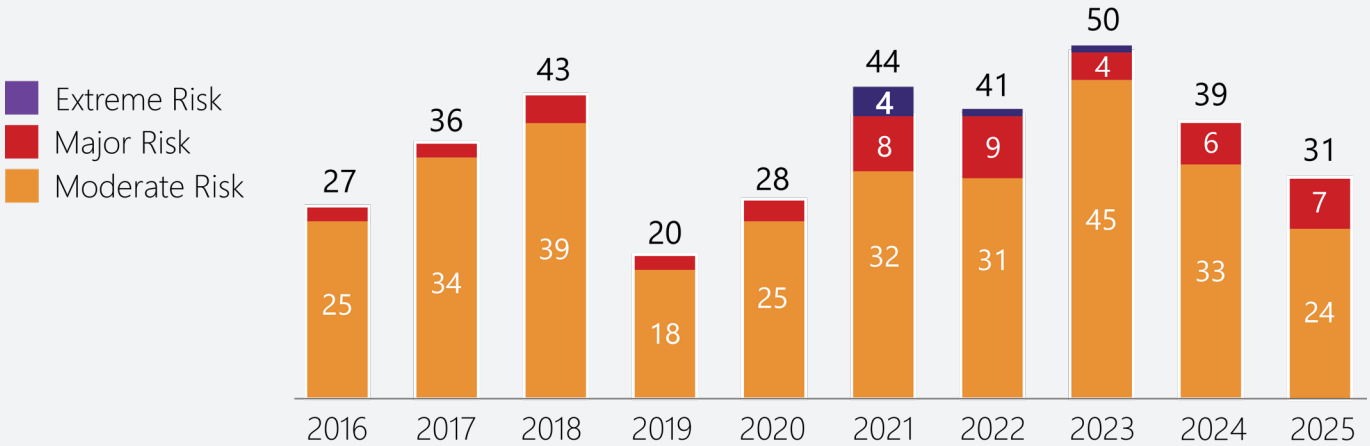


In summer 2025, there were seven heat events throughout where there were at least two days in a row of a HeatRisk index of '2 - moderate risk' or higher. This is two fewer than last summer. There were seven days with a HeatRisk index of '3 - major risk' in August. The number of days at or above a HeatRisk of '2 - moderate risk' were the lowest they have been since 2021 when the heat dome occurred.

FIGURE 5

There were 31 days with moderate or higher HeatRisk scores in summer 2025, the lowest since 2020.

Daily HeatRisk Index, 2015 - 2025, NWS



Heat-Related Illness

Overview

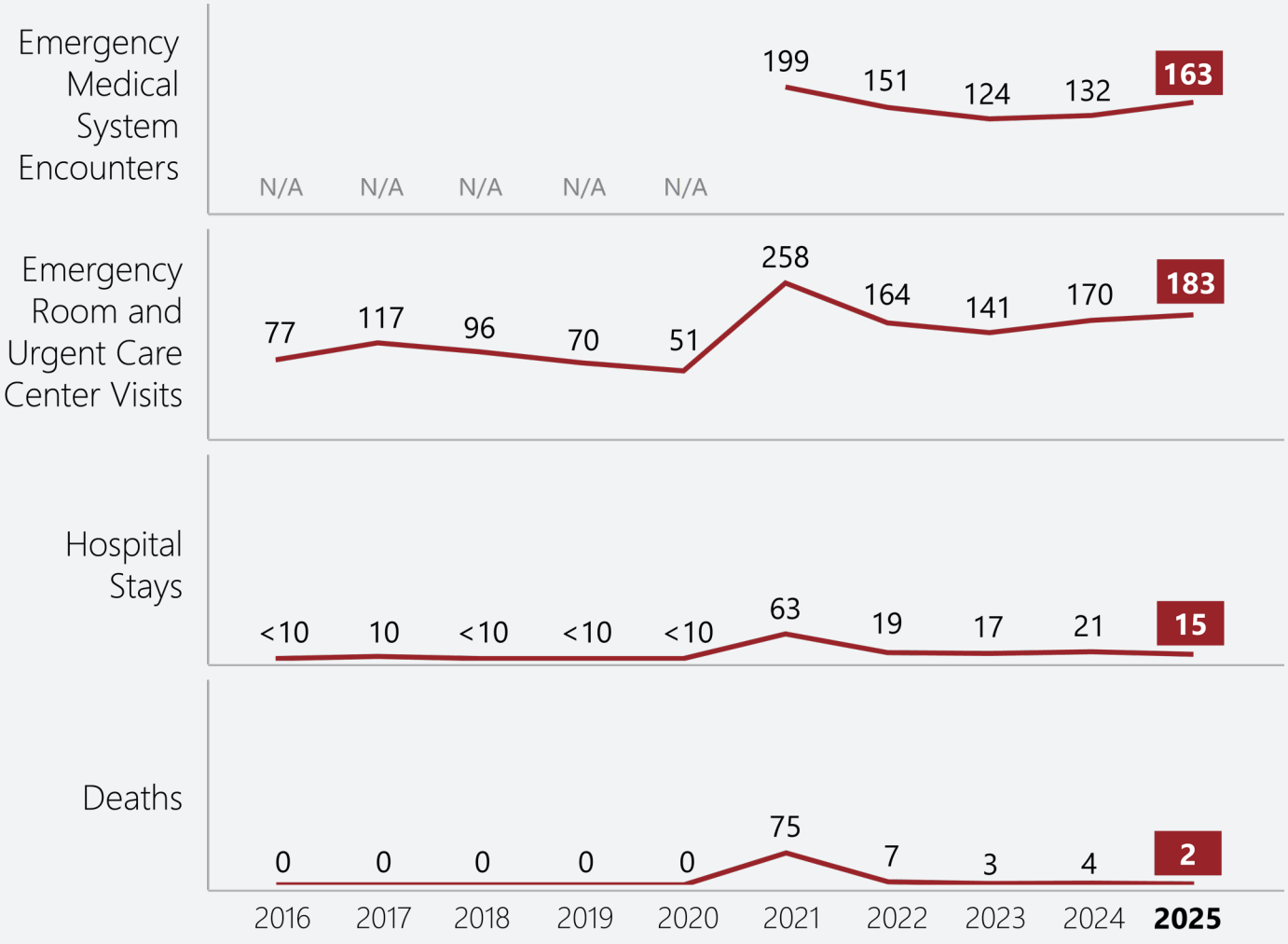
Heat-related illness (HRI) includes a wide range of conditions and symptoms caused by continuous exposure to warm temperatures. To cool down, the body sweats, increasing heart rate and causing water and salt loss. This can lead to dehydration, blood pressure changes, and stress on organs. Sudden exposure can cause heat exhaustion or stroke, especially for those on certain medications (Ebi et al., 2021).

Every person's sensitivity to heat is different and can change over time. From year to year, how sensitive someone is to heat could be different based on changes in lifestyle, exposures, or health status. For resources for care and prevention of heat-related illness and injuries, visit: **Help for When It's Hot**.

FIGURE 6

Emergency room visits and emergency medical service encounters saw a slight increase in the summer of 2025 compared to the previous summer, while severe outcomes like hospitalizations and deaths remained at similar levels.

Annual counts of heat-related illness outcomes. EMS, ESSENCE, OHA HDD, Vital Records.



Emergency Room and Urgent Care Center Visits

Visit Counts. HRI ED/UC visits have remained elevated over the past five years since 2021 compared to years prior. There were 183 emergency and urgent care (ED/UC) visits for HRI illness throughout the 2025 summer. This was:

- The second highest visit count for HRI since record keeping began in 2016.
- Slightly elevated compared to the 2020-2024 5-year average of 157 visits.

Visit Rates. The HRI visit rate was 94 visits per 100k all-cause visits in summer 2025. This is:

- Three percent higher than the HRI visit rate in summer 2024 (91 visits per 100k all-cause)
- Two percent higher than the average HRI visit rates over the past five summers (92 visits per 100k all-cause).

FIGURE 7

Emergency and urgent care visit counts and rates have remained elevated since 2021 and rose slightly in summer 2025 compared to the previous summer, marking the second-highest number on record.

Annual counts of heat-related illness ED/UC visits and rates, May- Sept 2016-2025, ESSENCE

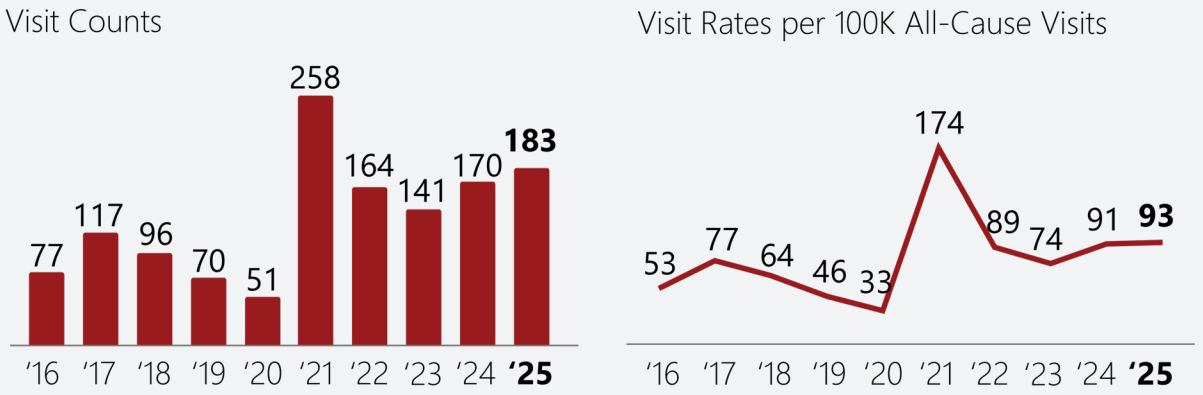
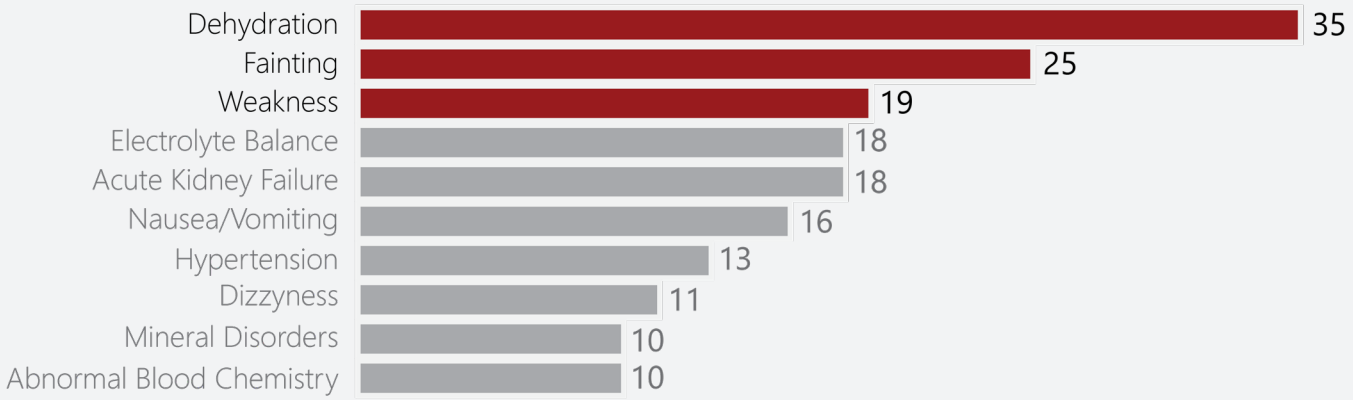


FIGURE 8

The most commonly diagnosed symptoms among HRI visits in 2025 were dehydration, fainting, and weakness.

Count of most frequent ICD diagnoses among HRI visits in 2025, May - Sept, ESSENCE



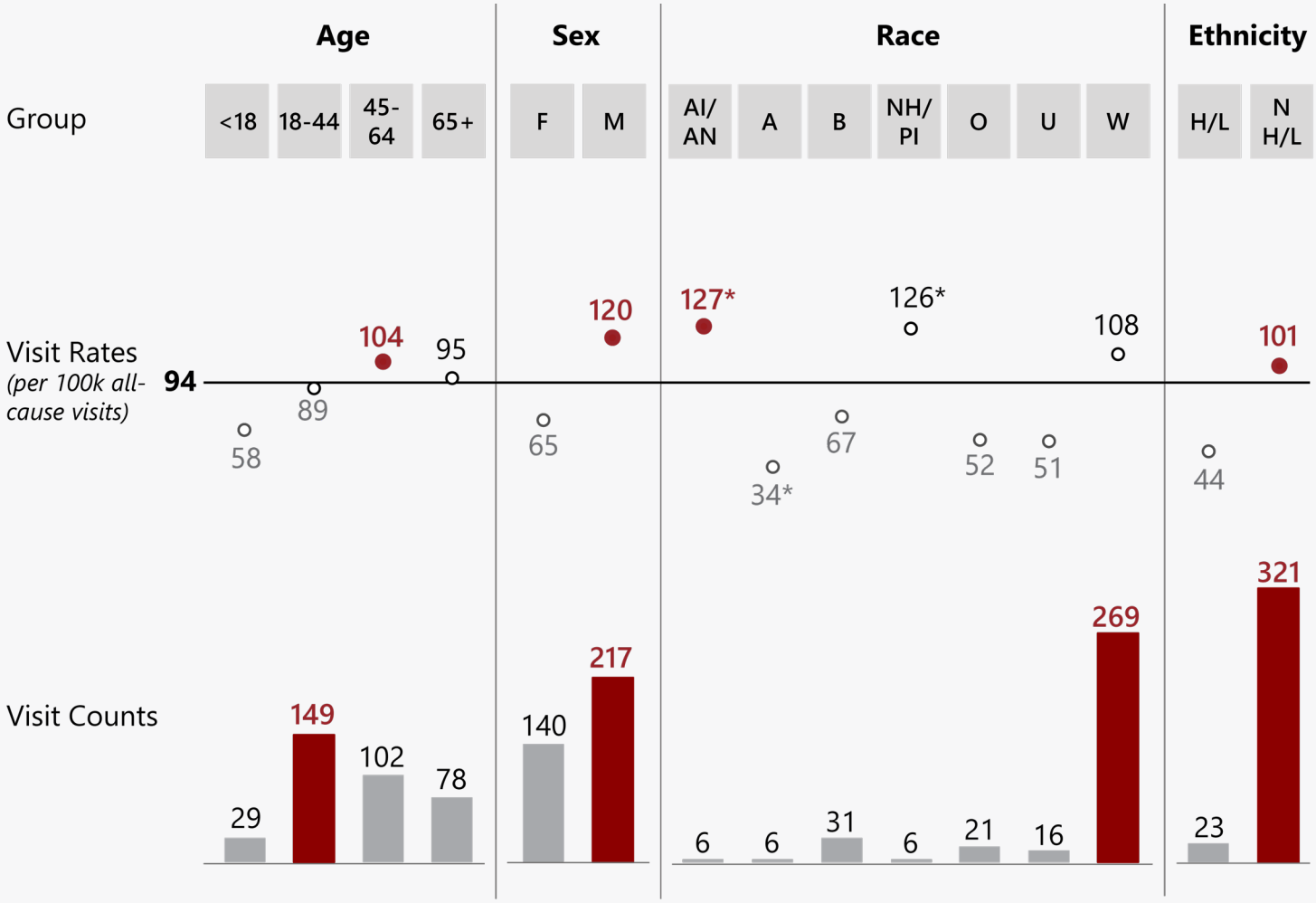
Subgroup statistics are presented for the past two summers (2024-2025, n=354). This increases sample size and reaches reportable thresholds (n>5) for more groups. In addition, trends are reported for 2022-2023 compared to 2024-2025.

- **Sex.** A majority of visits were made by male patients (61%, n=216). The visit rate for males was double the rate for females (119 per 100k) and statistically significant. This means the difference is unlikely due to chance. This data set is only available by sex, not gender. There were no non-binary patients in the sample.
- **Age.** The average age of a patient was 44 years, and ranged from 0-90. The most visits were made by people ages 18-44 (42%, n=149). Yet, people ages 45-64 had the highest rates (104 visits per 100k all-cause visits). People 65 and over were the only age group where visit rates decreased compared to the 2022-2023 period.
- **Race.** The largest proportion of visits were made by White residents (75%, n=268). This was followed by Black or African American residents (9%, n=31). However, when we looked at visit rates (i.e., number of visits per 100k people in the specific population), American Indian or Alaska Native (AI/AN) and Native Hawaiian or Pacific Islanders were more likely than other race groups to visit ED/UC for HRI and had the highest all-cause visit rates. Understanding the context behind these differences is important. For example, historic land dispossession, displacement, and discrimination may affect access to cooling resources for AI/AN residents (Hong et al., 2025).
- **Ethnicity.** A little over 6% of patients were Hispanic/Latine (n=23). They experienced significantly lower visit rates per 100k all-cause visits than the County overall.

FIGURE 9

Over the past two summers, residents who are White, ages 18-44 or male had the highest visit counts, while American Indian or Alaska Native and Native Hawaiian or other Pacific islanders had the highest visit rates.

HRI visit counts and rates per 100k all-cause visits by sub group, May - Sept 2024-2025, ESSENCE



**These rates are based on a very small number of visits. When numbers are this small, even one or two extra visits can make the rate look much higher or lower than it really is. A high rate is an important public health signal, and more exploration is needed to understand contexts and exposures.*

AI/AN= American Indian / Alaska Native
A = Asian
B = Black / African American
NH/PI = Native Hawaiian / Pacific Islander
O = Other Race not listed
U = Unknown
W= White

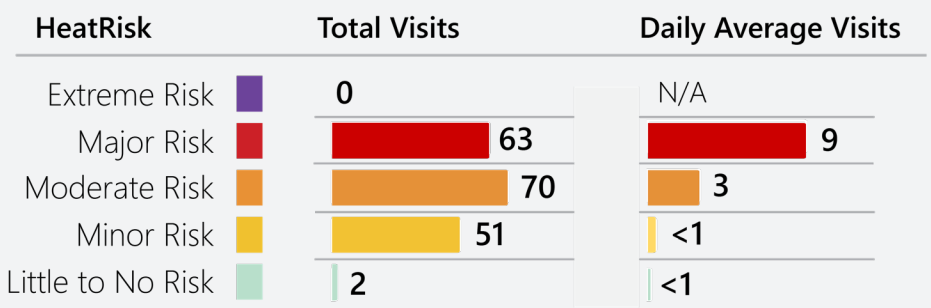
HeatRisk. A majority of HRI visits (38%, n=70) occurred on a day with 'moderate' (orange) HeatRisk. There were twice as many HRI visits that occurred on a day with 'low' HeatRisk compared to summer 2024.

Visits may be up on 'minor' HeatRisk days because people feel the heat from the hotter days before. Days with a 'high' (red) HeatRisk tended to have higher HRI visit counts. On average, three HRI visits occurred on any given 'moderate' HeatRisk day, while nine HRI visits occurred on any given 'high' HeatRisk day.

FIGURE 10

The largest number of visits happened on moderate heat days, but three times as many visits occurred on days with major risk.

HRI visit total counts and daily average by HeatRisk Index, May-Sept 2025, ESSENCE, NWS

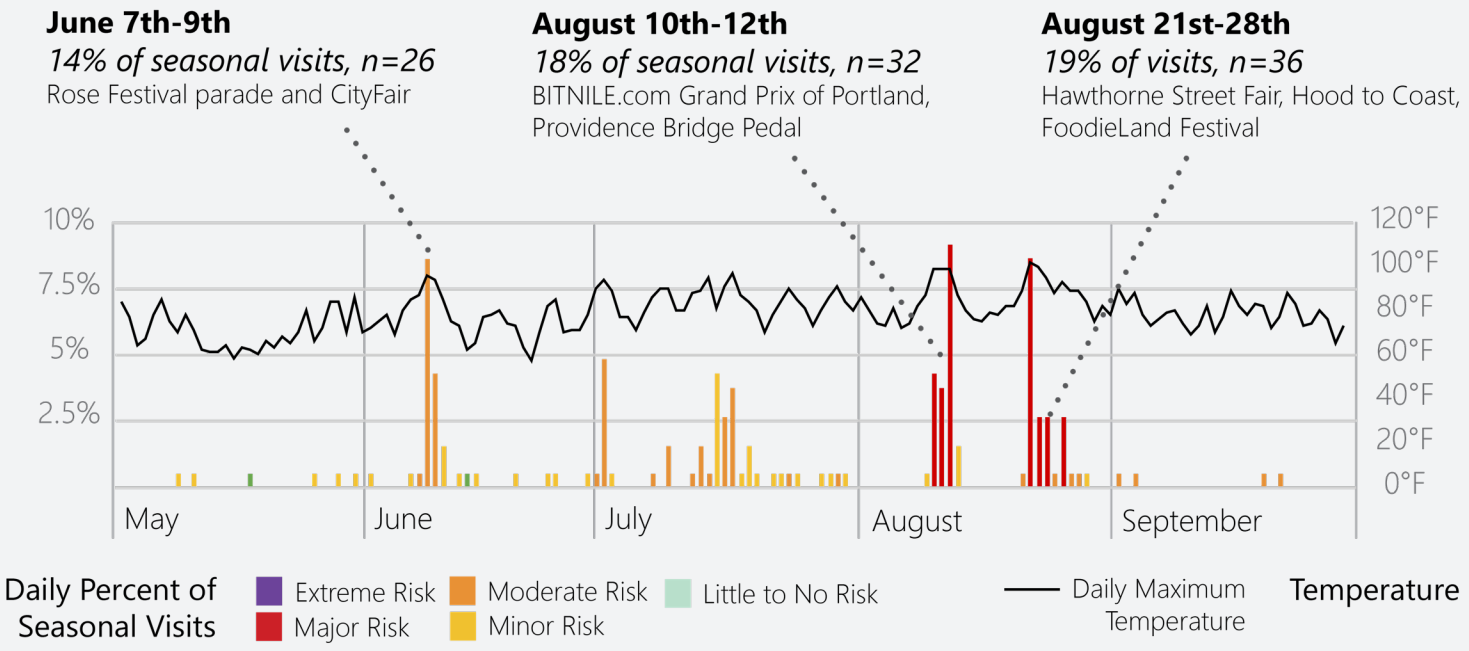


Heat Events. We define a heat event as two or more consecutive days of 'moderate' or higher HeatRisk. Throughout the summer, the three most impactful heat events overlapped with many community events.

FIGURE 11

Just over half of all visits happened during three specific heat events (14 days total), all of which overlapped with outdoor community events.

Daily percent of seasonal HRI visits, coded by daily HeatRisk Index, May-Sept 2025, ESSENCE, NWS



Risk Factors. Notes from emergency visits provide important context about how people experience heat illness. The most common risk factors mentioned include:

- Recreational activities (increases heat exposure)
- Work in hot indoor and outdoor places (increases heat exposure)
- Homelessness (increases exposure and limits the ability to cool down)
- Substance use (makes the body more sensitive to heat)
- Lack of air conditioning (limits the ability to cool down)

Recreation. Extreme heat puts athletes, as well as spectators, at a higher risk for heat illness (Orr et al., 2022). Endurance sports and football are known to have higher rates of heat-related illness compared to other sports (Gamage et al., 2020). Roughly 15% of visits (n=26) were related to recreational activities, including:

- Sport Activities (n=12) like biking, running, or playing soccer or football. Eight visits were related to the Hood to Coast event.
- Events (n=6) like an outdoor private party, a public fair or festival, or a professional sport game.
- Outdoor recreation (n=6) like hiking or water-based activities.

Occupation. Working in hot indoor or outdoor environments can lead to heat-related illness, especially if someone is not used to the type of work or older (Nath et al., 2026). Around 10% of visit records (n=20) indicated work conditions led to heat-related illness. This is a slight decrease compared to last year. Jobs in the warehousing and transportation delivery sector were most common.

Homelessness. People experiencing homelessness are at a higher risk of HRI than the general public. Living outdoors and frequent movement can increase exposure to dangerous heat and make it more difficult to find and keep cooling resources (Pocock et al., 2025). There were 17 visit records that indicated the patient was houseless (9% of summer total). This is:

- A slight increase in counts, and comparable to proportions in the previous summer 2024 (8%, n=13) (Multnomah County, 2025).
- Twelve times less than the number of cold-related illness visits made by people experiencing houselessness in winter ‘24-25 (45% of visits, n=200) (Multnomah County, 2025).

Substance use. Alcohol and some drugs can affect how well the body can handle heat. Heavy alcohol use can increase dehydration and affect decision-making to find someplace to cool off. Stimulants affect how well someone sweats and make them feel cooler than they really are (Ebi et al., 2021). There were 16 visit records that indicated the patient used a substance (9%). This is a slight decrease compared to last year. Alcohol was most commonly cited (n=11).

Lack of Air Conditioning. Air conditioners are a life saving intervention. Roughly two-thirds of residents who died during the 2021 heat dome lacked air conditioning (Multnomah County, 2022). There were 9 visits where records indicated the patient lacked air conditioning (5%), similar to the previous summer.

FIGURE 12

On average over the past three years, occupational exposure has contributed to more heat-related illness visits than houselessness, substance use, or lack of air conditioning at home.

Annual count of contributing factors, identified through manual review in triage notes, May-Sept 2023-2025, ESSENCE

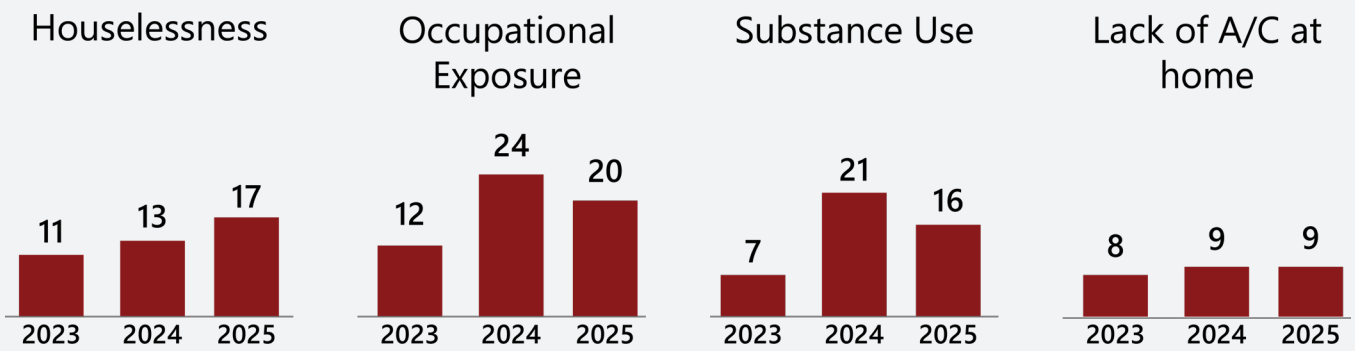
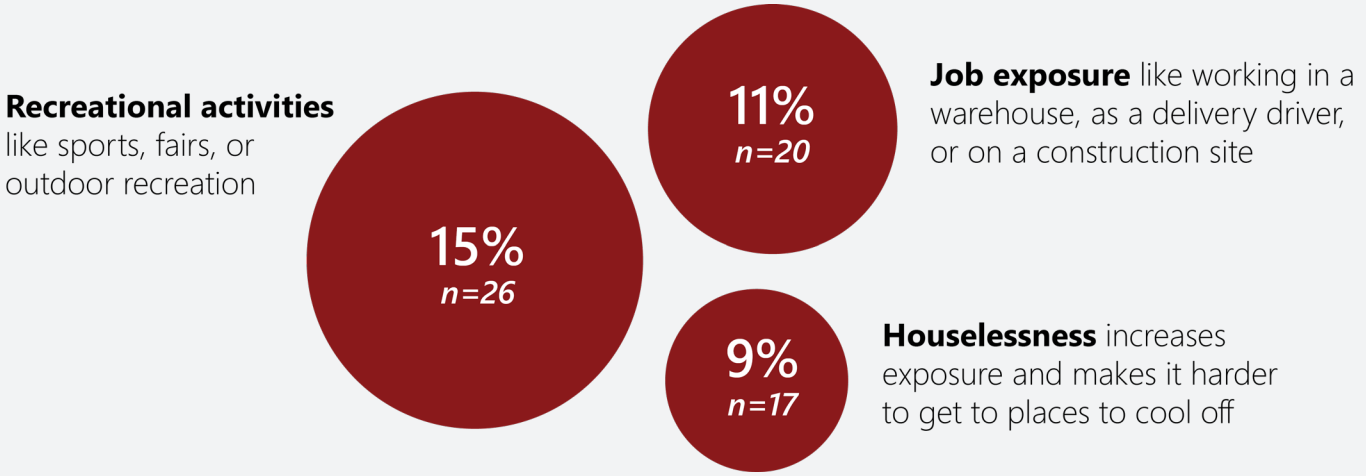


FIGURE 13

Recreation, job exposure, and houselessness contributed to at least 35% of heat illness.

Counts and proportions of contributing factors identified in triage notes, ESSENCE, May-Sept 2025



Zip Codes. The zip codes with the highest counts of HRI visits were:

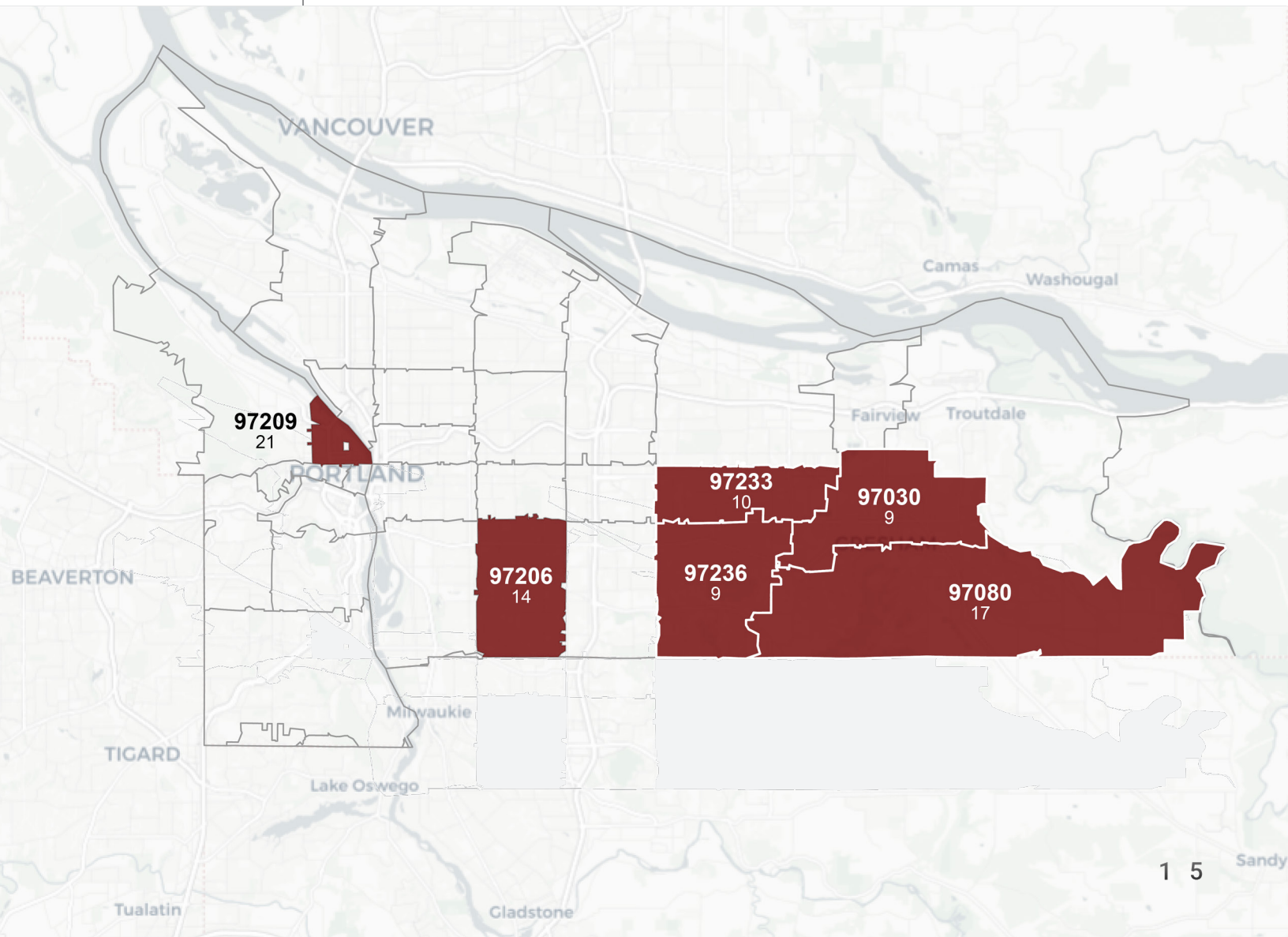
- 97209 (11%, n=21) in downtown Portland
- 97080 (9%, n=17) in Gresham
- 97206 (8%, n=14) in inner southeast Portland.

The top four zip codes with the highest visit rates per 100k all-cause visits were in downtown Portland. This was followed by zip code 97218, where the Cully neighborhood is located.

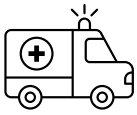
FIGURE 14

HRI visits most frequently occurred in downtown and southeast Portland and Gresham.

Top 6 zip codes with highest visit counts, May-Sept 2025, ESSENCE,



Emergency Medical System Encounters



Encounter Counts. There were 163 emergency medical service (EMS) encounters for HRI throughout the 2025 summer. This was a 23% increase compared to the previous summer (n=132) and the second highest visit count for HRI since records are available from 2021.

Subgroup Trends.

- **Sex.** A slight majority of people receiving HRI EMS services were men (54%, n=88).
- **Age.** The average age of a patient receiving HRI EMS services was 47 years, and ranged from 0-92.
- **Race.** The largest proportion of people receiving HRI EMS services were White (71%, n=115). This was followed by Black/African Americans (5%, n=18). Encounter counts for American Indian/Alaska Native, Asian, and Native Hawaiian/Pacific Islander communities were less than 5.
- **Ethnicity.** A little over one-tenth of patients receiving HRI EMS services were Hispanic/Latine (12%, n=19).

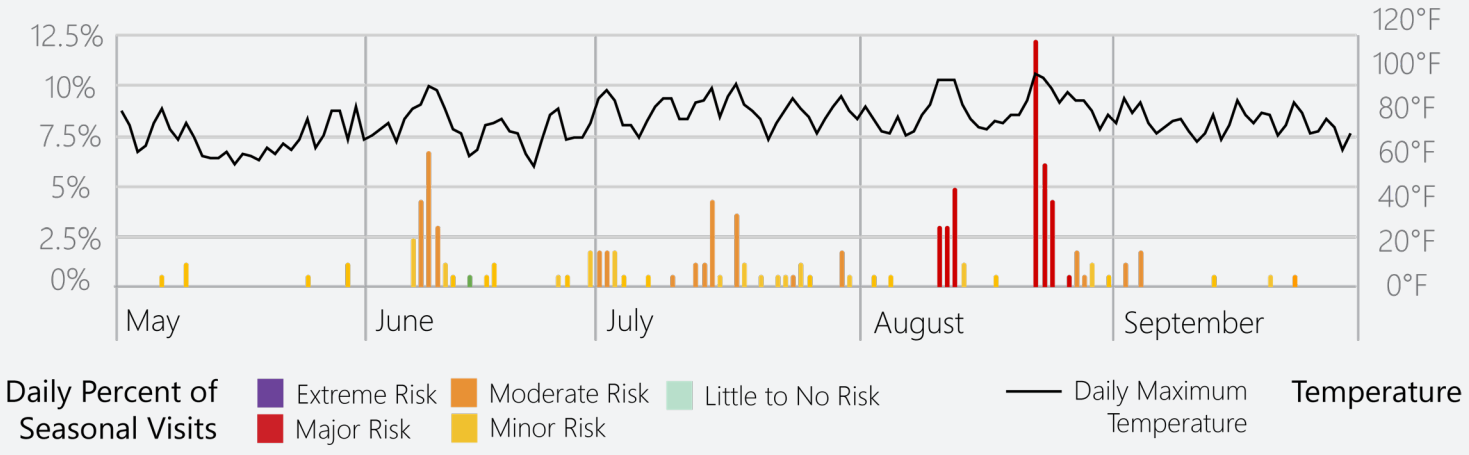
Severity of Need. A majority of encounters were lower acuity (71%, n=116). This means the patient was stable and had non-life threatening care needs. One-fifth of patients have emergent needs (21%, n=35). This means they were stable, but their condition may worsen if left untreated. Less than 3% (n<5) were in critical condition, requiring life-saving care.

Transfers to Emergency Departments. Two-thirds of encounters were transported to emergency departments for ongoing care.

FIGURE 15

Almost a quarter of all EMS encounters (23%, n=37) occurred from August 22nd - 24th. Twenty encounters occurred on August 22nd when summer temperatures peaked at 102°F.

Daily percent of seasonal HRI EMS encounters, coded by daily HeatRisk Index, May-Sept 2025, OHA, NWS



Location Type. The most common locations where encounters occurred were:

- Streets, highways, and roadways (31%, n=50)
- Trade and service areas (20%, n=32)
- Private residences (15%, n = 24), and
- Sports and athletic areas (11%, n=18)

Incident Location. A majority of encounters occurred within the City of Portland (89%, n=145). The remaining encounters occurred in the City of Gresham (7%, n=12) and smaller jurisdictions and unincorporated areas (4%, n=6).

Eight encounters were related to FoodieLand, an outdoor food festival at the Expo Center parking lot.

Hospital Stays

Counts. There were 15 hospitalizations for HRI in 2025. From 2022 through 2024 there were on average 19 HRI hospitalizations each year. There were typically fewer than 10 heat-related hospitalizations each year before the heat dome in 2021.

Rates. The HRI hospitalization rate was 6 hospitalizations per 10k all-cause hospitalizations in summer 2025. This is:

- A 25% reduction compared to last year's hospitalization rate (8 hospitalizations per 10k all-cause hospitalization).
- The lowest HRI hospitalization rate since 2021, the summer of the heat dome event. Hospitalizations rates peaked that summer at 27 hospitalizations per 10k all-cause.

Subgroup Trends. Subgroup statistics are presented for the past five summers (2021-2025, n=135). This increases sample size and reaches reportable thresholds (n=10) for more groups:

- **Sex.** A majority of patients hospitalized were male (n=87, 64%).
- **Age.** The average age of a patient hospitalized was 61 years, and ranged from 14-100.
- **Race.** The largest proportion of patients hospitalized were White (n=100, 74%), followed by Black/African Americans (n=13, 9%). Hospitalization counts for American Indian/Alaska Native, Asian, Native Hawaiian/Pacific Islander, and other racial origin groupings were less than 10.
- **Ethnicity.** A majority of patients hospitalized were non-Hispanic/Latine (n=125, 95%).

Length of Stay. In summer 2025, the average length of stay for an HRI hospitalization was three days. This is half of the six-day average observed over the previous three summers.

Insurance Provider. Over the past five summers, just over half (51%) of patients hospitalized for HRI were covered by Medicare (n=69/135). Medicaid was the second most common provider (n=41, 30%), followed by commercial insurers (n=11, 18%). The rest were either uninsured or used another form of coverage (n=14, 10%).

Emergency Room Services. Over the past four summers, a majority (91%) of hospitalizations received emergency room services before admission (n=140/154).

Deaths

Counts. There were two fatalities in 2025 related to heat exposure. This marks the fifth year in a row the County lost residents due to extreme heat. Before 2021, there was on average less than 1 heat-associated death a year.

In the previous four summers (2022-2025), there were 16 heat-associated deaths. Of these:

Subgroup Trends. Common characteristics were:

- Male (n=13, 81%)
- People 60 years or older (n=12, 75%)
- White (n=15, 93%)
- Non-Hispanic (n=15, 93%)
- Veterans (n=7, 43%)

Risk Factors. For all those who died where marital status was known (n=15), all were either divorced, widowed, or single. A majority of those who died (n=10) had underlying conditions that contributed to the death. Common conditions included hypertension, kidney disease, and diabetes. Nearly 90% were housed at the time of death..

Statement on an Additional Heat-Related Death. A third person died of heat-related causes within Multnomah County in summer 2025. Because this person was not a county resident, the death is not included in the counts and trends in this brief, which follow prior editions by including only Multnomah County residents (see Appendix A). Resident-only counts allow rates to be calculated and compared across years. The Medical Examiner reports deaths that occur in the county regardless of where the person lived, so other County communications report three heat-related deaths for summer 2025. We remember and honor each person who died.

Submersion and Drowning

Overview

As the weather gets warmer, people tend to spend more time around water for recreation. This increases water exposure and risk of drowning. Drowning is the process of not being able to breathe due to water submersion. It is not always fatal.

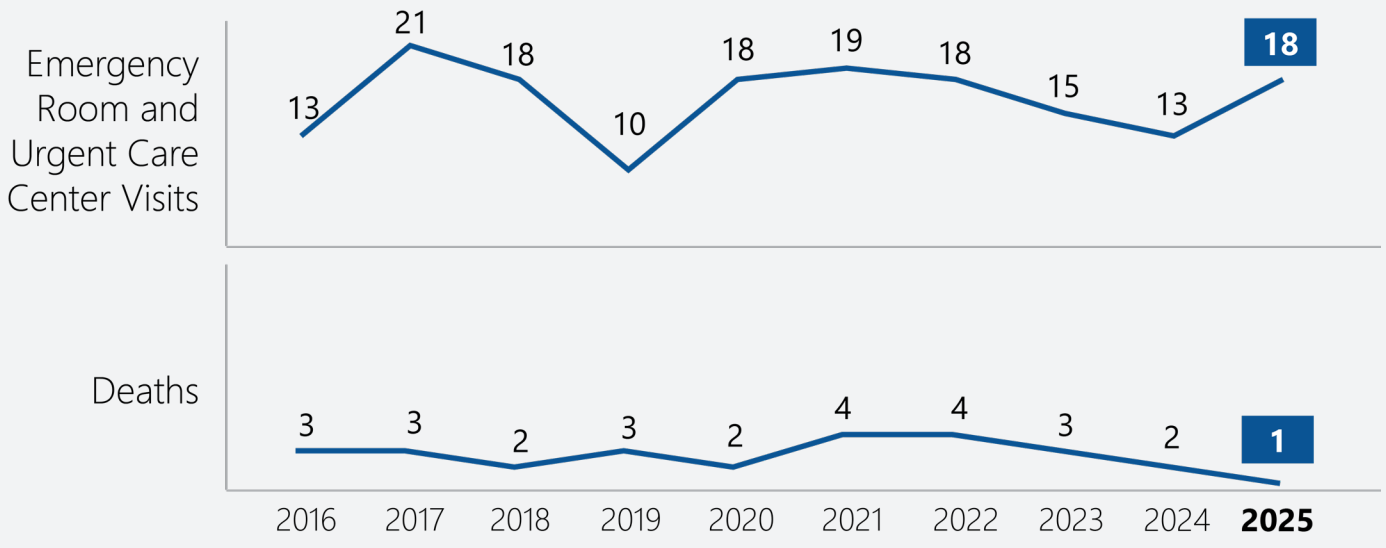
Water submersion can have a range of health outcomes from mild to severe. These include:

- Discomfort breathing or swallowing
- Continued mental distress
- Long term disability
- Brain injury (Gianfrancesco et al, 2025).

FIGURE 16

In summer 2025, emergency department and urgent care visits for drowning increased to similar counts as the average over the past five years, while deaths decreased to one.

Annual counts of drowning and submersion outcomes. May-Sept, ESSENCE, Vital Records.



Emergency Room and Urgent Care Center Visits

Visit Counts. There were 18 emergency and urgent care (ED/UC) visits for drowning and submersion throughout the 2025 summer. This was:

- A 5 visit increase compared to last summer.
- Comparable to the 2020-2024 5-year average of 17 visits

Visit Rates. The drowning visit rate was 9 visits per 100k all-cause visits in summer 2025. This is comparable to the drowning and submersion visit rates in summer 2024 (7 visits per 100k all-cause visits). It also aligns with the average drowning and submersion visit rates over the past five summers (10 visits per 100k all-cause).

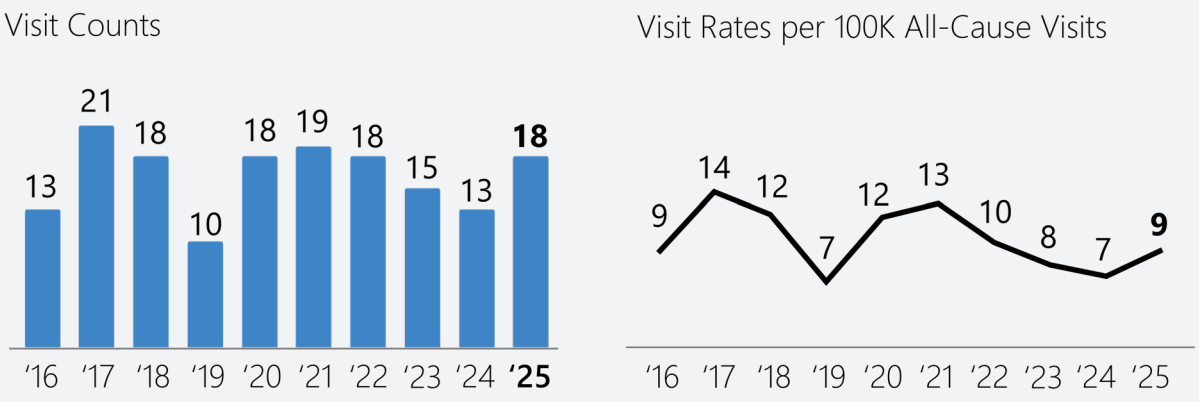
Location. In summer 2025, records indicate at least eight (44%) occurred in an open body of water. The rest either occurred in a recreational pool or did not document a location.

Recreational exposure. In summer 2025, records indicate that at least six visits (33%) stemmed from play-related submersion with friends. This included instances like holding their breath underwater for time or holding someone down.

FIGURE 17

Drowning visit counts and rates per 100K all-cause visits in summer 2025 were similar to trends seen over the past five years.

Annual counts of heat-related illness ED/UC visits and rates per 100k all-cause visits, May-Sept, ESSENCE



Subgroup Trends. Subgroup statistics are presented for the past four summers (2022-2025, n=64). This increases sample size and reaches reportable thresholds (n=5) for more groups:

- **Sex.** A majority of visits were made by men (62%, n=40). Men had roughly twice the visit rate of women (11.3 visits per 100k all-cause visits vs 5.5).
- **Age.** The average age of a patient was 22 years, and ranged from 0-88. A majority of visits were made by people under the age of 18 (53%). They also experienced the highest visit rate of all subgroups (34.1 visits per 100k all-cause visits).
- **Race.** The largest proportion of visits were made by White residents (40%, n=26), followed by residents who identify as another race not listed (17%, n=11). Native Hawaiian/Pacific Islanders and people who identify as another race not listed experienced the highest visit rates.
- **Ethnicity.** One-fifth of patients were Hispanic/Latine (20%, n=13). They also experienced visit rates roughly 2x as high as non-Hispanic/Latine patients (13.5 visits per 100k all-cause visits vs 6.4).

Deaths

Counts. There was one drowning death in 2025. This is:

- One less than the two drowning deaths that occurred in summer 2024.
- Two less than the five-year average of 3 drowning deaths per summer period.

In the previous eight summers (2018-2025), there were 20 deaths due to drowning. Of these:

Subgroup Trends. Drowning deaths were most commonly male (n=16), under the age of 25 (n=7), and White (n=12). There were eight Hispanic/Latino residents among fatalities. There were no Multnomah County drowning fatalities in the 1-4 age range during this period, which differs from national trends, where this age group experiences the highest rates of fatality (Clemens et al., 2024).

Locations. Ten fatalities occurred along the Sandy River, eight occurred along the Columbia, and two were at swimming pools.

Framework for Action

Discussion

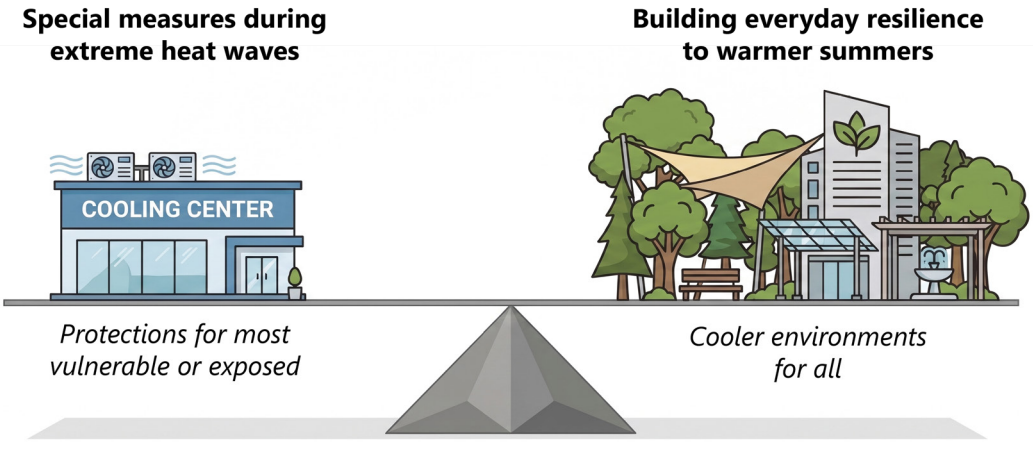
The findings in this report have important implications for public health interventions. Summer 2025 had the fewest days of extreme heat the County has experienced since before the heat dome in 2021. Days exceeding 90°F dropped by nearly a third to 19 days compared to the previous summer. Despite more mild temperature peaks, emergency department and urgent care (ED/UC) visits for heat-related illnesses still increased by 8% compared to the previous summer, reaching 183 visits for the season.

In addition, the burden of heat illness is not shared equally, highlighting the need for focused interventions. In 2024 and 2025, men experienced double the ED/UC visit rate than women, and adults aged 45-64 saw the highest visit rates overall. While White residents accounted for the majority of visits, American Indian/Alaska Native and Native Hawaiian/Pacific Islander communities faced the highest visit rates of all groups.

There is often a gap between actual heat risks and how worried someone actually feels about the heat. This gap is higher in Oregon than in most other states in the country (Marlon et al., 2025). Many people, especially older adults, rely on what summer used to feel like, rather than adapting to how dangerous it is today. A false sense of safety means someone might not take protective actions on moderately hot days until it is too late.

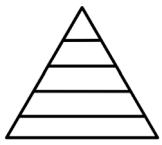
Outdoor events and sports, job exposure, and houselessness contributed to at least a third of heat illness in 2025. This highlights a clear need to build public spaces that help people stay cool, whether they are exercising, working, or living without shelter. To address all of these risks, we need a balanced approach. We need to keep protecting our most vulnerable residents while also building cooler, safer public environments for the general public.

FIGURE 18 **A balanced approach to heat resilience.**



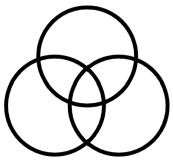
Grounding Practice in Theory

Crosswalking two common public health models provides a framework for action to plan interventions for emergency heat response and for building long-term resilience against summer hazards:



The **health impact pyramid** organizes actions by level of impact, ranging from individual to society (Frieden, 2010). Actions at the top of the pyramid focus have bigger impacts on individuals, but reach fewer people. Actions at the bottom have bigger impacts on a whole community, but can be harder to implement. Strategies that include actions from multiple tiers are most effective. The tiers are:

- Counseling and Education: Actions involve teaching individuals to change their personal habits, like drinking more water when it's hot or to remember to wear a life jacket on the river.
- Clinical Interventions: This strategy area involves ongoing, direct care for an individual, like managing medications that might make someone more sensitive to heat.
- Long-Lasting Protective Interventions: These are infrequent actions that offer long-term benefit, like installing an air conditioner in someone's home.
- Changing the Context: This strategy area involves changing the physical or policy environment so that healthy behaviors are the only option, like increasing tree canopy for shade along busy streets where people walk and bike.
- Socioeconomic Factors: These actions address social determinants of health like poverty and housing stability.



The **Climate Vulnerability Model** shows how climate risks might affect a community by outlining the level of climate threat, the community's existing health, and their ability to respond to a hazard:

- Exposure: This is the degree a group is in physical contact with a climate hazard like extreme heat or wildfire smoke. It considers things like how much and for how long of a hazard someone experiences.
- Sensitivity: These are characteristics of groups that affect how much a hazard exposure might affect them, like age or health conditions like asthma.
- Adaptive Capacity: This is the ability of an individual or community to prepare, respond to, and recover from climate hazards.

The matrix on the next page combines these two models to create a framework for planning interventions. The strategies in the matrix are based on evidence-based interventions (Abbinett et al., 2020) and information in this report. These actions are for everyone: residents, schools, health care providers, community groups, businesses, and governments. Collective action is needed to build a more heat-resilient county.

Model Category	Sensitivity	Adaptive Capacity	Exposure
Counseling & Education	■ Focused messaging for older adults (65+) and men on recognizing early signs of heat illness ■ Early season messaging (May/June) for people unacclimated to heat ■ Symptom education on heat and medication interactions	■ Culturally specific water safety education in schools and community centers ■ Public education campaigns on locating and utilizing free public cooling spaces (libraries, pools, splash pads) ■ Resource education on navigating utility assistance	■ Distribute updated event management guidelines and technical assistance to coaches, event planners, and recreation coordinators ■ Alert the public when night temps fail to drop below 65°F ■ Workplace-specific education and messaging during heat events
Clinical Interventions	■ Personalized heat medical plans for high-risk patients ■ Medication management during heat waves ■ Targeted outreach to the 45–64 age group	■ Household AC unit and cooling device distribution ■ Cooling shelter activation during multi-day heat events	■ Deployable misting stations, shade structures, and water distribution at public summer events ■ School or work activity modifications during >90°F days
Long-Lasting Protection	■ Automated wellness checks for isolated individuals ■ Clinical screening for heat vulnerability during routine checkups	■ Help with indoor cooling device maintenance ■ Creating community equipment libraries (e.g., shared pop-up tents, coolers, and misting fans for local events)	■ Implement specialized cooling interventions for workers in warehouses, transit, commercial kitchens, and construction ■ Mobile shade installations
Changing the Context	■ Strengthen formal and informal community networks so checking on neighbors becomes standard practice	■ Shifting the default schedule of community programming, summer sports leagues and practices, and public markets to cooler morning or evening hours	■ Promote permanent/temporary cooling in rec areas (natural shade, architectural cooling, accessible water features) ■ Apply heat-blocking paint and naturally cooler materials to busy streets, sidewalks, and parking lots
Socioeconomic Factors	■ Reducing chronic disease prevalence that compounds heat vulnerability	■ Improve housing stability	■ Zoning and land use to reduce the urban heat islands ■ Urban design standards for shade equity ■ Insurance to cover workers in hot environment on days with heat that would be dangerous to work in

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Data Source	Description	Variables	Limitations
National Weather Service	The NWS provides weather and climate information to inform decision-making to protect community well-being.	■ Temperature ■ HeatRisk	■ Data used are collected from one site (PDX), while variation exists throughout the county depending on built and natural environment
Oregon ESSENCE	The Oregon ESSENCE database tracks near-real time visits to local emergency departments and some urgent care clinics. Records include diagnoses, demographic information, and additional context from triage notes. Rates were calculated using the total visit count for a subgroup for all causes in the summer season.	■ CCDD Category Heat-related illness visits V2 Query ■ CCDD Category OR Drowning and Submersion V1	■ Counts may include the same person visiting on separate occasions ■ Some triage notes not complete and completeness varies by provider ■ Counts <5 suppressed due to data use agreements ■ Race can be provider recorded or incomplete ■ Represents people able to access care, therefore a likely undercount of full illness and injury incidence ■ Sensitive to exposures that residents experience outside of the County (ex: water or heat exposure on the coast) ■ Zip code is patient residence, and does not necessarily indicate place of exposure
OHA Hospital Discharge Records	This data includes information about residents who received inpatient care at a hospital. This includes why they were admitted and the care they received.	■ Heat-related illness hospitalizations (X30, X32, T67 in any 'dx' or 'ecode' field)	■ Counts <10 are suppressed due to data use agreements ■ Represents people able to access care, therefore a likely undercount of full illness and injury inciden
OHA EMS	This data includes information about EMS agency deployments and prehospital care. Records include diagnoses, demographic information, and additional context from triage notes.	■ Heat-related illness Encounters	■ Counts <5 suppressed due to data use agreements ■ Counts may include the same person visiting on separate occasions
OHA Vital Records	These records are the most stable source of information about death trends. It includes cause of death and some demographic information.	■ Hyperthermia deaths (X30, T67.0-.9) ■ Drowning deaths (V90, V92, W16, W67, W69, W73, W74)	■ Numbers are considered provisional and subject to change ■ Limited to Multnomah County residents that died due to exposure in tri-county area and medical examiner certified ■ Excludes deaths of non-County residents that died within the County