



November-December Cold Weather-Related Illness/Injury Surveillance

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PHR 7 conducted late fall to early winter season cold weather-related illness/injury surveillance using Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE). The surveillance report started on November 1, 2023 and will end on February 28, 2024.

The temperatures in the report were collected and obtained from a weather station at Austin-Bergstrom International Airport in Austin and overlaid onto ESSENCE tables. This data weather overlay on each of the EPI-curve chart represents the Central Texas region.



Stock image. Obtained through Microsoft PowerPoint image search result.

Temperatures may differ by a few degrees depending on specific location.

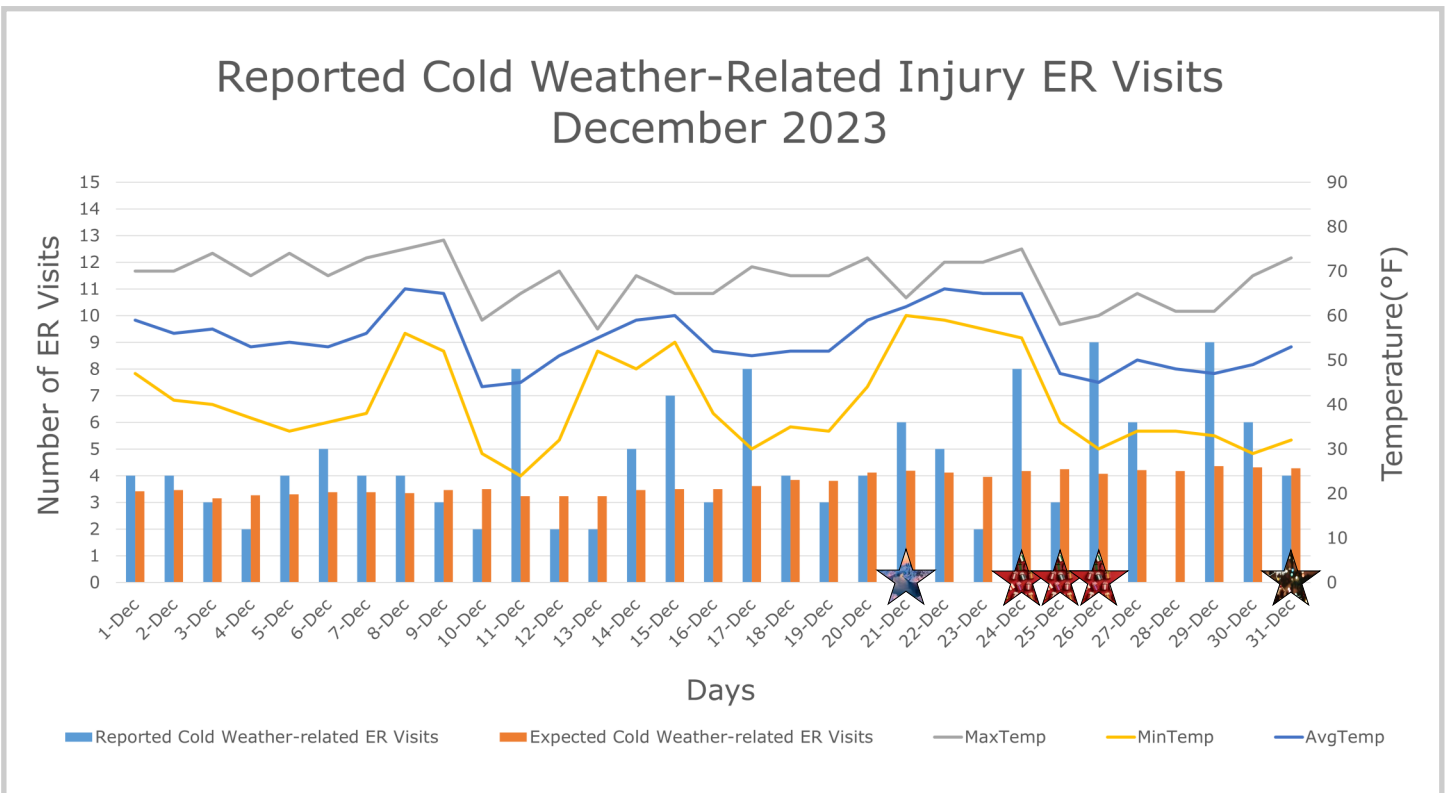
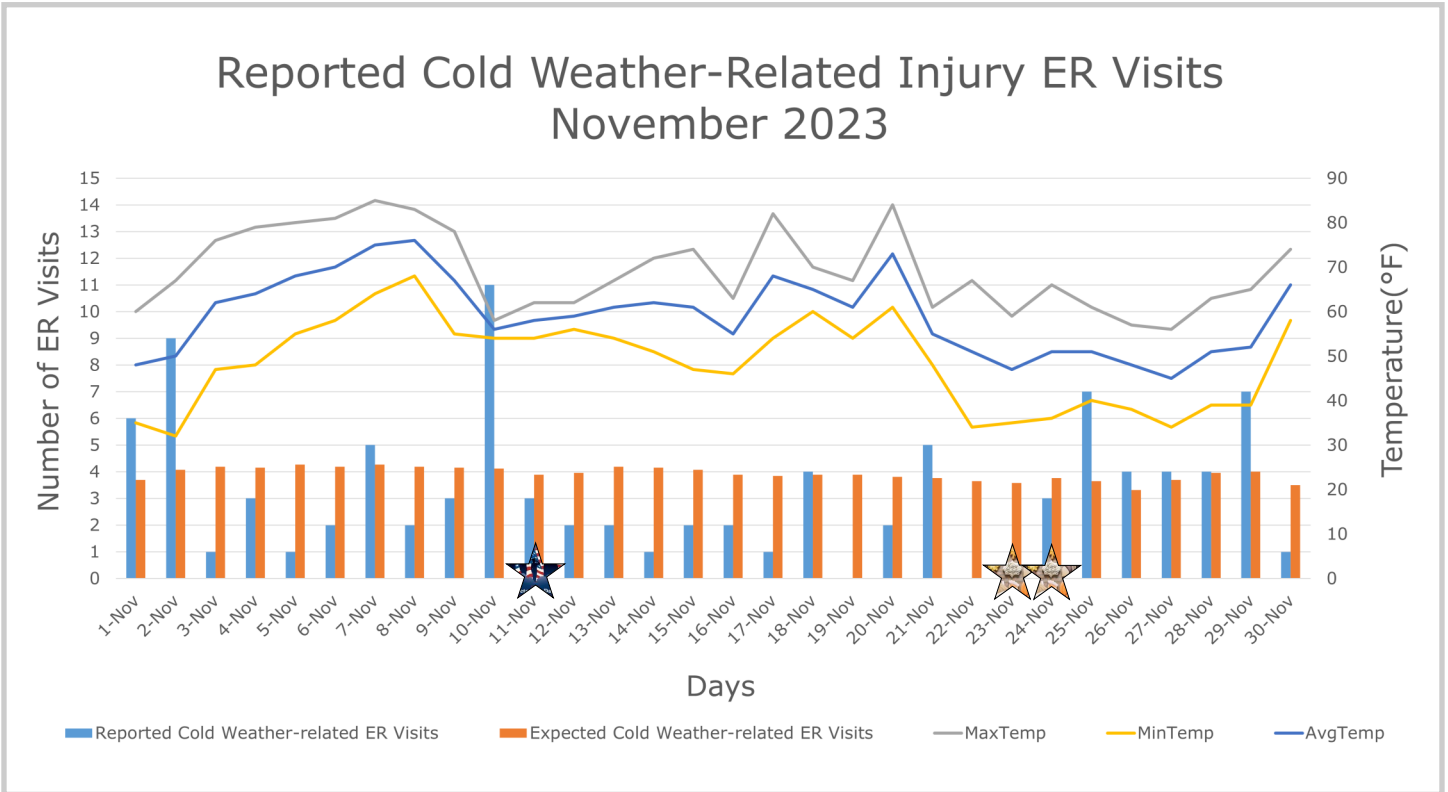
Thursday, December 21, is the last day of fall and the first day of winter solstice. Known as hibernal solstice, the northern hemisphere of the Earth will have its longest nights and shortest days. This is due to Earth's poles reaching their maximum tilt away from the Sun.

In November, the minimum and maximum temperature range observed was between 32-85 F. There was one report of a freezing temperature at 32 F. In December, the minimum and maximum temperature observed was between 24-77 F. There were eight separately reported freezing and/or below freezing temperatures.

Despite cold weather in Central Texas, the NOAA's Climate Prediction Center (CPC) predicts a mild outlook this year for the U.S. With wind chills factoring in for colder temperatures, it is recommended that Central Texas residents prepare for potential winter storms. For more information on winter weather preparedness and safety, please click on this link: [Winter Weather | Ready.gov](#).



Figure 4: Epi-Curve of Cold Weather-Related Injury ER Visits for November-December 2023



★ Veterans Day

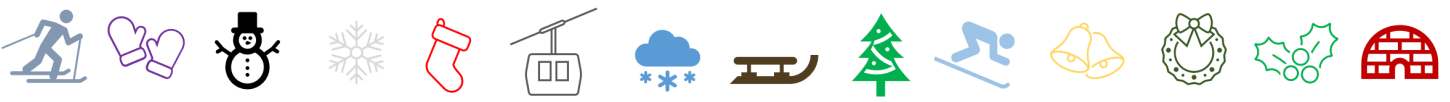
★ Thanksgiving Day | Day After Thanksgiving Observance

★ Winter Solstice

★ Christmas Eve | Christmas Day | Day After Christmas Observance

★ New Year's Eve

Note on PHR 7 data: The results from the query used in ESSENCE, an electronic bio-surveillance system, to track cold weather-related illnesses and injuries may be an overestimation or underestimation of the actual burden of illness related to the winter weather activities. This is due to the nature of the query, which includes the term hypothermia, a condition that may be caused by factors other than cold weather.



Cold Weather-Related Injuries

Figure 4 shows the two EPI-curves for reported cold weather-related injuries for each month by days for November and December. Based on the overall trend analysis, the spikes or significant increases were observed a day prior and/or after the federal and state holiday observances. Aside from this, other significant increase in reported cold weather-related injuries were also observed at or during significant decreases in temperature.

For November, 11 out of 30 days (37%) of reported cold weather-related ER visits were above the expected ER visits. However, for much of the month, PHR 7 observed a lower rate of reported ER visits compared to the expected rate. Additionally, there were multiple days/nights that experienced a drop in temperature, with the lowest minimum temperature being on Thursday, November 2 at 32 F. The highest reported number of ER visits was on the day before Veterans Day, Friday, November 10 (n=11). Around the Thanksgiving holiday weekend, November 25 and 29, there was an increase in reported ER visits compared to the expected amount of visits for those days.



Stock image. Obtained through Microsoft PowerPoint image search result.

For December, 18 out of 31 days (58%) of reported cold weather-related ER visits were above the expected ER visits. This was in contrast with November. Additionally, there were seven occasions that experienced a decrease in temperature at or below freezing, 32 F, per day/night. The lowest minimum temperature recorded was on December 11 at 24 F, which also observed a spike in the number of ER visits. The highest reported number of ER visits was on December 26 (n=9) and December 29 (n=9). Both days also experienced drops in temperature. This increase was the week between Christmas and New Year's Eve.

Most of the reported cold weather-related injury/illness ER visits were related to prolonged or excessive exposure to colder weather. The majority of patients experienced various symptoms related to hypothermia along with mild cold/flu like illness (i.e., altered mental status, shortness of breath, pneumonia, headache, etc.). Other injuries include frostbite of the hands and feet, including fingers and toes and trench/immersion foot.

The National Weather Service issued winter weather warnings, watches, and advisories, including a wind chill advisory for November and December.