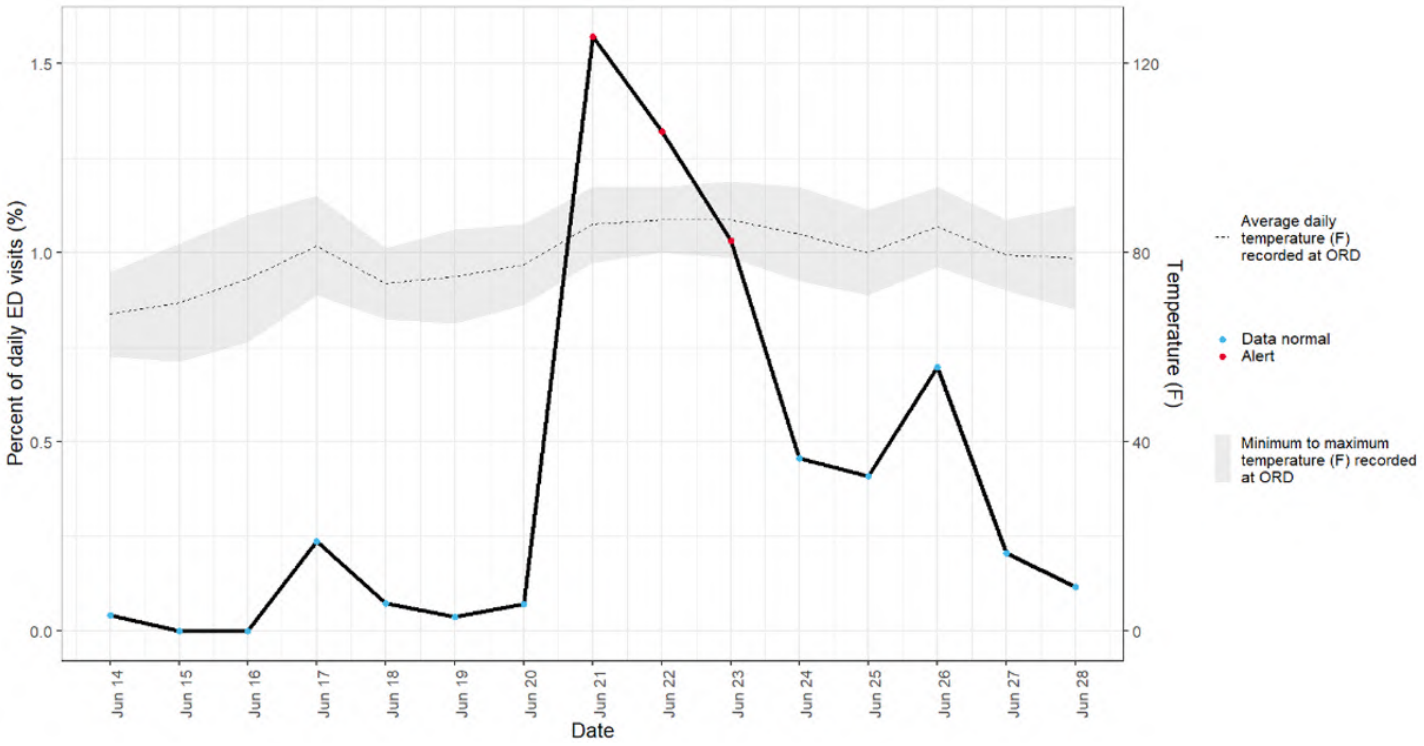
CDPH
Chicago Department of Public Health

Health Impacts of an Extreme Heat Event in Chicago, IL
June 20-24, 2025

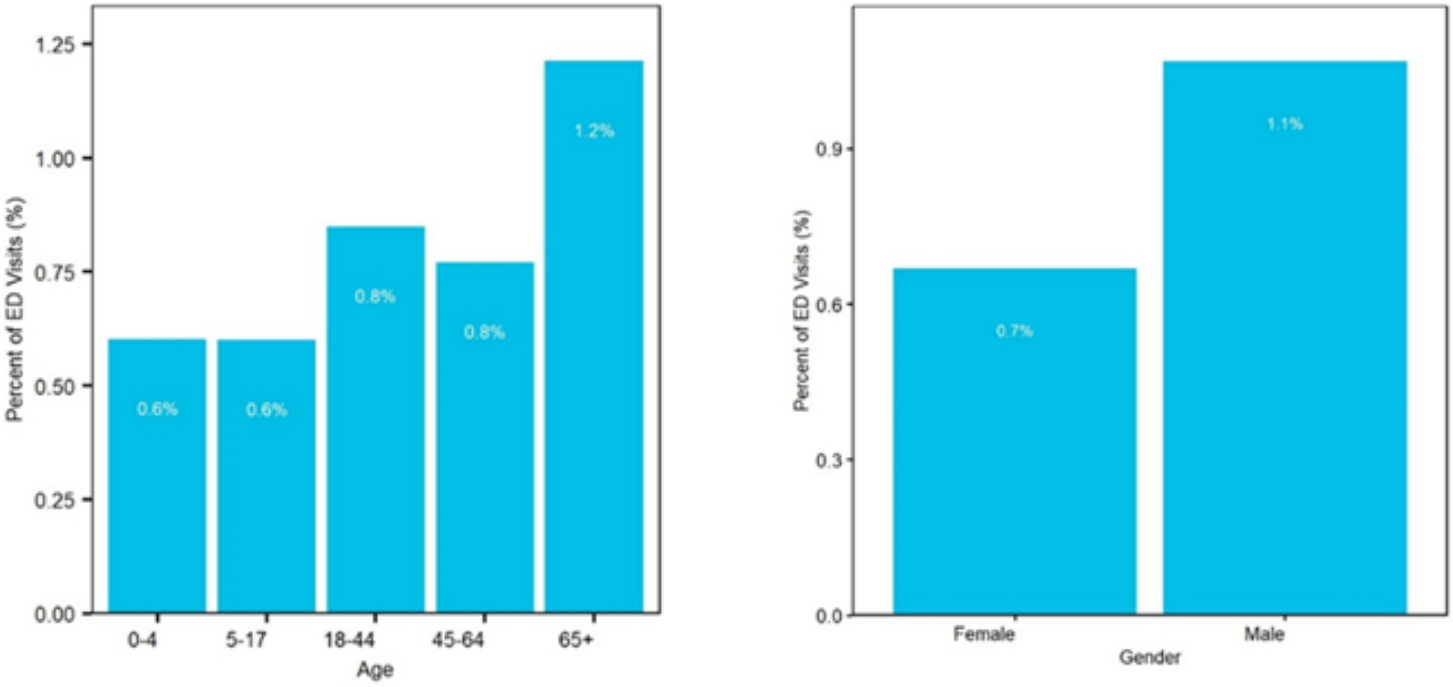
- On June 20, 2025, the National Weather Service (NWS) issued an Extreme Heat Warning for Chicago, lasting through June 24th. CDPH reviewed emergency department (ED) visits involving heat-related illness to help understand the health impacts of this weather event in Chicago.
- Heat-related illness spiked across Chicago, though particularly among men, those age 65 years and older, and those residing in zip codes on the North/Northwest side of the city.
- CDPH works closely with Chicago hospitals to ensure that they are prepared to identify and care for patients with heat-related illness during extreme heat events.
- See our **public health guidance regarding heat preparedness** to learn more about signs of heat-related illness and what you can do to avoid exposure to extreme heat and stay safe during future heat waves.

Figure 1: Daily visits to Chicago EDs for heat-related illness, as a percentage of total daily ED visits, June 14-28, 2025



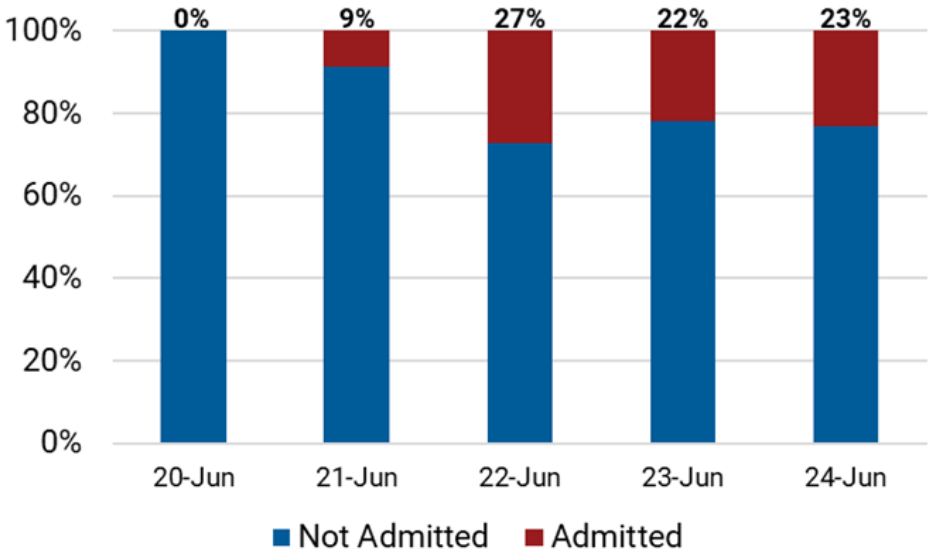
There was a sharp spike in ED visits associated with heat-related illness during the Extreme Heat Warning in Chicago. The percentage of ED visits that were heat-related increased approximately 10-fold during this time period (representing over 100 visits to Chicago hospitals). The maximum air temperature during June 20-24 reached 95°F.

Figure 2: Percent of visits to Chicago EDs that were heat-related, stratified by age group and gender, June 20-24, 2025



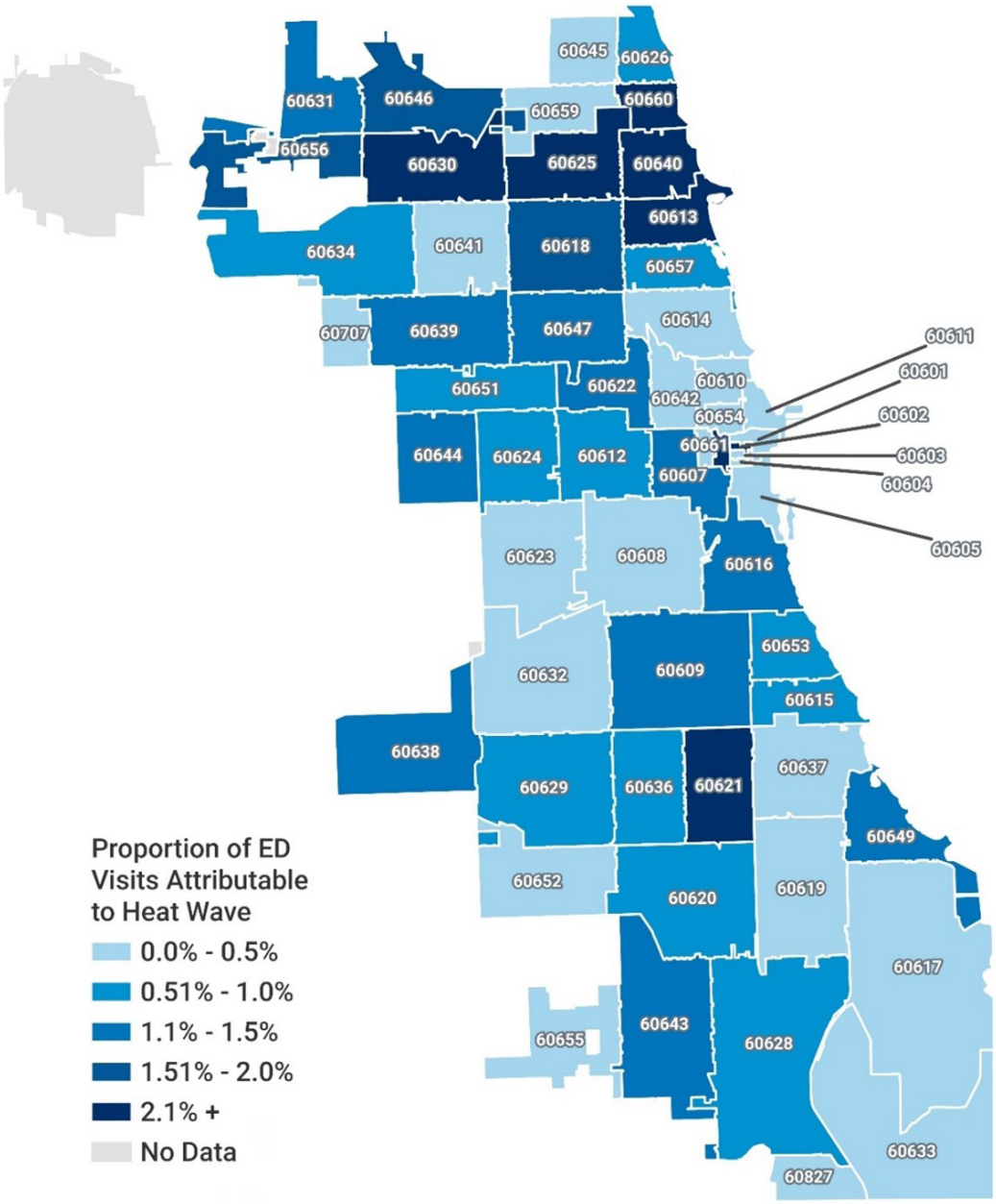
During June 20-24, 2025, heat-related ED visits to Chicago hospitals increased significantly across all demographic groups. Adults aged 65 years and older had the highest burden, with 1.2% of all ED visits in this group being heat-related, which was about twice the proportion seen in younger age groups. This elevated risk likely reflects age-related declines in the body's ability to regulate temperature, a higher prevalence of chronic health conditions, and other factors that might limit the body's ability to cool. Men were also disproportionately affected, consistent with research linking higher risk to greater occupational and outdoor exposure and certain health behaviors.

Figure 3: Percent of Emergency Department visits to Chicago hospitals for heat-related illness that required hospitalization, June 20-24, 2025



Overall, about 1 in 5 heat-related ED visits were serious enough to require hospitalization. A larger proportion of those requiring hospitalization occurred during the latter half of the extreme heat event.

Figure 4: Percent of visits to Chicago EDs that were heat-related, stratified by patient's home zip code, June 20-24, 2025



While residents from all regions of Chicago were at risk of heat-related illness during the June extreme heat event, zip codes that seemed to be disproportionately impacted were consistent with those identified in a **CDPH Data Brief** that considered longer timeframes. Zip codes shaded darker blue represent areas with a higher proportion of ED visits due to heat-related illness.

Data sources

This report summarizes public health surveillance data collected from the National Syndromic Surveillance Program's (NSSP) Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) system, which maintains visit data from Chicago hospital emergency departments (EDs). ED records contain information on patient demographics, including age and sex, as well as visit details and clinician notes. In Chicago, 100% of city EDs submit data for inclusion into ESSENCE. ESSENCE data was overlaid with temperature data (recorded at O'Hare airport daily), available from the National Oceanic and Atmospheric Administration (NOAA) climate data website (https://www.ncei.noaa.gov/cdo-web/).

Data analysis

CDPH analyzed ED visits to Chicago hospitals for evidence of heat-related illness from 6/20 to 6/24 and during comparison time periods to assess trends and summarize impacts on local hospitals and communities.

A syndrome definition for heat-related illness was adapted from an ESSENCE query developed by the Council for State and Territorial Epidemiologists (CSTE) Heat Syndrome Workgroup and later modified by the NSSP Community of Practice. The query identifies visits with diagnosis codes (ICD-10-CM) or terms/keywords associated with exposure to excessive natural heat (words like sunstroke, hyperthermia, heat cramp) but not man-made heat (e.g., medication related, heating pads, food temperature). The query was reviewed for relevance and face validity by CDPH epidemiologists.