

Definition of Reported Measures

- **Hospitalizations due to Heat-related illness** represents the number of hospitalizations due to heat-related illness among California residents; expressed as a rate per 100,000 California residents.
- **Emergency department (ED) visits due to Heat-related illness** represents the number of ED visits due to heat-related illness among California residents; expressed as a rate per 100,000 California residents.

How to Read Tables, Charts, and Maps

- The **95% confidence interval (CI)** is the range of values that likely contains the true rate in the population.
- **Crude rates** express the number of outcomes relative to the size of the population. N/A indicates that the data are not available due to the number of events being less than 12.
- **Total** counts are listed next to rates unless the total number of events is less than 12.
- The **map legend** displays the data with four class breaks, where the data is divided into four equal bins known as quartiles.
- Some counties have a greater proportion of people who are old or young than other counties, which makes it difficult to compare across counties or over time. Scientists often fix this problem through a technique called age adjustment so comparisons can be made. In addition to crude rates, we also present **age-adjusted rates**.
- Effective October 1, 2015, hospital record (HCAI) data transitioned from ICD-9 to ICD-10-CM. Differences between counts and rates in years prior to 2015 compared with 2015 and subsequent years could be a result of this coding change and not an actual difference in the number of events.
- Prior to 2019, data for Asians and Pacific Islanders were combined into a single group (Asian/PI). Beginning in 2019, data were reported separately for Asians and Native Hawaiian Pacific Islanders (NHPI). Data were also reported for Multi-race individuals starting in 2019.

Data Sources

- Emergency Department and Patient Discharge Datasets are from the California Department of Health Care Access and Information (HCAI), formerly known as the Office of Statewide Health Planning and Development (OSHPD).
- Denominators for rates are based on estimates from the California Department of Finance.

Methods

- Cases were limited to those occurring between May 1 and September 30 of each year.

Cases of heat-related hospitalizations and emergency department visits are identified by using the following ICD-9-CM and ICD-10-CM codes (as of 10/01/2015) listed anywhere in the record (i.e. primary or other diagnosis fields) :

ICD-9 Code	Code Description
992.0	Heat stroke and sunstroke
992.1	Heat syncope
992.2	Heat cramps
992.3	Heat exhaustion from water depletion
992.4	Heat exhaustion from salt depletion
992.5	Heat exhaustion, unspecified
992.6	Heat fatigue, transient
992.7	Heat edema
992.8	Other specified heat effects
992.9	Unspecified effects of heat and light
E900.0	Health effect caused by excessive heat due to weather (e.g. sunstroke, ictur solaris/heatstroke)
E900.9	Effect from unknown cause of excessive heat
Cases that were due to a man-made source of heat (E900.1) are excluded from this case definition.	

ICD-10 Code	Code Description
T67.0	Heat stroke and sunstroke
T67.1	Heat syncope
T67.2	Heat cramps
T67.3	Heat exhaustion from water depletion
T67.4	Heat exhaustion from salt depletion
T67.5	Heat exhaustion, unspecified
T67.6	Heat fatigue, transient

ICD-10 Code	Code Description
T67.7	Heat edema
T67.8	Other specified heat effects
T67.9	Unspecified effects of heat and light
X30	Exposure to excessive natural heat
X32	Exposure to sunlight*--only used for ED/Hospitalization

Cases that were due to a man-made source of heat (W92) or X32 (exposure to sunlight) are excluded from this case definition.

The number of heat-related illness events may differ from other sites due to differences in methods and ICD codes included.

Limitations of the data

- Data Collection Purpose - Diagnosis codes are recorded by hospitals for reimbursement purposes and not for public health surveillance.
- The rates provided include ED visits and hospitalizations for California residents. Out-of-state residents and unhoused patients with no recorded address are excluded from the rates.
- Low-level of resolution- Hospitals are not mandated to report patient addresses. The level of geographic resolution of the data is limited to state, county, and zip code.
- Heat stress can manifest in a number of clinical outcomes, and people with chronic health problems (e.g., cardiovascular disease, diabetes, obesity) are more susceptible to the effects of heat than healthy individuals. This measure does not capture the full spectrum of heat stress, where exposure to excess heat is not explicitly documented.

Additional Data Tables

Statewide Heat-related Deaths (2000-2019)

Total Heat-related Illness by County (2000-2020)

Suggested Citation

Tracking California, Public Health Institute. Heat Related Illness Emergency Department & Hospitalization data. Accessed [Month/Day/Year] from <https://data.trackingcalifornia.org>