

About the Data – Pregnancy-Related Mortality

Indicator Description

Pregnancy-related death is a death while pregnant or within one year of the end of pregnancy – regardless of the outcome, duration or site of the pregnancy – from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

Data Sources

California Department of Public Health, Birth Statistical Master File, 2009–2017: Compiled from information on birth certificates, including demographic information related to the infant and parents, as well as medical data related to the birth.

California Department of Public Health, California Comprehensive Master Birth File, 2018–2021: Compiled from information on birth certificates, including demographic information related to the infant and parents, as well as medical data related to the birth. Beginning in 2018, the California Comprehensive Master Birth File replaced the Birth Statistical Master File.

California Department of Public Health, California Pregnancy Mortality Surveillance System Data, 2009–2021: Compiled from information on vital statistics and administrative data (California Department of Public Health: Birth Statistical Master File, 2009–2017, California Comprehensive Master Birth File, 2018–2021, California Fetal Death Statistical Master File, 2009–2021, Death Statistical Master File, 2008–2013, California Comprehensive Master Death File, 2014–2021; California Department of Health Care Access and Information, formerly the Office of Statewide Health Planning and Development: Patient Discharge Data, 2009–2021, Emergency Department Data, 2009–2021 and Ambulatory Surgery Data, 2009–2021), Coroner/Medical Examiner investigations, autopsy and toxicology reports, hospital discharge summary, medical records and expert committee case review results.

National Comparison

Centers for Disease Control and Prevention, [Pregnancy Mortality Surveillance System](#), 2009–2019.

Data Analysis

The pregnancy-related mortality ratio shown in these dashboards is the number of pregnancy-related deaths per 100,000 live births, stratified by selected mortality and maternal

characteristics. Pregnancy-related deaths are also shown as proportions (%) by cause of death and by timing to death. The 95% confidence interval presented in the tooltips indicates there is a 95% chance that the range contains the true prevalence in the population. Rates or percentages with wide confidence intervals should be interpreted with caution. The state dashboard uses single year data, as well as three-year aggregated data.

Denominators include all live births to California resident mothers/parents giving birth. See Category and Subcategory Definitions below for additional inclusion/exclusion criteria.

Data Suppression

The numerator, rate and confidence interval are not shown when the numerator is less than 10.

Category and Subcategory Definitions

Age: Age of mother/parent giving birth at time of delivery. Excludes records with unknown age.

Cause of death: Cause of death was determined by expert committee review. Common causes of pregnancy-related deaths include the following: amniotic fluid embolism (AFE: a life-threatening birth complication involving allergic-like reaction to amniotic fluid); anesthesia complications; cardiovascular disease (CVD: includes cardiomyopathy and other CVD); cerebrovascular accident (stroke); hemorrhage (heavy bleeding); hypertensive disorders of pregnancy (high blood pressure, includes chronic and gestational forms, preeclampsia and eclampsia); pulmonary embolism (blood clots in lung artery, includes thrombotic pulmonary embolism); and sepsis (body's life-threatening response to an infection) or infection. Other medical causes are a spectrum of underlying medical conditions including epilepsy, diabetes, liver diseases, respiratory conditions, lupus and other autoimmune conditions, among others. Anesthesia complications, cerebrovascular accident, other medical causes and undetermined causes of death are not shown on the dashboards but are available in the downloadable data table.

Community conditions: Community conditions are measured using the [California Healthy Places Index \(HPI\)](#). Higher HPI percentiles indicate healthier community conditions relative to other California census tracts. The highest quarter of percentiles indicates the most healthy community conditions, and the lowest quarter of percentiles indicates the least healthy community conditions. Excludes records with unknown HPI percentiles.

Education: Highest level of education attained by the mother/parent giving birth at time of delivery. High school graduate includes GED; some college includes college credit either without a degree or with an associate's degree; and college graduate includes bachelor's degree or higher. Excludes records with unknown education level.

Geography: The state or region of maternal residence at time of delivery, excludes unknown geography information. Regions are defined as follows (see map on last page):

- North and Mid-Coastal Region: Alameda, Contra Costa, Del Norte, Humboldt, Lake, Marin, Mendocino, Monterey, Napa, San Benito, San Francisco, San Luis Obispo, San Mateo, Santa Clara, Santa Cruz and Sonoma counties
- Northeastern and Northern Central Valley Region: Alpine, Amador, Butte, Calaveras, Colusa, El Dorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Sierra, Siskiyou, Solano, Sutter, Tehama, Trinity, Yolo and Yuba counties
- Southern Central Valley Region: Fresno, Kern, Kings, Madera, Mariposa, Merced, Stanislaus, Tulare and Tuolumne counties
- Los Angeles - Santa Barbara - Ventura Region: Los Angeles, Santa Barbara and Ventura counties
- Southern Inland Region: Inyo, Mono, Riverside and San Bernardino counties
- Orange - San Diego - Imperial Region: Imperial, Orange and San Diego counties

Health insurance: Expected principal source of payment for delivery. Expected principal source of payment for prenatal care and/or type of coverage from hospital encounters is substituted when expected principal source of payment for delivery is missing, unknown, or medically unattended. Medi-Cal includes Medi-Cal, with or without CPSP services; private includes private insurance company; other government includes Medicare, Title V, Indian Health Service, CHAMPUS/TRICARE, county indigent program, worker's compensation, other government, disability, Health Maintenance Organization Medicare Risk, other federal program, Veterans Affairs plan; and self-pay/uninsured includes self-pay, medically indigent, other indigent, other payer, other non-federal programs. Excludes records with no prenatal care, other or unknown payment source and medically unattended deliveries.

Nativity: Birthplace of mother/parent giving birth. Born outside U.S. includes U.S. territories, Canadian provinces and foreign countries. Excludes records with unknown birthplace.

Prepregnancy BMI: Body Mass Index (BMI) was calculated from self-reported weight and height, classified as underweight/normal weight (<25), overweight (25–29.9), obese I/II (30–39.9), or obese III (≥40). BMI should not be used as the sole criterion for making health recommendations. It is a screening tool as part of an assessment for determining weight classifications. BMI may overestimate or underestimate body fatness in some individuals because it does not take into consideration an individual's muscle or bone mass. Excludes records with unknown BMI.

Race/ethnicity: Hispanic includes all persons of Hispanic origin of any race, including Other and Unknown race. Multi-Race includes those of non-Hispanic origin who reported more than one race. The remaining groups are of non-Hispanic origin who reported a single race: American Indian or Alaska Native (AIAN), Asian, Black, Native Hawaiian or Other Pacific Islander (Pacific

Islander), White, Other or Unknown. Other and Unknown race are not shown on the dashboards but are available in the downloadable data table.

Timing to death: Timing to death was calculated as days between end of the pregnancy and death, classified as pregnant (< 20 weeks gestation), pregnant (\geq 20 weeks gestation), day of delivery, 0–6 days, 7–42 days or 43–365 days.

Suggested Citation

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go.cdph.ca.gov/Pregnancy-Related-Mortality-Dashboard