

2024 Births

Santa Cruz County











Table of Contents

| Introduction | 3 |
|---|----|
| Executive Summary | 4 |
| Definitions and Technical Notes | |
| Data and Trends | 9 |
| Overall County Demographics | 9 |
| Demographics of Birthing People | 11 |
| Births by Delivery Location | 16 |
| Delivery Trends Among Residents | 19 |
| Key Health Measures (prenatal care, birthweight, preterm) | 22 |
| Birthing Person's Weight Gain | 28 |
| Birth Attendants | 31 |
| Mental Health | 32 |
| Neonatal Abstinence Syndrome | 34 |
| Significance Spotlight | |
| Community Efforts | 41 |
| Key Takeaways | 42 |
| Sources and References | 43 |

Introduction





The birth report provides data on live births delivered in 2024 and reveals trends in age-specific birth rates, cesarean section deliveries, delivery locations, prenatal care access, gestational diabetes and hypertension, maternal mental health, prenatal substance use, along with other data that provides valuable insights for equitable health planning and resource prioritization. The report was created by the Population Health and Children and Family Health Branches, in the Public Health Division of the Santa Cruz County Health Services Agency.

For more information about the data and methodology from this report, contact the Population Health Team at <u>Population.Health@santacruzcountyca.gov</u>. For health-related services and locations throughout Santa Cruz County, visit <u>santacruzhealth.org</u>.

Land Acknowledgement: The land on which we refer to as "Santa Cruz County" is the unceded territory of the Awaswas-speaking Uypi Tribe. The Amah Mutsun <u>Tribal Band</u>, descends from indigenous people of the San Juan Bautista (Mutsun) and Santa Cruz (Awaswas) areas, who were forcibly taken to Missions Santa Cruz and San Juan Bautista during Spanish colonization. Despite enduring missionization, disease, land dispossession under Mexican and early American rule, and the illegal termination of federal recognition in 1927, the Tribe preserved its language, culture, and traditions. Today, the Amah Mutsun work to restore traditional stewardship practices, heal from historical trauma, and maintain cultural continuity. Through the Amah Mutsun Land Trust, established in 2013, the Tribe actively conserves and restores indigenous cultural and natural resources, combining traditional ecological knowledge with contemporary resource management. Their stewardship spans the Santa Cruz Mountains, coastal areas, and inland watersheds, ensuring healthy ecosystems, clean water, and sustainable wildlife populations. The Land Trust also fosters education, ceremony, and intergenerational knowledge transfer, reaffirming the Tribe's role as stewards of their ancestral lands. To learn more, please visit the <u>Amah Mutsun Land Trust</u>.

County Equity Statement: Equity in action in Santa Cruz County is a transformative process that embraces individuals of every status, providing unwavering support, dignity, and compassion. Through this commitment, the County ensures intentional opportunities and access, fostering an environment where everyone can thrive and belong.

Executive Summary





In 2024 Santa Cruz County saw fewer total births (2,512) than in 2022 (2,808). Of the 2,512 births within the county, 2,060 births were to residents and 463 were to non-residents. Births continued to be concentrated among people aged 30-34 (33% of all births, 89 births per 1,000 women), although the birth rate for this group has been falling and the 35-39 age group is rising. Hispanic/Latinx birthing people accounted for half of all deliveries and maintained the highest stable fertility rate. Multiple births showed markedly higher rates of low or very low birthweight and preterm delivery compared with singletons.

Maternal-health trends highlight a decade-long increase in gestational diabetes, which is most prevalent among Hispanic/Latinx birthing people, and a 2023 shift in which White birthing people now exceed Hispanic/Latinx birthing people in gestational hypertension. Perinatal mental-health indicators reveal growing prenatal and postpartum depression symptoms, especially among Hispanic/Latinx individuals, alongside rising anxiety disorders at delivery for Hispanic/Latinx and Asian/Pacific Islander groups. Neonatal Abstinence Syndrome (NAS), linked to prenatal opioid exposure, surged 87.5% county-wide since 2015, with recent increases in North County and declines elsewhere, underscoring the need for focused surveillance and intervention.

SantaCruzHealth.org





Suggested Citation: Santa Cruz County Health Services Agency, Public Health Division. Births, Santa Cruz County, 2024. Santa Cruz County, CA. November 2025

For the purposes of this report, the following terms are defined as shown below:

| Term | Meaning |
|----------------------|--|
| Residents | All birthing people who self-identify as residing in Santa Cruz County, regardless of where they delivered. A small number of birthing people identify as living in Santa Cruz County, but actually live in another county, usually Monterey. They are counted as Santa Cruz County residents, in accordance with the county shown on the birth certificate. |
| Occurrence | All birthing people who delivered in Santa Cruz County, regardless of where they reside. |
| Tri-County | Zip codes are located by county region either North, Mid, or South County. Zip codes with an asterisk do not have a population denominator designated by the US Census. North-county: 95005, 95006, 95007, 95017, 95018, 95033, 95041, 95060, *95061, *95063, 95064, 95065, 95066, *95067 Mid-county: *95001, 95003, 95010, 95062, 95073 South-county: 95019, 95076, *95077 |
| Low Birthweight | Between 1500 and 2500 grams. |
| Very Low Birthweight | Less than 1500 grams. |

| Term | Meaning |
|--------------------------------------|--|
| Race/Ethnicity | In this report, ethnicity categories combine the concepts of race and ethnicity, which are collected separately on the birth certificate. If a person is listed as Hispanic or Latino they are shown as Hispanic/Latinx. The remaining categories reflect a non-Latino ethnicity (e.g., "White" means non-Latino White). All categories are mutually exclusive. |
| Preterm | 32 to 36 weeks + 6 days completed gestation. |
| Very Preterm | Less than 31 weeks + 6 days completed gestation. |
| VBAC | Vaginal Birth after Cesarean. |
| General Fertility Rate | The number of live births per 1,000 women ages 15-44 (typical childbearing age). |
| Non-Hospital | Births that occurred at home, in-transit to a hospital, or a hospital or clinic in Santa Cruz County other than: Dominican, Sutter, or Watsonville. |
| Primary Childbearing Age | Females ages 15-44. |
| Ethnicity-specific Fertility Rate | Number of births per ethnicity divided by the female population (ages 15-44) per ethnicity. |

| Term | Meaning |
|----------------|---|
| Low-Risk Birth | A low-risk female is defined as nulliparous (never given birth before), full-term (at least 37 weeks of gestation, based on obstetric estimate of gestation at delivery), singleton (not a multiple) pregnancy, with a vertex fetus (head facing in a downward position in the birth canal). ¹ |

Technical notes:

- Data de-identification: Steps have been taken to address data security and confidentiality concerns, including suppressing all measures for "strata" or "cells" where the corresponding number of births is less than 11. Or for stratified data such as gender, age group, race and ethnicity, and educational attainment if one "cell" within a stratum is suppressed, at least one complementary "cell" is suppressed to avoid arithmetic back-calculation of the suppressed cell. These procedures ensure compliance with the California Health and Human Services Agency Data De-Identification Guidelines (DDG).²
- Significant difference: The term "significant difference," as used in this report,
 means there is a statistically significant difference, based on 95% confidence
 intervals (CI). This means, the probability is less than 5% that the difference
 was due to normal variation, assuming a normal distribution. Statistical
 significance tests do not necessarily imply meaningful significance. Where
 applicable, Kruskal-Wallis and Chi-Square tests were conducted to determine
 significance.
- Missing data and unstable rates: Missing data are not included in the denominators of proportions, but they are included in totals unless otherwise noted. As missing data increases, the rates become less reliable or unstable. Unstable estimates of numerators less than 20 or denominators of 100 or less are considered unstable and suppressed.²

Neonatal Abstinence Syndrome (NAS) Methodology: NAS cases in Santa Cruz County were identified using the <u>Santa Cruz Health Information Exchange</u> (<u>SCHIO</u>) and searching by two types of healthcare coding systems, SNOMED and ICD-10 diagnostic codes. After extracting NAS diagnoses, the statistical programming program R was used to link these records to birth certificates from the California Department of Public Health Vital Records.

Limitations: This birth report has data gaps related to Adverse Childhood Experiences, housing status and houselessness among families and birthing people, indications for cesarean delivery, whether a midwife was used but not designated as the primary birth attendant, child welfare involvement at birth (such as removals), and incomplete information on Sexual Orientation and Gender Identity and Expression (SOGIE).

Data and Trends





Overall County Demographics

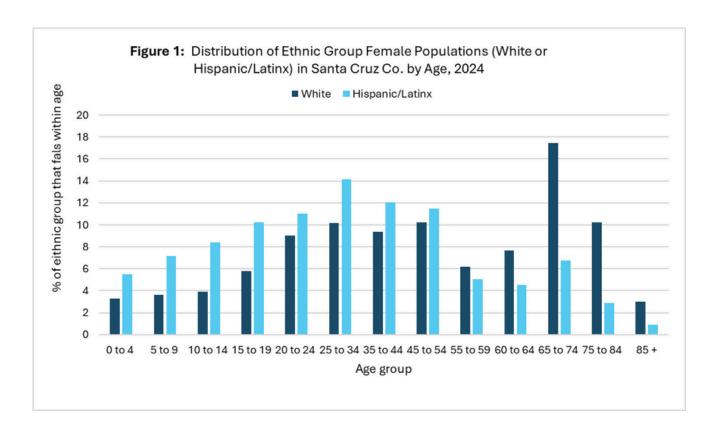
The California Department of Finance projected the total population in Santa Cruz County to be 267,317 in 2024.³ Females (50%) between 20 to 44 years old (33%) who identify as White (56%) make up most of the population. Over 90% of the county's population is either White (56%) or Hispanic/Latinx (35%) (Table 1).

The age distribution of the White population is older than the Hispanic/Latinx population. The proportion of the White population over age 60 is 57%, compared to just 13% of the Hispanic/Latinx population (Figure 1).

| Table 1: Demographics, Santa Cruz Count | y Residents | , 2024 |
|---|-------------|---------|
| | Number | Percent |
| GENDER | | |
| Female | 133955 | 50.1 |
| Male | 133362 | 49.9 |
| AGE (Years) | | |
| 4 and Under | 11291 | 4.2 |
| 5 – 19 | 48953 | 18.3 |
| 20 - 44 | 87706 | 32.8 |
| 45 - 64 | 59879 | 22.4 |
| 65 and Over | 59488 | 22.3 |
| RACE/ETHNICITY | | |
| American Indian or Alaska Native | 1068 | 0.4 |
| Asian | 12236 | 4.6 |
| Black or African American | 2692 | 1.0 |
| Hispanic/Latinx | 92097 | 34.4 |
| Multiple Races | 8238 | 3.1 |
| Native Hawaiian or Other Pacific Islander | 330 | 0.1 |
| White | 150656 | 56.4 |
| TOTAL | 267317 | 100.0 |

SantaCruzHealth.org

Overall County Demographics



AGE OF BIRTHING PERSON

Birthing people aged 19 and under mostly identify as Hispanic/Latinx (87%), live in South County (76%), initiate prenatal care early (57%), have vaginal deliveries (86%), and use Medi-Cal (90%). In contrast, those who are 35 and older identify as White (53%), reside throughout the county, begin prenatal care early at a higher percent (91%), have vaginal deliveries less frequently (62%), and use private insurance (67%) (Table 2).

Table 2: Demographics of Birthing People by Key Variables, Santa Cruz County Residents 2024

| | T . | | | | | | | |
|--|--------------|---------|-----------|---------|------------|---------|--------|---------|
| | 19 and Under | | 20- | 24 | 25-34 | | 35 an | d Over |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| RACE/ETHNICITY ¹ | | | | | | | | |
| American Native & Pac. Islander | - | - | - | - | - | - | - | - |
| Asian | 0 | 0% | 0 | 0% | 47 | 4% | 44 | 6% |
| Black or African American | - | - | - | - | - | - | - | - |
| Hispanic or Latinx | 55 | 87% | 185 | 89% | 569 | 52% | 229 | 33% |
| Two or More Races | - | - | - | - | - | - | - | - |
| Unknown | - | - | - | - | - | - | - | - |
| White | - | - | 17 | 8% | 408 | 37% | 364 | 53% |
| AREA OF RESIDENCE | | | | | | | | |
| North-county | - | - | 38 | 18% | 349 | 32% | 270 | 39% |
| Mid-county | - | - | 19 | 9% | 253 | 23% | 207 | 30% |
| South-county | 48 | 76% | 152 | 72% | 494 | 45% | 215 | 31% |
| PARITY ¹ | | | | | | | | |
| 1st Child | 58 | 92% | 129 | 61% | 457 | 42% | 213 | 31% |
| 2nd - 3rd Child | - | - | 74 | 35% | 532 | 48% | 376 | 54% |
| 4th + Child | - | - | - | - | 106 | 10% | 101 | 15% |
| PRENATAL CARE: INITIATION1 | | | | | | | | |
| Early (1st Trimester) | 36 | 57% | 179 | 87% | 947 | 89% | 604 | 91% |
| Late (2nd or 3rd Trimester) | 24 | 38% | 25 | 12% | 119 | 11% | 58 | 9% |
| PRENATAL CARE: UTILIZATION ¹ | | 0070 | 20 | 1270 | | 1170 | 00 | 0.0 |
| | 14 | 00% | 27 | 100/ | 004 | 010/ | 140 | 0.00/ |
| Fewer Than 10 Visits | 14 48 | 22% | 37 170 | 18% | 234 854 | 21% | 146 | 22% |
| At least 10 Visits | 40 | 76% | 170 | 82% | 004 | 78% | 531 | 78% |
| BIRTH OUTCOMES: WEIGHT ² | | | | | | | | |
| Low Birthweight | - | - | - | - | 45 | 4% | 51 | 7% |
| Normal Birthweight | 57 | 90% | 195 | 93% | 1042 | 95% | 639 | 92% |
| Very Low Birthweight | - | | - | - | - | - | - | - |
| BIRTH OUTCOMES: GESTATIONAL AGE ² | | | | | | | | |
| Normal Gestation | 57 | 90% | 187 | 89% | 1024 | 93% | 632 | 91% |
| Preterm | - | - | 18 | 9% | 59 | 5% | 57 | 8% |
| Very Preterm | - | - | - | - | 13 | 1% | - | - |
| DELIVERY METHOD | | | | | | | | |
| Primary Cesarean | - | - | 29 | 14% | 175 | 16% | 132 | 19% |
| Repeat Cesarean | 0 | 0% | 11 | 5% | 122 | 11% | 112 | 16% |
| Vaginal | 54 | 86% | 166 | 79% | 762 | 70% | 431 | 62% |
| VBAC | - | - | - | - | 37 | 3% | 17 | 2% |
| PAYMENT FOR DELIVERY ¹ | | | | | | | | |
| Medi-Cal | 57 | 90% | 169 | 81% | 462 | 43% | 193 | 28% |
| No Insurance | - | - | - | - | 35 | 3% | 26 | 4% |
| Other Insurance | - | - | - | - | 12 | 1% | - | - |
| Private Insurance | - | - | 36 | 17% | 578 | 53% | 458 | 67% |
| | | | | | | | | |

⁻ groups with fewer than 11 cases are suppressed for confidentiality, in accordance with CDPH de-identification guidelines 1 percentages are out of known data for each column

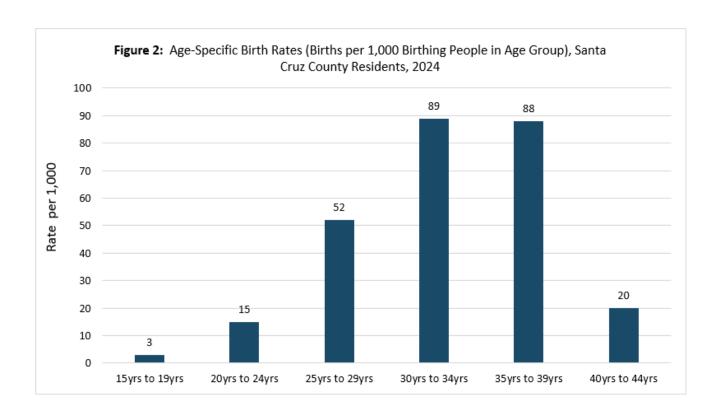
² Outcomes are among all births and do not exclude multiple births.

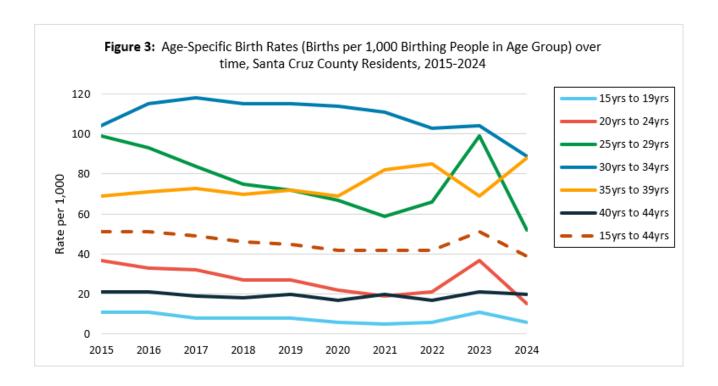
Birthing people between 30 to 34 had the highest proportion of births (Table 3 & Figure 2). They also had the highest age-specific birth rate (the number of births per population in a specific age category), 89 births per 1,000 women (Table 3). While the number and the birth rates in the 30 to 34 continue to remain the highest, the 35 to 39 age group has been increasing. The 20 to 24 and 25 to 29 age group rates increased in 2023 but dropped back down in 2024 (Figure 3).

| Table 3: | Births by Birthing Person's Age Group and Age-Specific Birth Rates per 1,000 Females, | |
|----------|---|--|
| Santa Cr | uz County Residents, 2024 | |

| Birthing Parent Age Group | Number of Births | Percent of Births | Total Female Population (per age group) | Birth Rate per 1,000 | 95% Confidence Intervals |
|------------------------------------|------------------------|-------------------------|---|-------------------------------|--------------------------------|
| 15-19 | 62 | 3% | 17726 | 3 | (2,13) |
| 20-24 | 209 | 10% | 13757 | 15 | (8,25) |
| 25-29 | 407 | 20% | 7864 | 52 | (39,68) |
| 30-34 | 689 | 34% | 7744 | 89 | (71,110) |
| 35-39 | 544 | 27% | 6172 | 88 | (71,108) |
| 40-44 | 139 | 7% | 7117 | 20 | (12,31) |
| TOTAL ¹ | 2,050 | 100% | 53263 | 38 | (24,48) |

¹Rates are age-specific and use the general fertility rate.





RACE/ETHNICITY OF BIRTHING PERSON

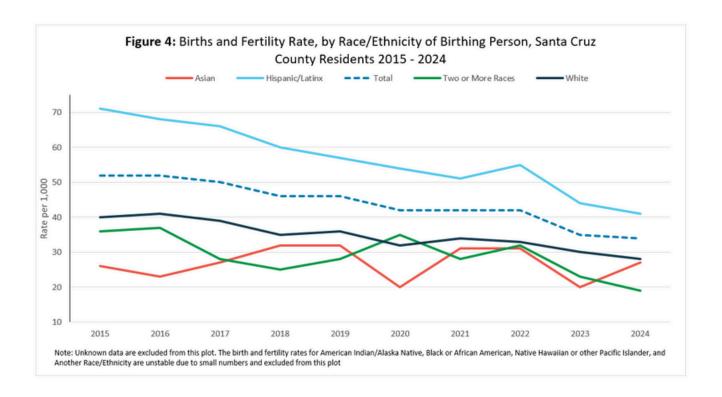
Among the "primary childbearing age" population in Santa Cruz County, approximately 42% are Hispanic/Latinx and 47% are White. However, Hispanic/Latinx birthing people delivered 51% of the babies in 2024, while White birthing people delivered 39% of the babies (Table 4; Figure 4).

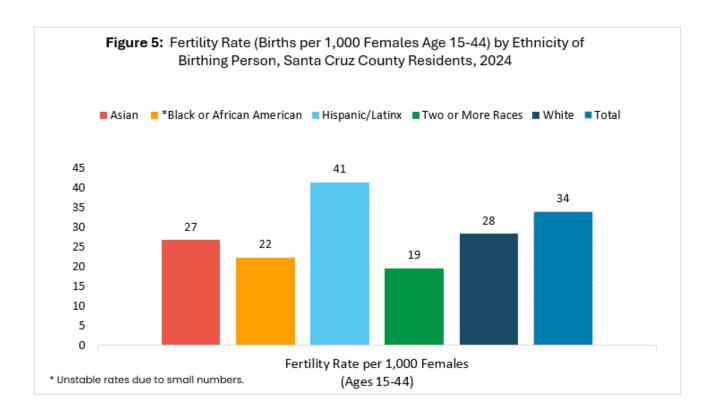
Table 4: Births and Fertility Rate, by Race/Ethnicity of Birthing Person, Santa Cruz County Residents, 2024

| Race/ethnicity of birthing parent | Number of Births | Percent of Births | Total Female Population | Fertility Rate per 1,000 Females | 95% Confidence Intervals |
|--|---------------------|----------------------|-------------------------------|--|--------------------------------|
| American Indian or Alaska Native | - | - | 215 | _ | _ |
| Asian | 91 | 4.4% | 3,418 | 27 | (18,39) |
| *Black or African American | 14 | 0.7% | 629 | 22 | (14,33) |
| Hispanic/Latinx | 1,038 | 50.6% | 25,136 | 41 | (29,56) |
| Native Hawaiian and Other Pacific Islander | - | - | 45 | - | - |
| Two or More Races | 56 | 2.7% | 2,877 | 19 | (11,30) |
| Unknown | 56 | 2.7% | N/A | - | - |
| White | 795 | 38.8% | 28,186 | 28 | (19,40) |
| Total | 2,050 | 100% | 60,506 | 34 | (24,48) |

Groups with fewer than 11 cases are suppressed for confidentiality, in accordance with CDPH deidentification guidelines

^{*} Unstable rates due to small numbers.





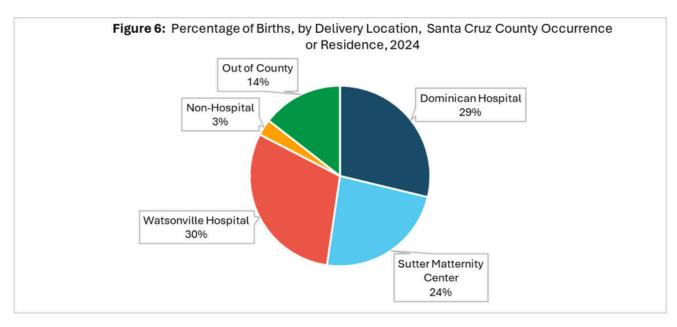
Births by Delivery Location

| | DELIVERY LOCATION | | | | | | | |
|---|-------------------|---------------------|-----------------|-------------------|---------------|--|--|--|
| | Dominican | Sutter | Watsonville | Non-Hospital | Out of County | | | |
| GE OF BIRTHING PERSON (YEARS) | Johnnoull | Jutter | TT GEOGRAFIE | .ton nospitul | out of county | | | |
| 19 and under | 19 (2.6%) | - | 56 (7.3%) | - | - | | | |
| 20 - 24 | 91 (12.5%) | 30 (5.1%) | 147 (19.2%) | _ | 13 (3.6%) | | | |
| 25 - 34 | 389 (53.6%) | 1 7 | 406 (53.1%) | 41 (55.4%) | 197 (54.0%) | | | |
| 35 and over | 227 (31.3%) | 229 (38.6%) | 155 (20.3%) | 28 (37.8%) | 154 (42.2%) | | | |
| ACE/ETHNICITY OF BIRTHING PERSON ³ | 227 (01.0%) | 220 (00.0%) | 100 (20.0%) | 20 (07.0%) | 104 (42.270) | | | |
| American Indian or Alaska Native | _ | _ | _ | _ | _ | | | |
| Asian | 25 (3.4%) | 29 (4.9%) | _ | _ | 35 (9.6%) | | | |
| Black or African American | 20 (0.4%) | 20 (4.5%) | _ | _ | | | | |
| Hispanic or Latinx | 405 (55.8%) | 213 (35.9%) | 684 (89.5%) | _ | 94 (25.8%) | | | |
| Native Hawaiian and Other Pacific Islander | - (55.6%) | 210 (00.0%) | - (05.5%) | _ | 54 (25.5%) | | | |
| Two or More Races | 18 (2.5%) | 26 (4.4%) | _ | _ | 14 (3.8%) | | | |
| Unknown | 10 (2.5%) | 27 (4.6%) | _ | _ | 26 (7.1%) | | | |
| White | 863 (34.2%) | 296 (49.8%) | 64 (8.4%) | 51 (68.9%) | 190 (52.1%) | | | |
| | 603 (34.2%) | 296 (49.6%) | 04 (0.4%) | 51 (06.9%) | 190 (52.1%) | | | |
| DUCATION OF BIRTHING PERSON ^{2,3} | 269 (37.1%) | 412 (69.4%) | 104 (13.6%) | 42 (56.8%) | 245 (67.1%) | | | |
| College Degree High School Diploma/GED/or some colleg | | 151 (25.4%) | 298 (39.0%) | 17 (23.0%) | 77 (21.1%) | | | |
| Less than High School Diploma | 24 (3.3%) | 14 (2.4%) | 362 (47.4%) | 17 (23.0%) | // (21.1%) | | | |
| | | | | 14 (10 00) | 33 (9.0%) | | | |
| Unknown | 142 (19.6%) | 17 (2.9%) | 0 (0.0%) | 14 (18.9%) | 33 (9.0%) | | | |
| RENATAL CARE: INITIATION | 0 1 = (00 0 t) | = 00 (0 + 0+) | 5 +5 (5+ co) | 10 (5 111) | 222 (22 44) | | | |
| 1st Trimester | 645 (88.8%) | | 547 (71.6%) | 40 (54.1%) | 330 (90.4%) | | | |
| 2nd or 3rd Trimester | 48 (6.6%) | 15 (2.5%) | 215 (28.1%) | 18 (24.3%) | 28 (7.7%) | | | |
| None | - | - (2.20) | - () | - | - () | | | |
| Unknown | 30 (4.1%) | 17 (2.9%) | 0 (0.0%) | 14 (18.9%) | 5 (1.4%) | | | |
| RENATAL CARE: UTILIZATION | () | () | | () | (| | | |
| Fewer than 10 | 78 (10.7%) | 123 (20.7%) | 151 (19.8%) | 27 (36.5 %) | 139 (38.1%) | | | |
| Greater or equal to 10 | 627 (86.4%) | 464 (78.1%) | 613 (80.2%) | 46 (62.2%) | 225 (61.6%) | | | |
| Unknown | 21 (2.9%) | 7 (1.2%) | - | - | - | | | |
| SIRTH OUTCOMES: WEIGHT ⁴ | | | | | | | | |
| Low Birthweight | 60 (8.3%) | - | 45 (5.9%) | - | 26 (7.1%) | | | |
| Normal | 664 (91.5%) | 591 (99.5%) | 718 (94.0%) | 72 (97.3%) | 326 (89.3%) | | | |
| Very Low Birthweight | - | - | - | - | 13 (3.6%) | | | |
| SIRTH OUTCOMES: GESTATION AGE 4 | | | | | | | | |
| Normal | | 587 (98.8%) | 714 (93.5%) | 74 (100%) | 320 (87.7%) | | | |
| Preterm | 78 (10.7%) | - | 47 (6.1%) | - | 32 (8.8%) | | | |
| Very Preterm | - | - | - | - | 13 (3.6%) | | | |
| DELIVERY METHOD | | | | | | | | |
| Primary Cesarean | 122 (16.8%) | 107 (18.0%) | 111 (14.5%) | - | 85 (23.3%) | | | |
| Repeat Cesarean | 110 (15.2%) | 55 (9.3%) | 104 (13.6%) | - | 37 (10.1%) | | | |
| Vaginal | 462 (63.6%) | 432 (72.7%) | 510 (66.8%) | 73 (98.6%) | 237 (64.9%) | | | |
| VBAC | 32 (4.4%) | - | 39 (5.1%) | - | - | | | |
| AYMENT FOR DELIVERY | | | | | | | | |
| Medi-Cal | 375 (51.7%) | 110 (18.5%) | 632 (82.7%) | - | 38 (10.4%) | | | |
| No Insurance | - | - | - | 57 (77.0%) | - | | | |
| Other | - | - | - | - | 18 (4.9%) | | | |
| Private Insurance | 338 (46.6%) | 476 (80.1%) | 126 (16.5%) | 11 (14.9%) | 296 (81.1%) | | | |
| Unknown | - | - | - | - | 11 (3.0%) | | | |
| Groups with fewer than 11 cases are suppress | ed for confiden | itiality, in accord | dance with CDPH | de-identification | 1 1 | | | |
| All ages have been included to describe the e | | | | | g-100111100 | | | |
| 3 | | | | | rs to compare | | | |

Births by Delivery Location

Table 6 provides more details about where Santa Cruz County residents and non-residents deliver. The three leading locations of delivery remained consistent as Dominican Hospital, Watsonville Hospital, and Sutter Maternity Center. Since 2018, the percentage of births by delivery location saw an increase of births at Dominican Hospital and decrease at Sutter Maternity Center. Watsonville Hospital leads with 31% of births in 2022 and 30% of births in 2018; Dominican Hospital follows with 30% of births in 2022, while only having 27% of births in 2018; Sutter Maternity Center shows a decrease of 25% of births in 2022 and 31% of births in 2018. The changes in births by delivery location from 2018 to 2022 were statistically significant at Sutter Maternity Center (p<0.01), but were not at Dominican (p=0.1) and Watsonville Hospitals (p=0.9).

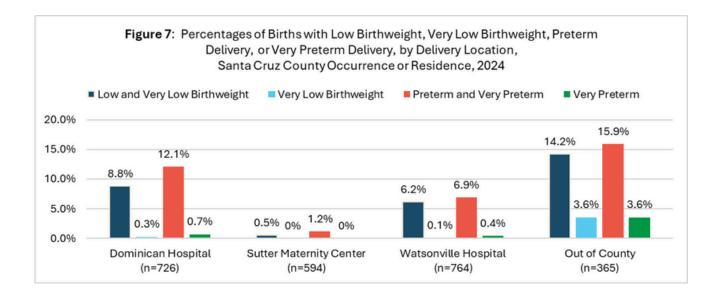
| | | DELIVERY LOCATION | | | | | | | | |
|--------------------|--------|-------------------|--------|---------|------------------|---------|--------|---------|---------------|---------|
| | Domi | nican | Sut | ter | Watsonville Non- | | Non-H | ospital | Out of County | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| AREA OF RESIDENCE | | | | | | | | | | |
| Mid-County | 176 | 25% | 173 | 29% | 27 | 4% | 24 | 41% | 85 | 24% |
| North-County | 212 | 30% | 214 | 36% | 22 | 3% | 34 | 59% | 184 | 52% |
| South-County | 248 | 35% | 113 | 19% | 466 | 62% | - | - | 72 | 20% |
| MONTEREY COUNTY | 50 | 7% | 65 | 11% | 215 | 29% | - | - | - | - |
| SAN BENITO COUNTY | 12 | 2% | 12 | 2% | 18 | 2% | 0 | 0% | 0 | 0% |
| SANTA CLARA COUNTY | - | - | - | - | - | - | - | - | 13 | 4% |
| OTHER CA COUNTIES | 20 | 3% | 11 | 2% | - | - | - | - | - | - |
| OUT OF STATE | - | - | - | - | - | - | - | - | - | - |
| TOTAL | 718 | 29% | 588 | 23% | 748 | 30% | 58 | 2% | 354 | 14% |



Births by Delivery Location

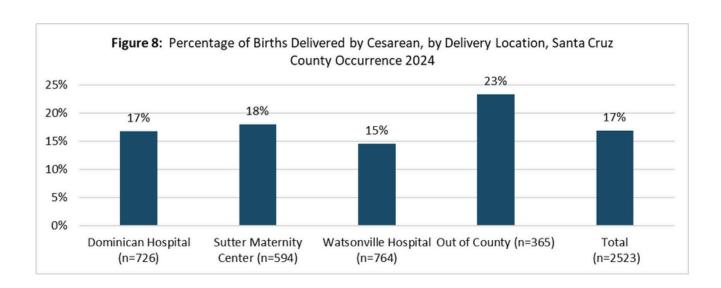
BY BIRTHWEIGHT AND PRETERM STATUS

Figure 7 shows most of babies who were delivered low birthweight and preterm by delivery location in 2024 occurred out of the county followed by Dominican hospital.



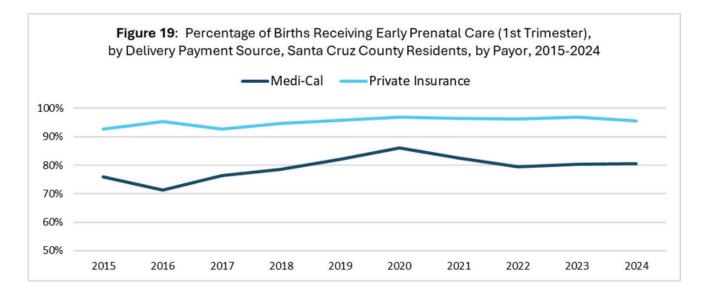
CESAREAN BIRTHS

Figure 8 shows the percentage of cesarean births that occurred in Santa Cruz hospitals and residents who delivered out of county in 2024. The percentage of births delivered by cesarean section increased from 16% in 2022, to 17% in 2024. The difference in cesarean births from 2018 to 2022 was not statistically significant (p=0.9)



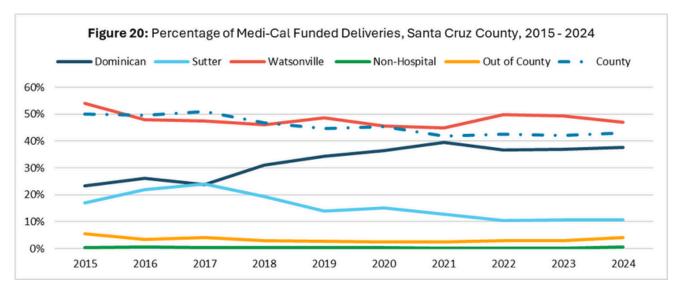
Delivery Trends Among Residents

Figure 19 compares early prenatal care for deliveries paid by Medi-Cal versus those paid by private insurance. Births with private insurance have had a consistently higher percentage of receiving early prenatal care than births with Medi-Cal.



MEDI-CAL FUNDED DELIVERIES

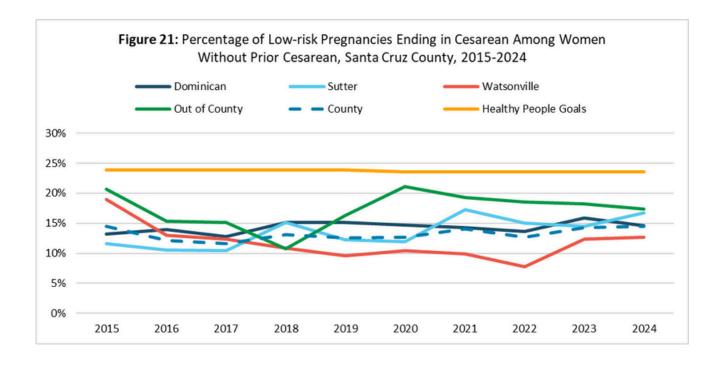
Figure 20 shows the trend in the percentage of deliveries funded by Medi-Cal at each facility. In 2024, 43% of Santa Cruz County residents' deliveries were funded by Medi-Cal, continuing the decreasing trend since the peak in 2017 (51%). Sutter experienced the biggest reduction in Medi-Cal funded deliveries from 24% in 2017 to 19% in 2018, and now at 11% in 2024. Dominican has experienced an increase in Medi-Cal funded deliveries from 23% in 2015 to peaking in 2020 at 40%, and now at 38% in 2024.



Delivery Trends Among Residents

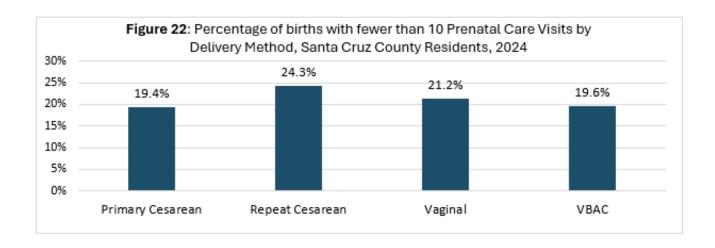
LOW-RISK PRIMARY CESAREAN RATES

While nationwide averages for cesarean births are 25.9% Santa Cruz County consistently falls below this at 15%. Figure 21 shows the trend for cesarean deliveries among low-risk births at each facility over time.



DELIVERY METHOD WITH FEWER THAN 10 PRENATAL VISITS

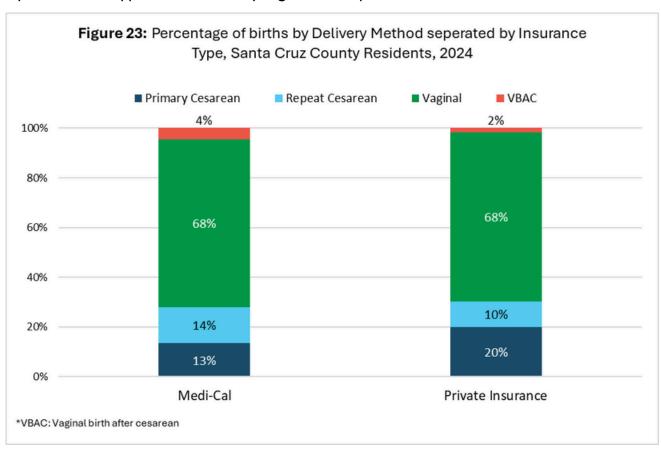
Figure 22 shows the percentage of Santa Cruz County residents who had fewer than 10 prenatal care visits by delivery method. Those who had a repeat cesarean had the highest percentage of having fewer than 10 prenatal care visits at 24.3%.



Delivery Trends Among Residents

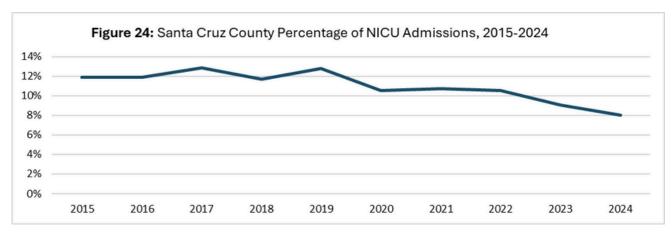
DELIVERY METHOD BY INSURANCE TYPE

Figure 23 shows the percentage of births by delivery method separated by insurance type. Residents who had private insurance had a higher percentage of primary cesareans (20%) compared to those who used Medi-Cal (13%), while those who used Medi-Cal had a higher percentage of a repeat cesarean (14%) than those who used private insurance (10%). The difference in delivery method by insurance type is statistically significant (p<0.01).



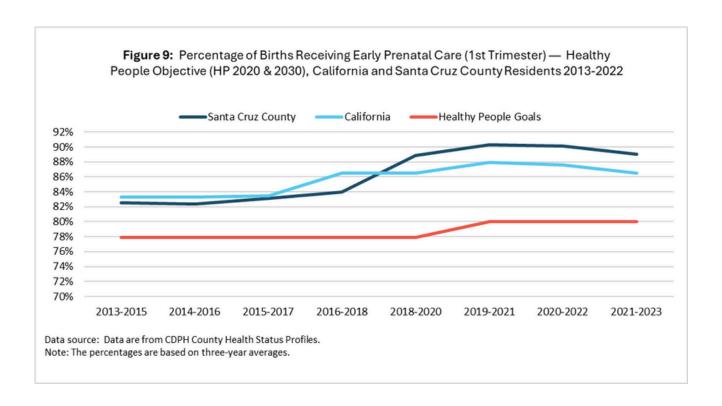
NICU TRENDS

Figure 24 shows the trend in the percentage of NICU admissions in Santa Cruz County from 2015-2024. This percentage has been decreasing since 2019.



EARLY PRENATAL CARE

As seen in Figure 9, the percentage of birthing people who received early prenatal care has stayed around 90% since 2019 (Figure 16).

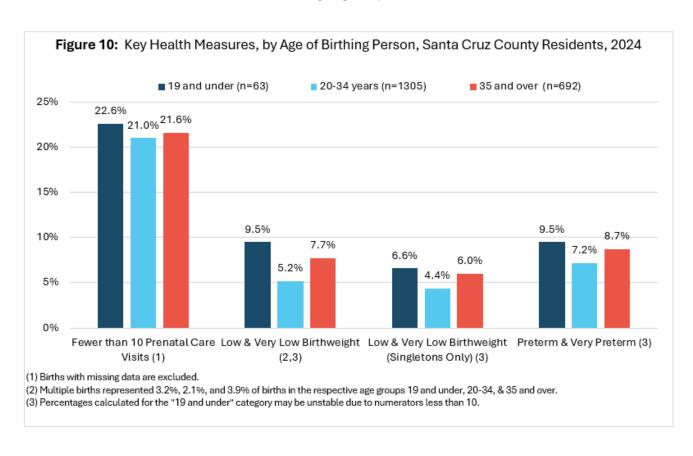


MULTIPLE BIRTHS

Multiple births have significantly higher percentages of low or very low birthweight and preterm births compared to single births (p<.001). In 2024, there were 57 multiple births, and 27 (47%) were low or very low birthweight. There was a significant difference in the proportion of multiple births between birthing people 20 to 34 years old and birthing people over 35 (p=0.02).

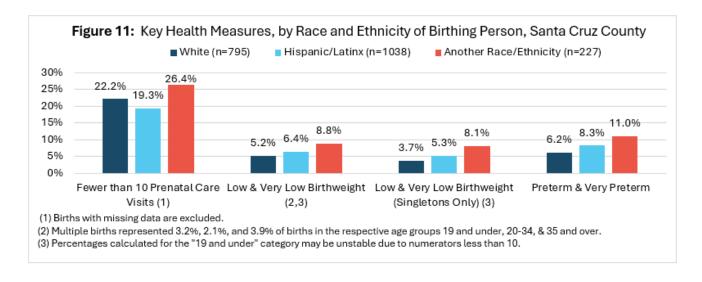
KEY HEALTH MEASURES BY AGE OF BIRTHING PERSON

Countywide, the number of birthing people receiving fewer than 10 prenatal care visits continues to decrease. Birthing people under 19 had slightly fewer prenatal care visits (22.6%), higher percentages of low & very low birthweight (9.5% and 6.6%), and more preterm & very preterm births (9.5%) compared to older parents (Figure 6). The percentage of this age group receiving fewer than 10 prenatal visits decreased from 35.2% in 2022 to 22.6 % in 2024. Out of all births in 2024 3.1% (63) were to birthing people 19 and under (Figure 10). This decreased compared to 2022, with 73 births in the same age group.



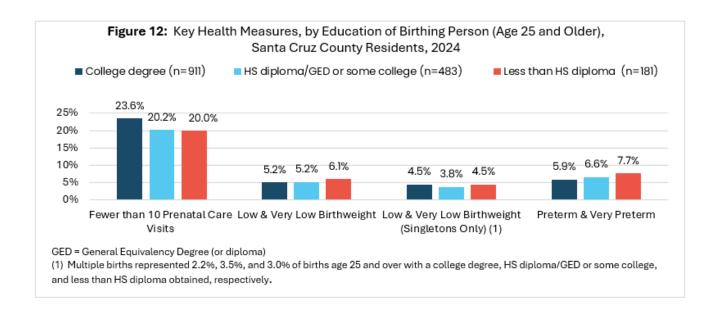
KEY HEALTH MEASURES BY RACE/ETHNICITY OF BIRTHING PERSON

Birthing people who identified as another race/ethnicity had fewer prenatal care visits (26.4%), higher percents of low & very low birthweight (8.8% and 8.1%), and more preterm & very preterm births (11%) compared to Hispanic/Latinx or White parents (Figure 11). The number of Hispanic/Latinx birthing people receiving fewer than 10 prenatal care visits has decreased from 23.7% in 2022 to 19.3% in 2024 (Figure 11) and the gap in prenatal care visits, birthweight, and preterm birth between Hispanic/Latinx and White birthing people were all not statistically significantly different (p=0.13). Hispanic/Latinx birthing people had higher rates of low and very low birthweight and preterm and very preterm births compared to White birthing people, though these percentages were not found to be significantly different by race/ethnicity (p=0.24 and p=0.09 respectively).



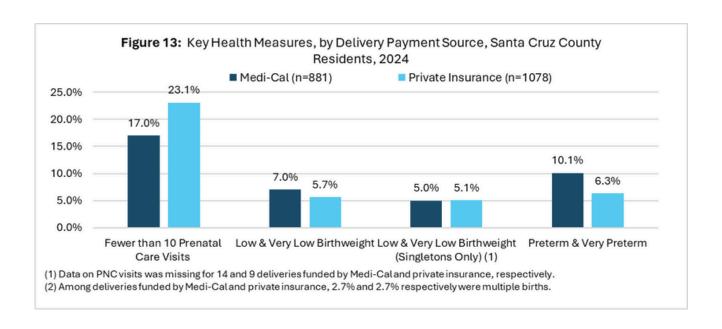
KEY HEALTH MEASURES BY EDUCATION OF BIRTHING PERSON

Birthing people 25 and older who had a college degree had fewer prenatal care visits (23.6%) than those without a degree, though this difference was not statistically significant (p=.24) (Figure12). Low and very low birthweight as well as preterm and very preterm births also did not differ significantly across education levels among birthing people with multiple or singleton births (p=0.88, p=1.0, p=0.63 respectively).



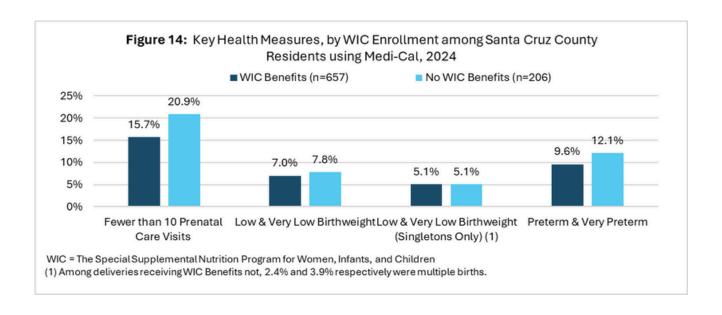
KEY HEALTH MEASURES BY PAYMENT SOURCE

Birthing people who used private insurance at the time of delivery had fewer prenatal care visits (23.1%) than those that used Medi–Cal insurance (17%), a gap that has grown since 2022 (22.4% and 25.6% respectively) and is now significantly different (p=0.008). Similarly, the rate of preterm and very preterm births was significantly different between Medi–Cal funded deliveries and deliveries with private insurance (p=0.002). However, the rate of low and very low birthweights was not significantly different between Medi–Cal funded deliveries and deliveries with private insurance (p=0.08).



KEY HEALTH MEASURES BY WIC ENROLLMENT

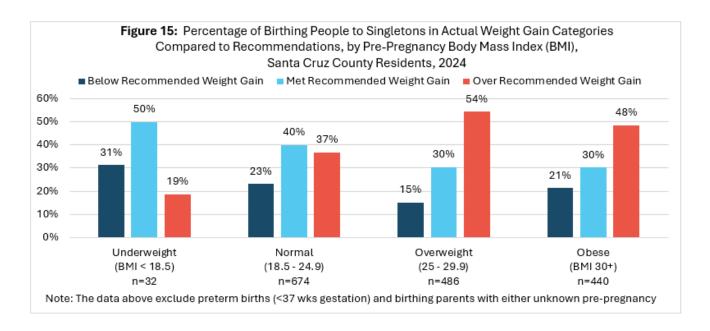
In California in 2024, Medi-Cal users qualified for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Figure 14 shows birthing people who did not use WIC benefits had fewer prenatal care visits (15.7%) compared to those receiving WIC benefits (20.9%) but not significantly different (p=0.08). Similarly, the percentage of preterm births was higher among Medi-Cal users not receiving WIC benefits, but this is not significantly different (p=0.48).



Birthing Person's Weight Gain

WEIGHT GAIN BY RECOMMENDATIONS

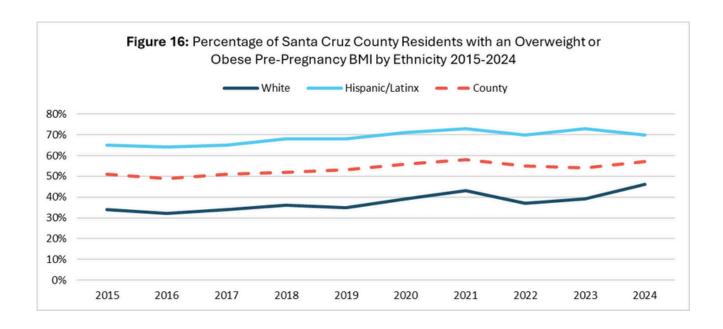
In 2024, 45% of birthing people who carried to term gained more weight than recommended during their pregnancy by the American College of Obstetricians and Gynecologists, compared to 42% in 2022. A higher proportion of birthing people whose pre-pregnancy BMI was categorized as overweight or obese exceeded the weight gain recommendation compared to birthing people with normal or underweight BMI levels (Figure 15). In 2024, 57% of all birthing people began pregnancy as overweight or obese.



Birthing Person's Weight Gain

PRE-PREGNANCY BMI

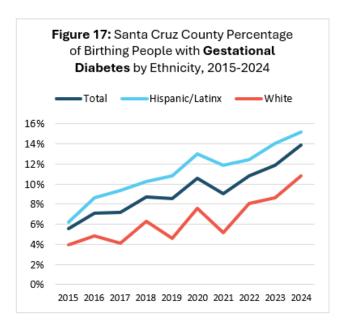
The percentage of birthing people beginning pre-pregnancy as overweight or obese has been slightly increasing since 2015. These percentages are higher among Hispanic/Latinx birthing people compared to White. In 2024, 70% of Hispanic/Latinx birthing people were overweight or obese compared to 46% of White birthing people (Figure 16). In 2024, 70% of Hispanic/Latinx birthing people were overweight or obese compared to 46% of White birthing people which is statistically significant (p<0.01) (Figure 16).

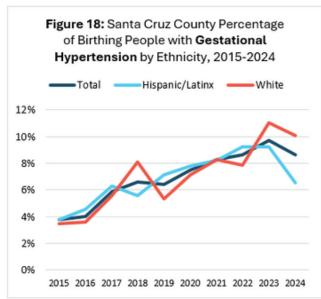


Birthing Person's Weight Gain

GESTATIONAL DIABETES and HYPERTENSION

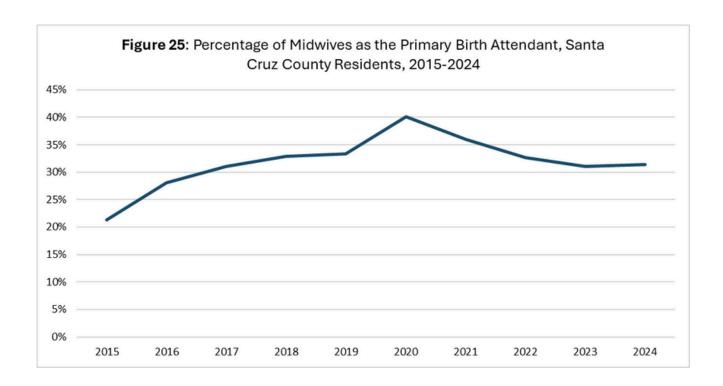
Figures 17 and 18 show the trends in the percentage of gestational diabetes and hypertension by ethnicity in Santa Cruz County from 2015–2024. The percentage of gestational diabetes has been increasing since 2021 and the percentage has been highest among Hispanic/Latinx birthing people. The percentage of gestational hypertension increased in 2023 but decreased in 2024. The percentage of White birthing people with gestational hypertension surpassed Hispanic/Latinx birthing people in 2023.





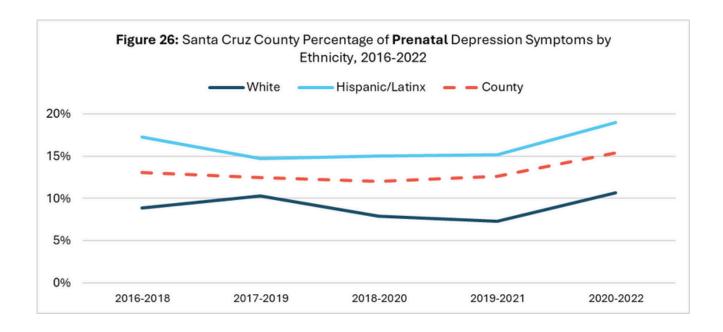
Birth Attendants

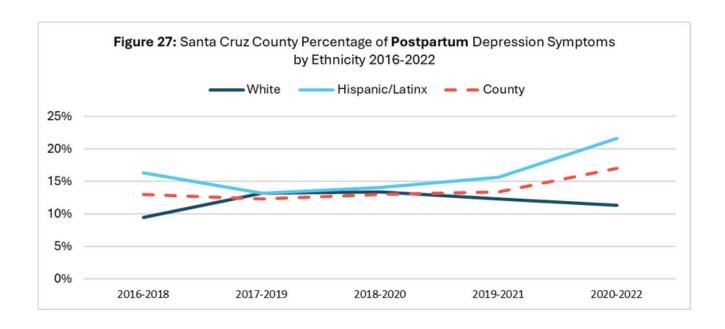
Figure 25 shows the trend in the percentage of births with a primary attendant as a midwife. In 2024, 31.4% of births in Santa Cruz County had a midwife as their primary attendant. The percentage increased slightly for the first time since 2020, when the percentage of births with a primary attendant as a midwife in Santa Cruz County was highest at 40.1%.



Mental Health

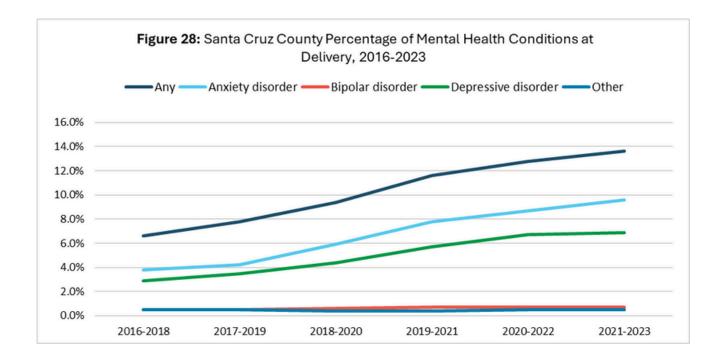
Figures 26 and 27 show the percentage of prenatal and postpartum depression symptoms by ethnicity in Santa Cruz County from 2016–2022. Prenatal depression symptoms are increasing, with the highest percentages are among Hispanic/Latinx individuals. Postpartum depression symptoms have also increased among the Hispanic/Latinx population but have slightly decreased among White individuals.

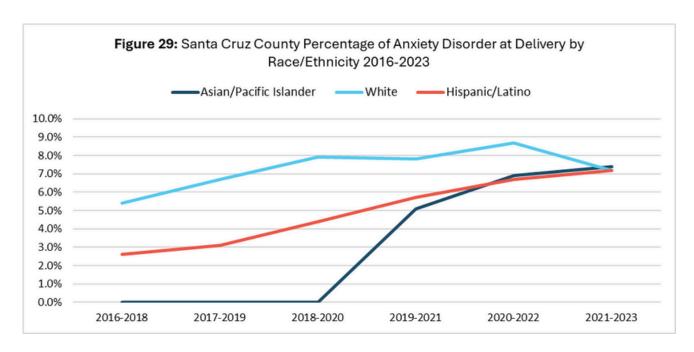




Mental Health

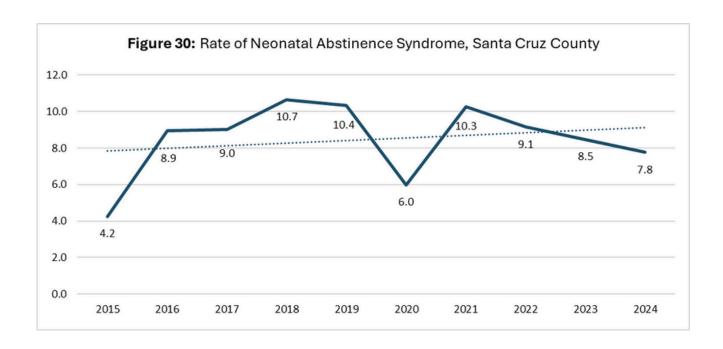
Figures 28 and 29 show the percentage of perinatal mental health conditions at delivery in Santa Cruz County using data from 2016 to 2023. Over this period, there has been an increase in any prenatal mental health condition, as well as anxiety and depressive disorder have specifically trended upward. Notably, between 2020-2022 and 2021-2023, the percent of anxiety disorders slightly declined among White individuals, while it increased among Hispanic/Latinx and Asian/Pacific Islander populations.





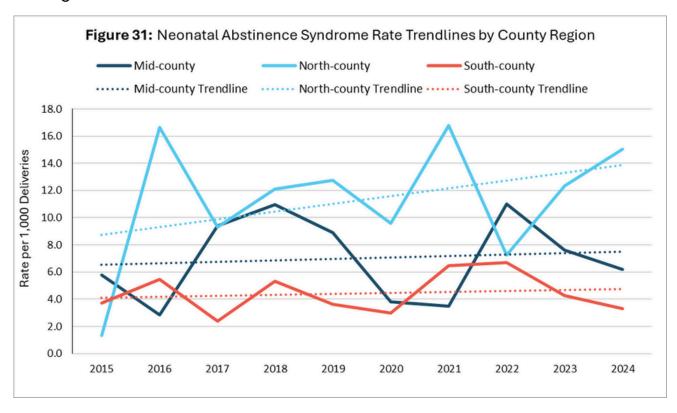
Neonatal Abstinence Syndrome

Figure 30 shows the trend in NAS cases in Santa Cruz County from 2015 to 2024. NAS cases have increased steadily over time, rising 85.7% since 2015. While recent years suggest a possible leveling off, the overall burden remains high. The data highlights NAS as a significant public health concern and underscores the need for continued surveillance and evaluation of intervention efforts.



Neonatal Abstinence Syndrome

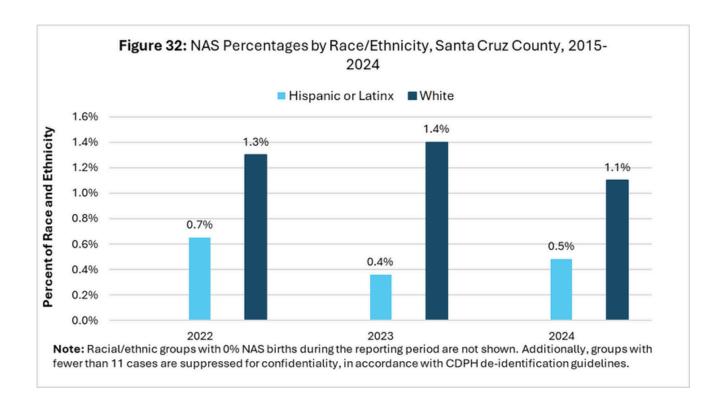
Figure 31 highlights significant regional disparities in NAS rates across Santa Cruz County. North County shows the highest increase, with NAS rates rising 1,061% since 2015. Mid County experienced a more modest 17% increase, while South County saw a 10% decrease and reported the lowest rate in 2024. These differences underscore the need for geographically tailored public health strategies.



| · | Table 7: NAS percent by city in | | | | | | | | |
|----------------|--|--|--|--|--|--|--|--|--|
| | Santa Cruz County, 2015-2024 City Percent NAS | | | | | | | | |
| City | | | | | | | | | |
| La Selva Beach | 3.09 | | | | | | | | |
| Brookdale | 1.52 | | | | | | | | |
| Santa Cruz | 1.28 | | | | | | | | |
| Soquel | 1.24 | | | | | | | | |
| Los Gatos | 1.13 | | | | | | | | |
| Felton | 0.95 | | | | | | | | |
| Boulder Creek | 0.83 | | | | | | | | |
| Ben Lomond | 0.62 | | | | | | | | |
| Aptos | 0.59 | | | | | | | | |
| Scotts Valley | 0.58 | | | | | | | | |
| Freedom | 0.47 | | | | | | | | |
| Watsonville | 0.44 | | | | | | | | |
| Capitola | 0.30 | | | | | | | | |

Neonatal Abstinence Syndrome

Figure 32 suggests that Whites are disproportionately affected by NAS compared to other racial and ethnic groups. Although the NAS rate among Hispanic/Latinx infants is lower than that of White infants, the absolute number of cases is comparable, or even higher, due to the larger population size.



Significance Spotlight Why the Data Matters





AGE OF BIRTHING PERSON

As the age of birthing people increases, fertility naturally declines and health risks for both parent and baby rise. This may lead to greater demand for fertility treatments and high-risk pregnancy care, as older pregnant individuals are more likely to experience conditions such as high blood pressure, which can increase the risk of preeclampsia, as well as higher chances of miscarriage and stillbirth. It is important for the community and people of reproductive age to be aware of these risks when planning for a family.⁴

BIRTHS BY DELIVERY LOCATION

The medical capability to handle high-risk births varies by hospital. When a resident travels out of county, it is often to deliver at a hospital that is designated as having the ability to deliver high-risk births. In Santa Cruz County, Dominican Hospital has the only Level 3 Neonatal Intensive Care Unit. This influences the outcome data below since other hospitals may send high-risk pregnant individuals to Dominican Hospital for delivery.

DELIVERY METHODS

There are two delivery methods, vaginally or by cesarean section otherwise known as C-section. A cesarean delivery can be a first time (primary cesarean) or repeat surgery (repeat cesarean), while vaginal birth after cesarean (VBAC) refers to giving birth vaginally after a previous cesarean section. For healthy, full-term pregnancies with one head-down baby, cesarean births can sometimes lead to avoidable complications and longer recovery.⁵

HEALTHY PEOPLE 2030

Healthy People 2030 is the U.S. Department of Health and Human Services' nationwide framework for improving the health and well-being of all Americans over the next decade. It sets evidence-based, measurable objectives across 12 priority areas—ranging from chronic disease prevention and mental health to health equity and environmental health—to guide federal, state, and local policies, programs, and community actions. By providing a clear, data-driven roadmap, Healthy People 2030 help stakeholders track progress, identify gaps, and allocate resources strategically, ultimately aiming to reduce health disparities and achieve better health outcomes for every person, place, and community.

Significance Spotlight

NEONATAL INTENSIVE CARE UNIT (NICU) TRENDS

The birth of a baby is a complex process requiring major adjustments for the newborn, including breathing, circulation, digestion, and immune function, which sometimes necessitate specialized care in a NICU.⁶ While NICUs provide lifesaving support through advanced technology and trained healthcare teams, they can be stressful and bring potential health challenges for both babies and parents, highlighting the importance of policies and models such as Family Care Centers or Mother Newborn Care Units, that support family-centered care and may reduce NICU stays. 10-11

EARLY PRENATAL CARE

Prenatal care visit rates may be used to evaluate healthcare access, identify disparities, and understand potential areas for improvement in maternal and fetal health outcomes. Between 10-15 prenatal visits, during a low-risk pregnancy, is recommended by the American College of Obstetricians and Gynecologists (ACOG) and the American Academy of Pediatrics (AAP). Prenatal care visits usually include a physical exam, blood pressure and weight checks, blood tests, and imaging tests, such as ultrasound exams. Additionally, during prenatal visits, pregnant parents discuss adherence to prenatal vitamins, ensure medication safety, and work closely with their health care providers to control existing conditions, such as high blood pressure and diabetes.¹² These visits are important ways to support birthing people and families, and take steps towards a healthy pregnancy. The Healthy People objective was lowered from 90% in 2010 to 77.9% for 2020 then up to 80% for 2030; the 2030 objective has been met or nearly met countywide for the past 10 years. 13 Although the percentage of people receiving early prenatal care slightly decreased during 2021-2023, Santa Cruz County still surpassed the 2030 objective with 89% of birthing people receiving early prenatal care.

KEY BIRTH INDICATORS

Low Birthweight (LBW), Very Low Birthweight (VLBW), gestational age, and preterm birth are key indicators of infant health with implications for both short and long-term outcomes. Babies born small or large for their gestational age, or before 37 weeks of gestation (preterm) face higher risks of complications such as respiratory distress syndrome, infections, and developmental delays. Monitoring these measures helps identify disparities and target preventative interventions during pregnancy, including prenatal care, nutrition, and management of parental health, to support fetal growth.¹⁴

Significance Spotlight

BIRTHING PERSON'S WEIGHT GAIN

In 2009, the Institute of Medicine released a report recommending new guidelines for weight gain during pregnancy. In 2013, the American College of Obstetricians and Gynecologists added weight gain recommendations for birthing people carrying twins, this information was reaffirmed in 2023. The recommended total weight gain range for each category of pre-pregnancy body mass index (BMI) is as follows:

| Pre-pregnancy Weight & BMI (kg/m2) | | Recommended Range of Total Added Weight (<u>lbs</u>) Singletons | Recommended Range of Total Added Weight (<u>lbs</u>) Twins |
|---------------------------------------|----------------|---|--|
| Underweight | < 18.5 | 28 - 40 lbs. | |
| Normal | 18.5 - 24.9 | 25 - 35 lbs. | 37 - 54 lbs. |
| Overweight | 25.0 - 29.9 | 15 - 25 lbs. | 31 - 50 lbs. |
| Obese | > 30.0 | 11 - 20 lbs. | 25 - 42 lbs. |

BMI is a useful tool for classifying weight but should be considered as part of a broader health assessment, since it doesn't account for differences in muscle or bone mass and may not accurately reflect body fat.¹⁶ Pre-pregnancy weight and healthy weight gain during pregnancy affect both maternal and infant health, so those starting pregnancy with a higher BMI are encouraged to work with their healthcare provider to meet weight goals.

BIRTH ATTENDANTS

Different medical professionals (such as physicians and midwives) and other care providers (such as doulas) can make up a care team for a pregnant person. Midwives are specially trained health professionals who care for people with healthy, low-risk pregnancies, including prenatal checkups, childbirth, and postpartum care. Some midwives are also nurses.¹⁷

MENTAL HEALTH

Depression is defined as persistent feelings of sadness, emptiness, hopelessness, or loss of interest in usual activities. Prenatal depression is linked to higher risks of complications for both the birthing person and child development.¹⁸ From 2016 to 2023, there has been an increase in prenatal mental health conditions, and anxiety and depressive disorders have specifically trended upward. Given these shifts, routine screening and prompt referral to appropriate treatment are critical strategies to optimize outcomes for both birthing people and infants.¹⁹

Significance Spotlight

NEONATAL ABSTINENCE SYNDROME (NAS)

Neonatal Abstinence Syndrome (NAS) is a withdrawal condition in newborns exposed in utero to substances that cause physical dependence. After birth, the sudden discontinuation of these substances can lead to symptoms affecting the nervous, gastrointestinal, and autonomic systems. NAS is most commonly linked to prenatal opioid exposure, but may also result from or be worsened by exposure to other substances, including:

- Opioids (e.g., heroin, methadone, buprenorphine, oxycodone)
- Benzodiazepines (e.g., diazepam, lorazepam)
- Barbiturates
- SSRIs/SNRIs (e.g., fluoxetine, sertraline, venlafaxine)
- Nicotine
- Alcohol
- Stimulants (e.g., cocaine, methamphetamine)

This definition reflects current clinical and public health consensus, drawing from guidance by the CDC, AAP, and SAMHSA.²⁰⁻²².

The data highlights NAS as a significant public health concern and underscores the need for continued surveillance and evaluation of intervention efforts.

Community Efforts





BIRTH ATTENDANTS

Doulas provide non-medical pregnancy and postpartum education, empowerment, and support. ¹⁷This support may include health navigation, lactation support, birth plan development, and connection to community-based resources. Santa Cruz County is working with the Central California Alliance for Health (CCAH) and Kaiser to obtain access to doula services data and plan to include that in a future birth report.

In Santa Cruz County, the number of doulas working with the Medi-Cal population is significantly increasing. CCAH has provided multiple grants through their Medi-Cal Capacity grant program to assist community doula providers.

NEONATAL ABSTINENCE SYNDROME (NAS)

Santa Cruz County is currently addressing this concern in several ways. Santa Cruz Family and Children's Services has initiated the Infants with Prenatal Substance Exposure (IPSE) Workgroup with partners from First Five, Public Health, and Health Improvement Partnership. The purpose of the group is to achieve clarity on roles and expectations around Plans of Safe Care to ensure that infants who are prenatally substance-exposed and their parents are connected to appropriate services and supports. Health Improvement Partnership has also started convening a Perinatal Medication-Assisted Treatment (MAT) Subgroup through the SafeRx Program. This group aims to improve community collaboration & coordination of care, increase provider education, training & support services, and strengthen community outreach and access to services.

PERINATAL EQUITY

The data in this report reveal several birth-outcome disparities. To confront these gaps, Santa Cruz County Public Health convened its inaugural Perinatal Summit in June 2025, centering care on respect, dignity, and community. Shortly thereafter, in July 2025, the Health Improvement Partnership launched the Birth Equity Action Group to collaboratively re-envision and redesign the maternal health system in Santa Cruz County to ensure it is equitable, person centered, and accountable to the communities it serves, especially those who have historically faced systemic barriers.

Key Takeaways





- **Birth volume:** 2024 births (2,512) declined from 2022 (2,808); 2,060 to county residents, 463 to non-residents.
- **Age trends:** Ages 30-34 remain the largest share (33%) but their birth rate is decreasing; ages 35-39 are gaining share.
- **Ethnicity:** Hispanic/Latinx birthing people deliver 50% of babies and hold the highest stable fertility rate.
- Multiple vs. singleton births: Multiples have substantially higher rates of low/very low birthweight and preterm birth.
- **Gestational diabetes:** Continues an upward trend over ten years, highest among Hispanic/Latinx birthing people.
- **Gestational hypertension:** In 2023, White birthing people surpassed Hispanic/Latinx birthing people.
- Perinatal mental health:
 - Prenatal depression rising, especially among Hispanic/Latinx.
 - Postpartum depression symptoms increasing for Hispanic/Latinx, slightly declining for White birthing people.
 - Anxiety disorders at delivery climbing for Hispanic/Latinx and Asian/Pacific Islander populations since 2018.
- **Neonatal Abstinence Syndrome (NAS):** Overall county increase of 87.5% since 2015; rising in North County since 2022, decreasing in Mid and South County.
- **Implications:** The data point to a pressing need for culturally responsive mental-health services, targeted substance-use interventions, and continued monitoring of gestational complications, particularly within Hispanic/Latinx communities.





All the Santa Cruz County birth data in this report (unless otherwise noted) are directly extracted from the Santa Cruz County Automated Vital Statistics System where birth certificate records are created and maintained, and should be considered provisional until they have gone through data cleaning by the State, which often takes two years to complete. The 2024 data was accessed in July 2025.

Population data is from the State of California, Department of Finance, Report P-3: State and County Population Projections: 2010-2060. Sacramento, California, May 29, 2019, https://dof.ca.gov/forecasting/demographics/projections/.

References:

- 1. Office of Disease Prevention and Health Promotion. Healthy People 2030. U.S. Department of Health and Human Services. Healthy People 2030, Data Methodology and Measurement, Reduce cesarean births among low-risk women with no prior births MICH-06, https://odphp.health.gov/healthypeople/objectives-and-data/browse-objectives/pregnancy-and-childbirth/reduce-cesarean-births-among-low-risk-women-no-prior-births-mich-06/data-methodology.
- 2.Scott L. Data De-Identification Guidelines (DDG) Version 2.0. California Department of Health Care Services; 2016. Accessed October 14, 2025. https://www.dhcs.ca.gov/dataandstats/Documents/DHCS-DDG-V2.0-120116.pdf.
- 3. Demographic Research Unit (DRU). Projections Department of Finance, P-3: Complete State and County Projections Dataset. State of California Department of Finance; 2019. Accessed October 14, 2025. https://dof.ca.gov/forecasting/demographics/projections/.
- 4. College of Obstetricians and Gynecologists. Having a Baby After Age 35: How Aging Affects Fertility and Pregnancy. ACOG. https://www.acog.org/womens-health/faqs/having-a-baby-after-age-35-how-aging-affects-fertility-and-pregnancy. Accessed October 14, 2025.

intensive-care-unit-nicu-90-P02389.

- 5. California Department of Public Health, Center for Family Health, Maternal, Child and Adolescent Health Division, Delivery Methods Dashboard, Last Modified April 2025.
 - https://www.cdph.ca.gov/Programs/CFH/DMCAH/surveillance/Pages/Delivery-Methods.aspx.
- 6. The Neonatal Intensive Care Unit (NICU). Stanford Medicine Children's Health. Accessed October 15, 2025. https://www.stanfordchildrens.org/en/topic/default?id=the-neonatal-
- 7.DiBari JN, Rouse L. Parent Perspectives: Part 1—Considerations for Changing the NICU Culture. Children. 2023; 10(11):1735. https://doi.org/10.3390/children10111735.
- 8.Obeidat HM, Bond EA, Callister LC. The parental experience of having an infant in the newborn intensive care unit. J Perinat Educ. 2009;18(3):23-29. doi:10.1624/105812409X461199.
- 9.Lean RE, Rogers CE, Paul RA, Gerstein ED. NICU Hospitalization: Long-Term Implications on Parenting and Child Behaviors. Curr Treat Options Pediatr. 2018;4(1):49-69.
- 10. Gómez-Cantarino S, García-Valdivieso I, Moncunill-Martínez E, Yáñez-Araque B, Ugarte Gurrutxaga MI. Developing a Family-Centered Care Model in the Neonatal Intensive Care Unit (NICU): A New Vision to Manage Healthcare. International Journal of Environmental Research and Public Health. 2020; 17(19):7197. https://doi.org/10.3390/ijerph17197197.
- 11. The Neonatal Intensive Care Unit (NICU). Stanford Medicine Children's Health. Accessed October 15, 2025. www.stanfordchildrens.org/en/topic/default? id=the-neonatal-intensive-care-unit-nicu-90-P02389.
- 12.Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH, HHS, What is prenatal care and why is it important? 2017.

 What is prenatal care and why is it important? | NICHD Eunice Kennedy

 Shriver National Institute of Child Health and Human Development (nih.gov).

- 13. Office of Disease Prevention and Health Promotion. Healthy People 2030. U.S. Department of Health and Human Services. https://odphp.health.gov/healthypeople/objectives-and-data/browse-objectives/pregnancy-and-childbirth/increase-proportion-pregnant-women-who-receive-early-and-adequate-prenatal-care-mich-08.
- 14. De Costa, A., Moller, A., Blencowe, H., Johansson, E. W., Hussain-Alkhateeb, L., Ohuma, E. O., Okwaraji, Y. B., Cresswell, J., Requejo, J. H., Bahl, R. Oladapo, O. T., Lawn, J. E., and Moran, A. C. (2021). Study protocol for WHO and UNICEF estimates of global, regional, and national preterm birth rates for 2010 to 2019. PloS ONE 16 (10): e0258751.
- 15. American College of Obstetricians and Gynecologists. Weight Gain During Pregnancy. ACOG Committee Opinion No. 548. Obstet Gynecol. 2013;121(1):210–212. doi:10.1097/01.AOG.0000425668.87506.4c.
- 16. California Department of Public Health, Center for Family Health, Maternal, Child and Adolescent Health Division, Prepregnancy Weight Dashboard, Last Modified April 2025. go.cdph.ca.gov/Prepregnancy-Weight-Dashboard.
- 17. California Department of Health Care Services. Doctors, Midwives, and Doulas: Finding the Right Care Team for Your Pregnancy. Medi-Cal Program. Accessed October 15, 2025. https://www.dhcs.ca.gov/CalAIM/Documents/BD-Perinatal-Provider-Differences-Flyer.pdf.
- 18. California Department of Public Health, Center for Family Health, Maternal, Child and Adolescent Health Division, Maternal Mental Health, Last Modified April 2025. https://www.cdph.ca.gov/Programs/CFH/DMCAH/surveillance/Pages/Maternal-Mental-Health.aspx.
- 19. California Department of Public Health, Center for Family Health, Maternal, Child and Adolescent Health Division, Prenatal Mental Health Conditions at Delivery, Last Modified April 2025.

 https://www.cdph.ca.gov/Programs/CFH/DMCAH/surveillance/Pages/Perinat-al-Mental-Health-Conditions-at-Delivery.aspx.

- 20. Center for Disease Control and Prevention. (2023, August 22). Opioid use during pregnancy: About. U.S. Department of Health and Human Services. https://www.cdc.gov/opioid-use-during-pregnancy/about/index.html.
- 21. Hudak, M. L., Tan, R. C., & the Committee on Drugs and the Committee on Fetus and Newborn. (2020). Neonatal opioid withdrawal syndrome. Pediatrics, 146(5), e2020029074. https://doi.org/10.1542/peds.2020-029074.
- 22. Substance Abuse and Mental Health Services Administration. (2018). Clinical guidance for treating pregnant and parenting women with opioid use disorder and their infants (HHS Publication No. SMA 18-5054). U.S. Department of Health and Human Services. https://library.samhsa.gov/sites/default/files/sma18-5054.pdf.



ACKNOWLEDGMENTS

Ella Batterson, MPH – Cal-EIS Fellow
David Melchor, MPH – Epidemiologist I
Troy Tournat, MPH – Epidemiologist II
Najeeb Kamil, MSW, MPA – Senior Departmental Administrative Analyst
Susan Paradise, LMFT – Maternal Child Adolescent Health Director
Ramy Husseini, MPH – Senior Health Services Manager
Dr. Cal Gordon – Maternal Child Adolescent Health Medical Director
Primavera Hernandez, MPH – Maternal Child Adolescent Health Coordinator