Medi-Cal Birth Statistics

Maternal and Infant Health Statistics

Outline of Presentation

1. Introduction
2. Medi-Cal Population & Trends
3. Maternal Demographics
4. Birth Characteristics
5. Maternal Comorbidities and Behavioral Risk Factors
6. Birth Outcomes
7. Conclusions

Introduction

Childbirth is among the most common reasons for hospital care in the U.S., and this trend is no different in the Medi-Cal program. Among female beneficiaries under age 65, childbearing is the primary reason for seeking health care in the Medi-Cal program.

The Medi-Cal Birth Statistics report presents detailed data for California resident births that occurred in a hospital setting, including data on maternal characteristics, delivery methods, and select birth outcomes such as low birthweight, preterm delivery, and infant mortality. This report includes key comorbidities and health behaviors known to influence birth outcomes such as hypertension, diabetes, substance use, pre-pregnancy weight, and smoking during pregnancy.

Introduction, continued

This report presents birth statistics for women participating in the Medi-Cal Fee-For-Service (FFS) and Medi-Cal managed care delivery systems, as well as births financed by private insurance, births financed by other public funding sources, and births among uninsured mothers.

These statistics are important in several ways:

1. they provide a profile of the Medi-Cal beneficiaries that seek care for delivery services
2. they identify factors that may contribute to variations in birth outcomes
3. they provide useful comparisons between the birth outcome of Medi-Cal beneficiaries and other births in the state

How the Report Was Prepared

- The primary data source for the Birth Statistics Reports were the 2007 through 2011 Birth Statistical Master Files maintained by the California Department of Public Health, Center for Health Statistics and Informatics.
- The Office of Statewide Health Planning and Development (OSHPD) hospital discharge files were used to identify comorbidities among women with hospital births.
- Medi-Cal inpatient hospital claims containing dates-of-services from January 1, 2007 through December 31, 2011, and containing a delivery diagnosis code were used to confirm birth certificate records for women giving birth in 2011 under the Medi-Cal FFS program.
- Women with a delivery financed by Medi-Cal's managed care program were confirmed in the Birth Statistical Master File by using Medi-Cal eligibility records from the Medi-Cal Eligibility Determination System (MEDS).

Data Used

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Analytic Data Source

OSHPD Patient Discharge File

- Maternal diabetes
- Maternal hypertension
- Maternal substance use

Medi-Cal Claims

Inpatient claims with the following ICD-9 codes were used to validate birth certificate data for women in Medi-Cal's FFS delivery system:

650

640 to 676 with 5th digit of '1' or '2'

Medi-Cal Eligibility Determination System

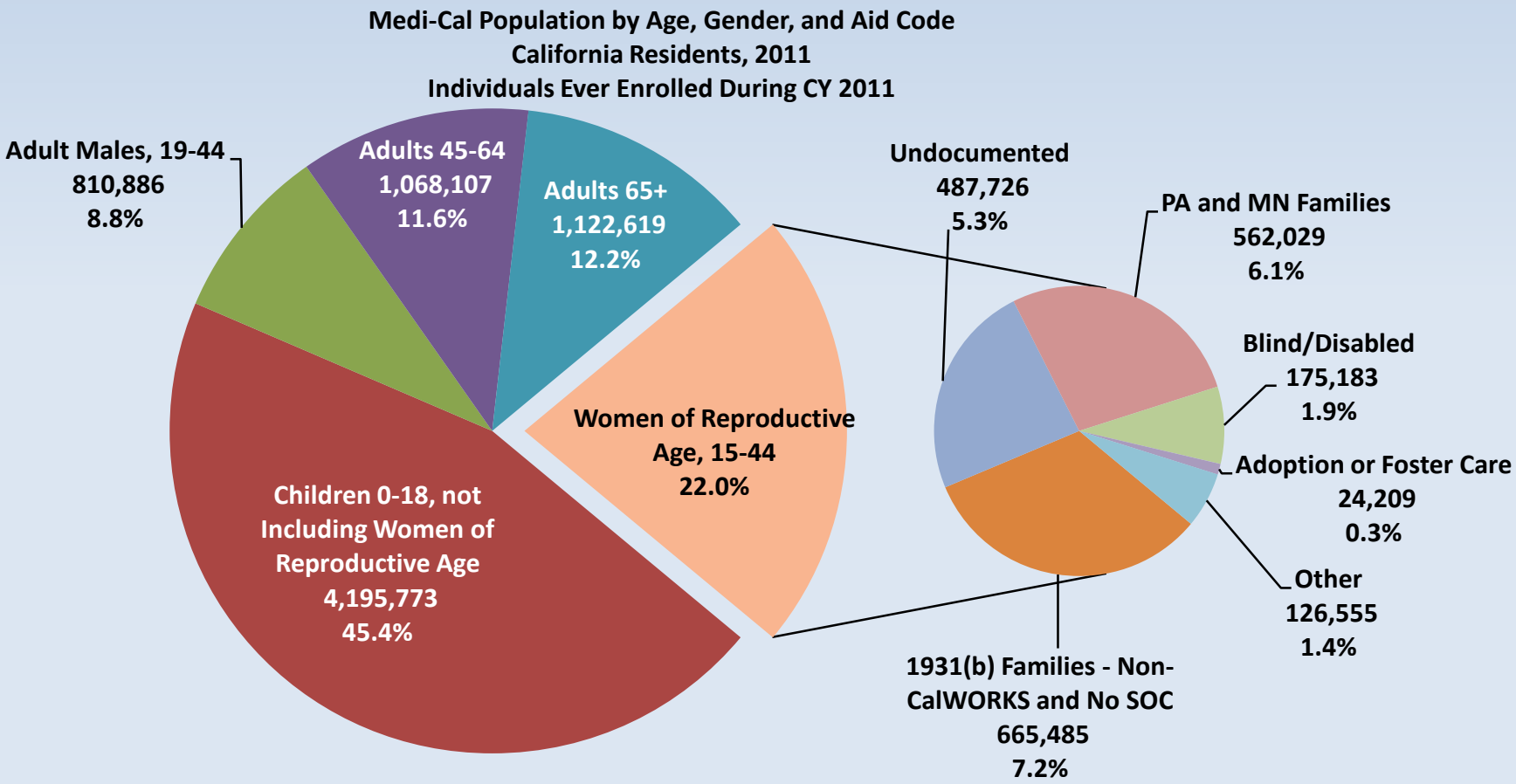
Eligibility records were used to validate birth certificate data for women in both Medi-Cal FFS and managed care. Variables retained during this process included:

- Aid code at time of delivery
- Health delivery system participating in at time of delivery
- County of Residence
- Length of Medi-Cal Enrollment prior to pregnancy/During Preg.

Medi-Cal Population & Trends

Distribution of the Medi-Cal Population
Health System Participation
Medi-Cal Births' Timelines

Distribution of Medi-Cal Population

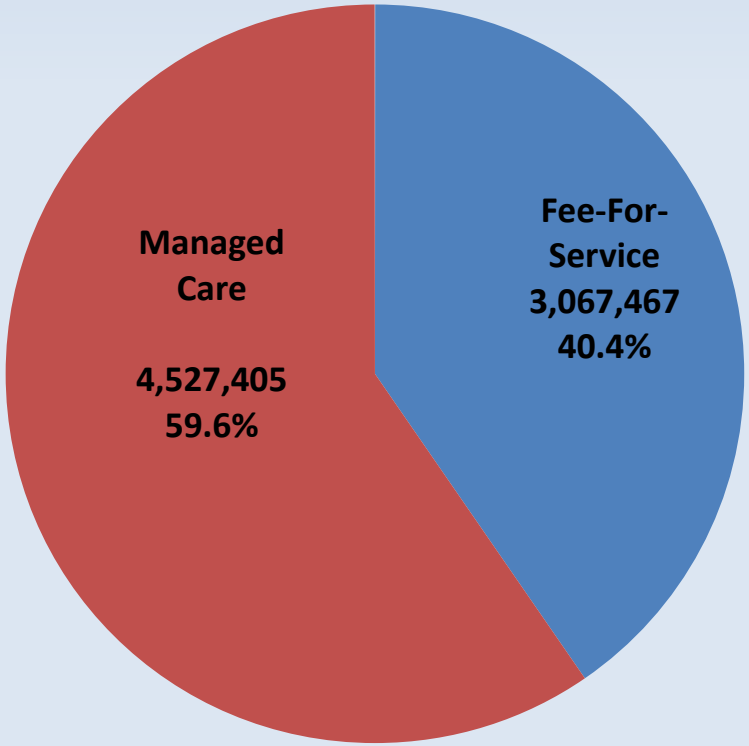


During calendar year 2011, 9.3 million Californians were eligible for Medi-Cal for at least one month. Of these beneficiaries, 22.0%, or 2.0 million, were women between the ages of 15 and 44.

Note: Subgroups may not total to 100% due to rounding.

Health System Participation

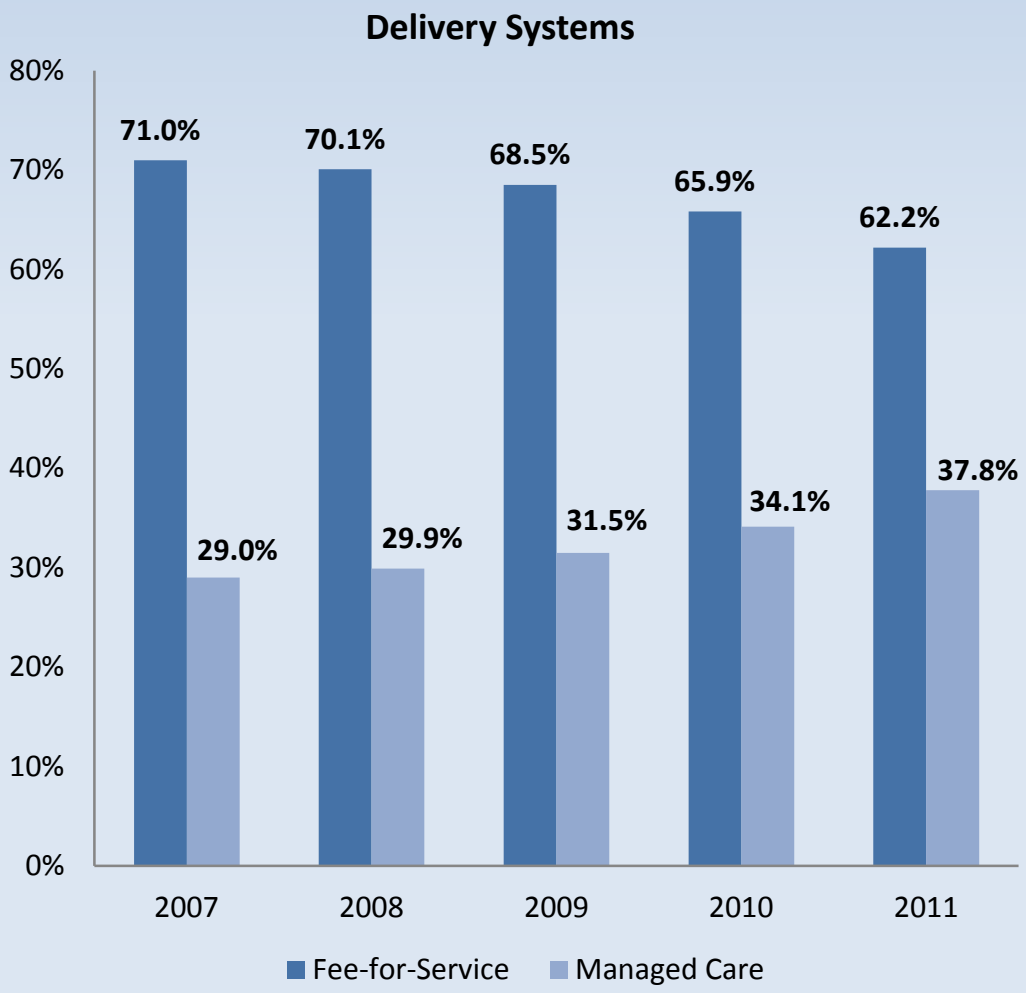
Medi-Cal Certified Eligibles
By Health Delivery System
July 2011



In general, a Medi-Cal beneficiary receives care through one of Medi-Cal's two service delivery systems. The first system is the traditional FFS system. Under the FFS delivery system, beneficiaries seek medical services from a qualified Medi-Cal provider and the provider bills Medi-Cal for each service administered. Under the FFS system, beneficiaries must locate providers willing to accept Medi-Cal as a payer source.

The second delivery system is Medi-Cal managed care. Under the managed care delivery system, the Medi-Cal program contracts with health care plans to administer health care services to the enrolled population. The contracting health plans are paid a monthly payment for each enrolled member and assume the financial risk for all necessary health care services. Health plans assign beneficiaries to participating providers and arrange care through their network of providers.

Medi-Cal Trends – Births by Health Delivery System, 2007-2011

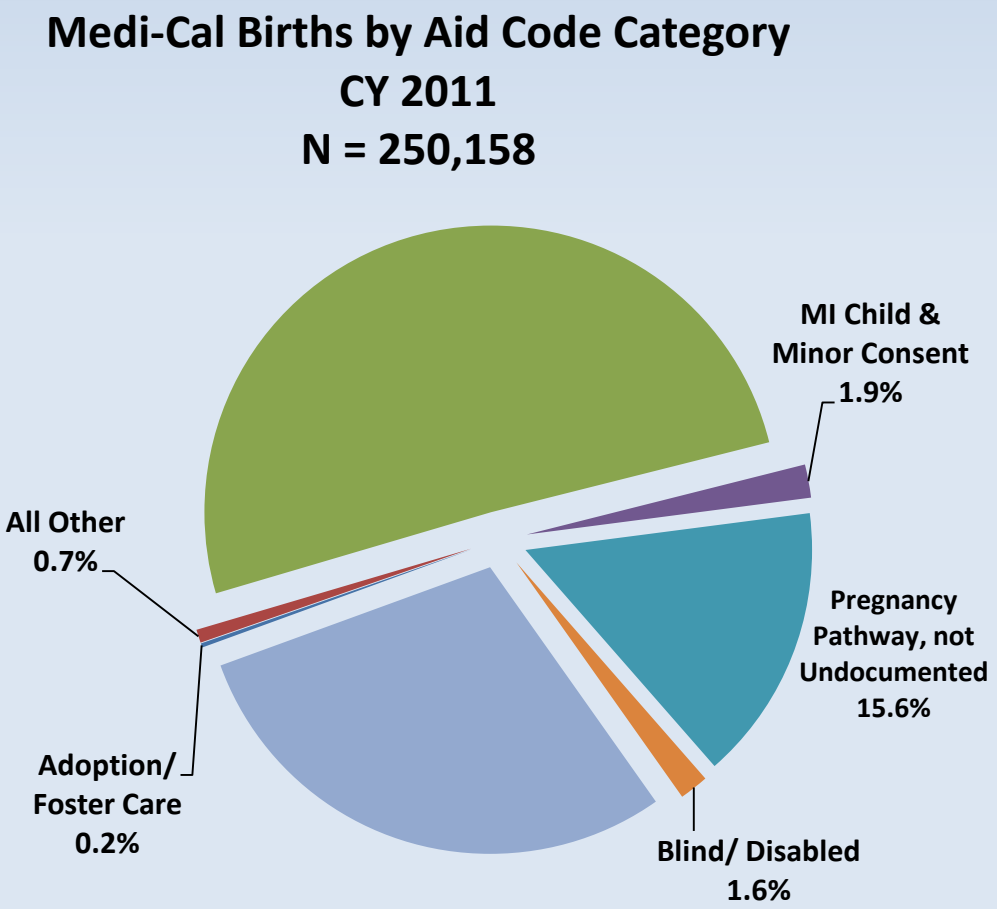


The downward trend in the percent of births financed by the FFS system is the result of the expansions of managed care delivery systems throughout the state.

While the number of births financed by Medi-Cal managed care will continue to increase, as additional counties transition to managed care (for example, in the 28 rural counties), FFS will continue to finance a significant percentage of births due to specific enrollment policy issues. Namely, undocumented individuals cannot currently participate in Medi-Cal's managed care delivery systems.

California Resident Hospital Births

Distribution of Medi-Cal Births By Eligibility Pathway



Two aid code categories accounted for roughly 80% of all Medi-Cal financed births: mothers enrolled in Families aid codes (50.6%), and mothers enrolled in Undocumented aid codes (29.2%).

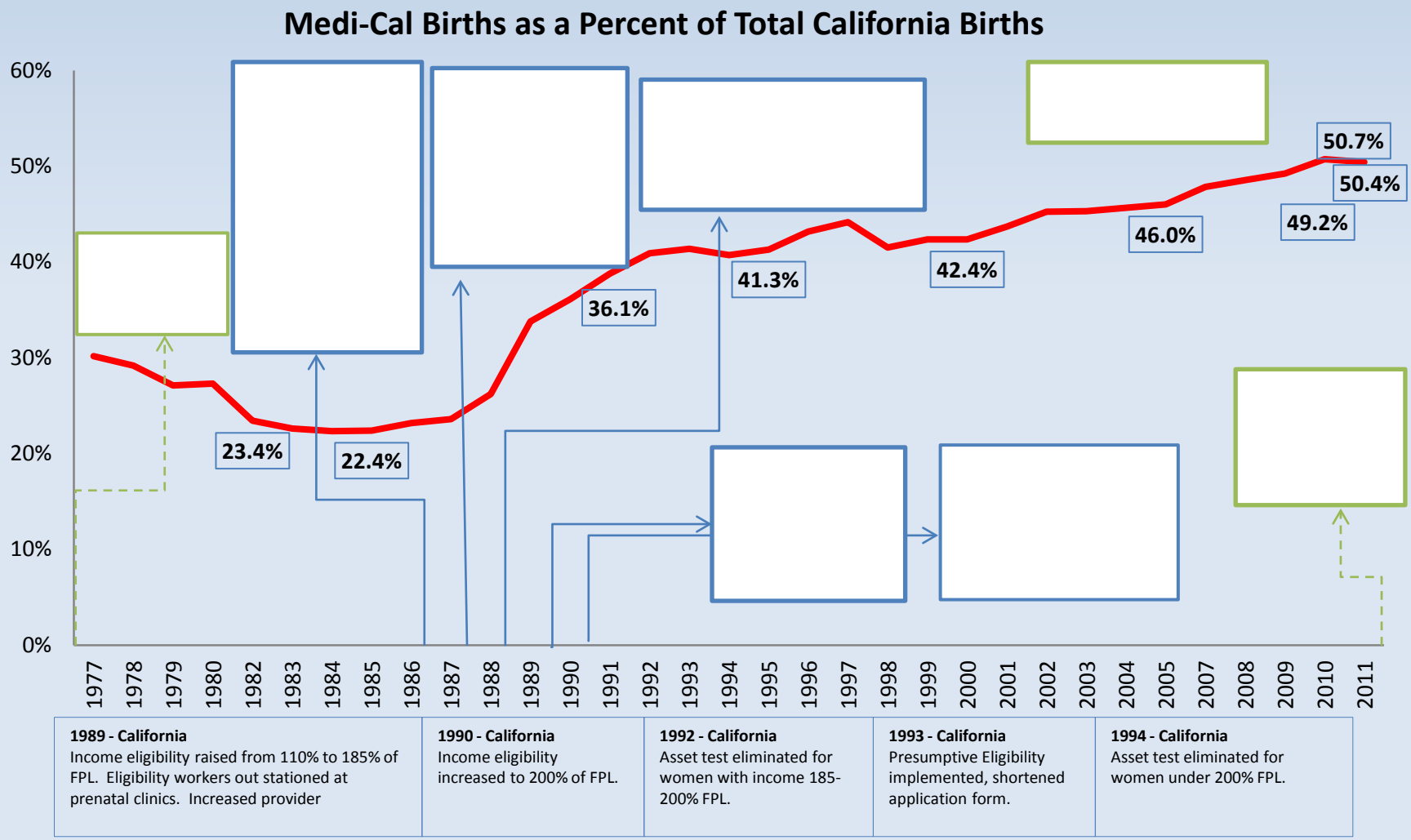
Families includes 1931(b) – non-CalWORKS, CalWORKS, and Medically Needy eligibles.

Pregnancy pathway includes women enrolled in the 200% FPL program.

Note: Percentages may not add to 100.0 due to rounding.

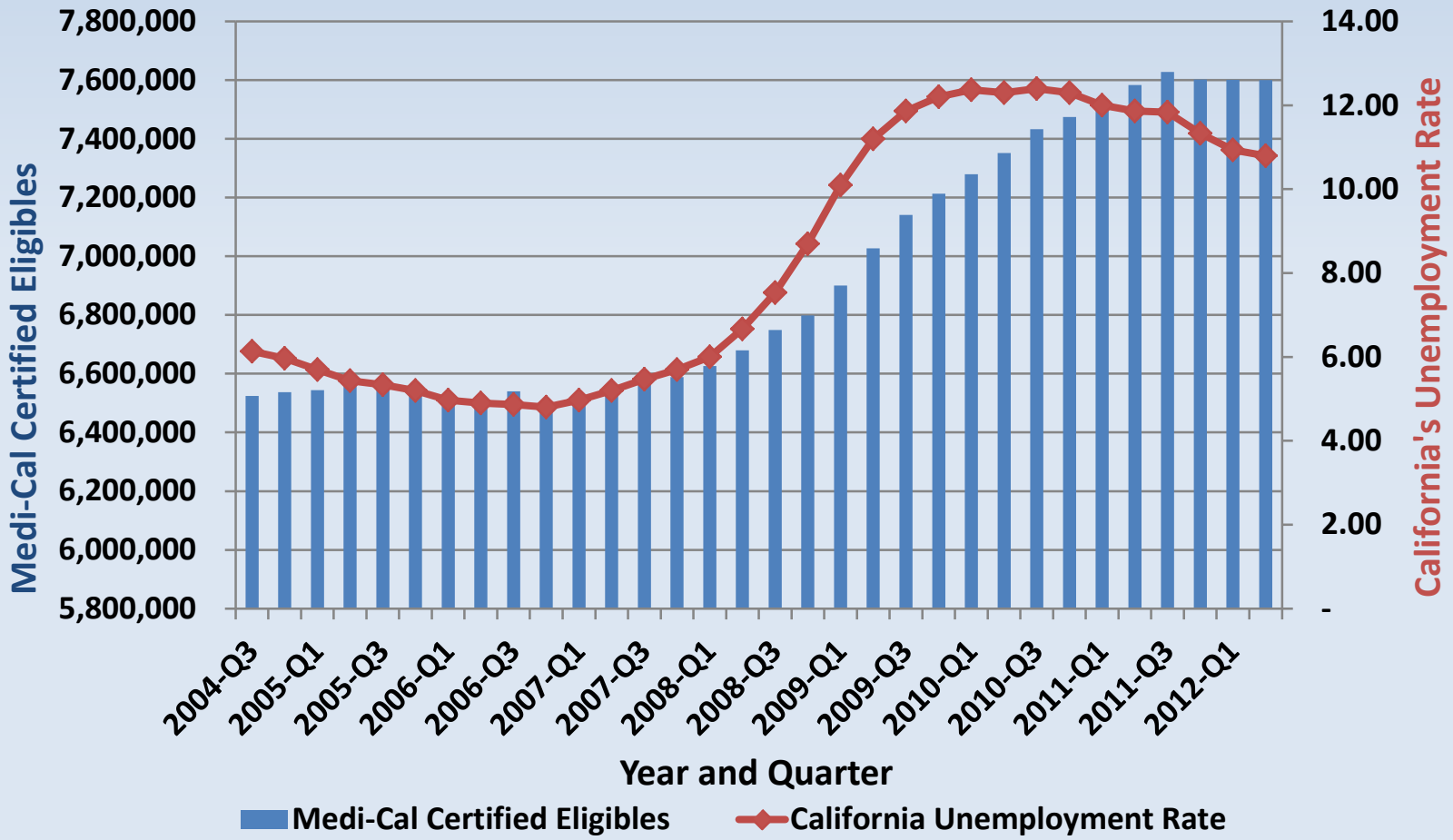
California Resident Hospital Births 2011

Medi-Cal Birth Trends Timeline



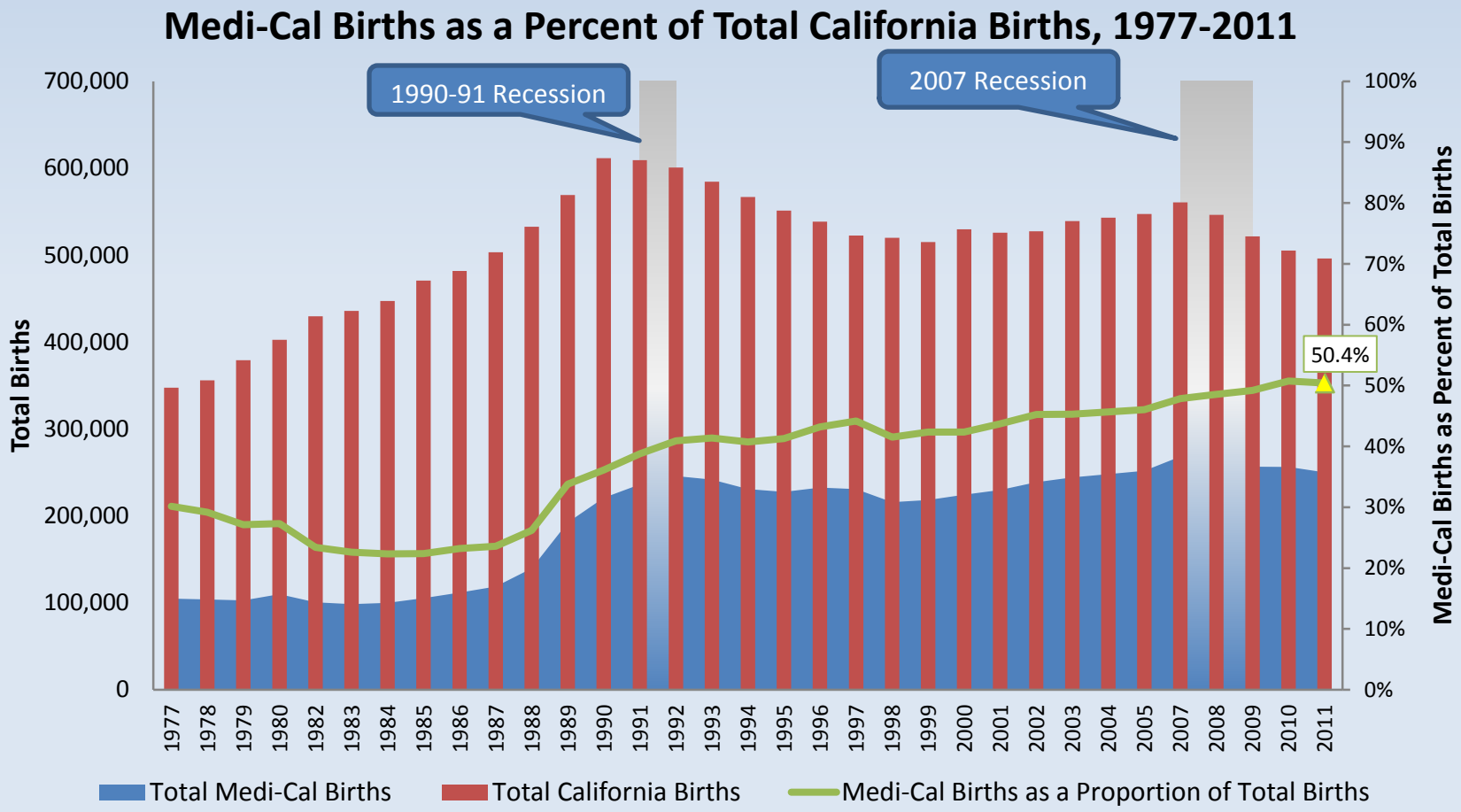
During the mid 1980s and early 1990s, federal legislation greatly expanded Medicaid's role as a financer of maternal health.

Trend in Medi-Cal Eligibles Compared to the Unemployment Rate



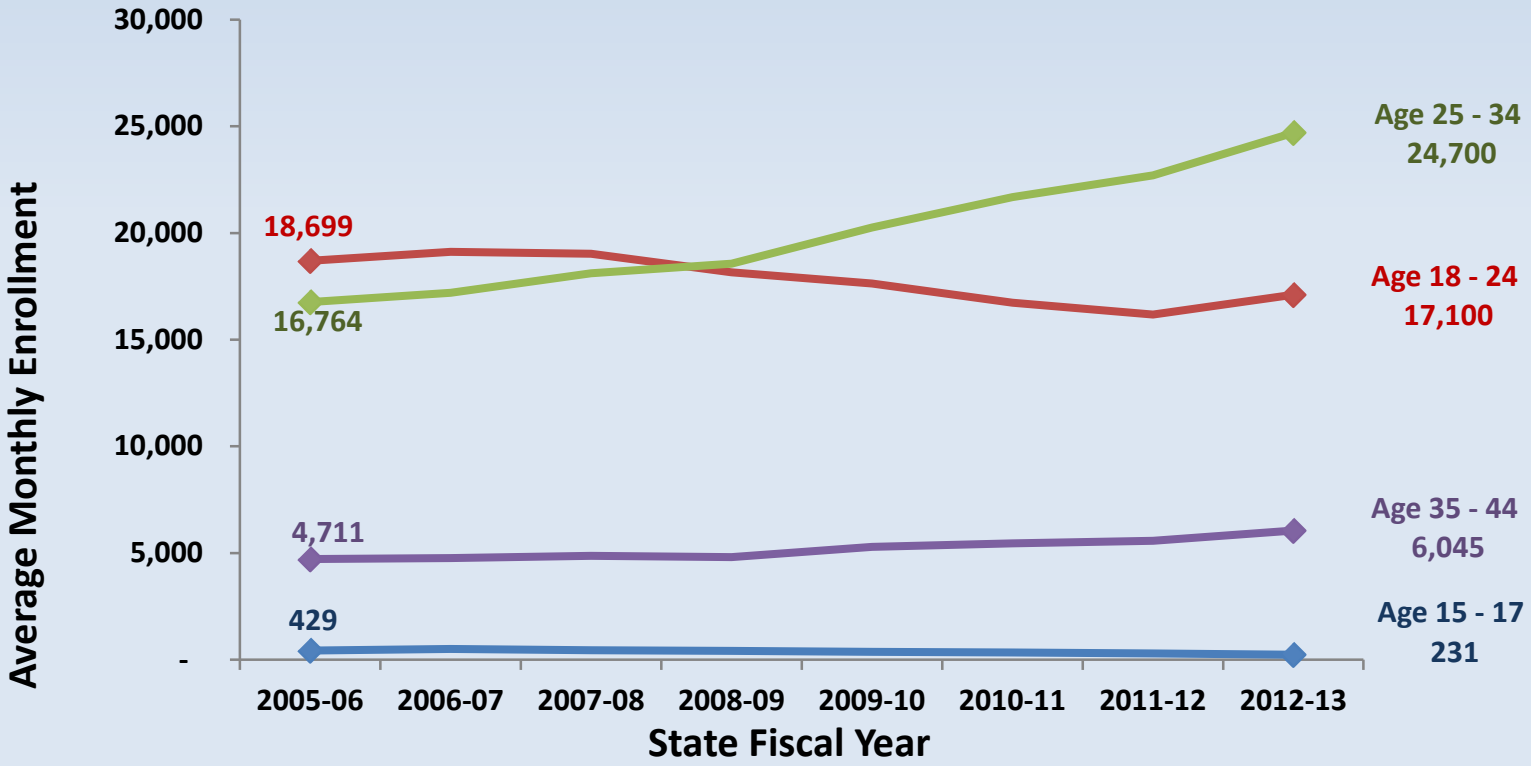
The Great Recession increased Medi-Cal enrollment by over 1 million beneficiaries. Most of these individuals were enrolled in Family aid codes.

Trends in Medi-Cal & California Births



Due to the 2007 recession, Medi-Cal added over one million new eligibles . These new beneficiaries changed the demographic make-up of the Medi-Cal population. Pregnant women, who lost employer sponsored insurance and enrolled in Medi-Cal displayed demographic characteristics that deviated from historical norms.

Women in Pregnancy Pathway Aid Codes by Age Categories, excluding Undocumented



Many women lost employer-sponsored health insurance during the Great Recession, and as a result, they sought Medi-Cal coverage. The influx of newly pregnant women were older than historical demographics.

Healthy People 2020 Goals

Outcome Measure	All U.S. Births	All California*	Medi-Cal*	Non-Medi-Cal*	*Healthy People 2020 Goal*
Low Birthweight	**8.1%**	6.8%	6.6%	6.9%	*7.8%*
Very Low Birthweight	1.4%	1.1%	1.1%	1.2%	*1.4%*
Preterm Delivery	**11.7%**	9.9%	10.3%	9.4%	*11.4%*
Very Preterm Delivery	**1.9%**	1.5%	1.6%	1.4%	*1.8%*

Populations shaded in green represent those that met the Healthy People 2020 goal in 2011. Populations in red did not meet the Healthy People 2020 Goal in 2011.

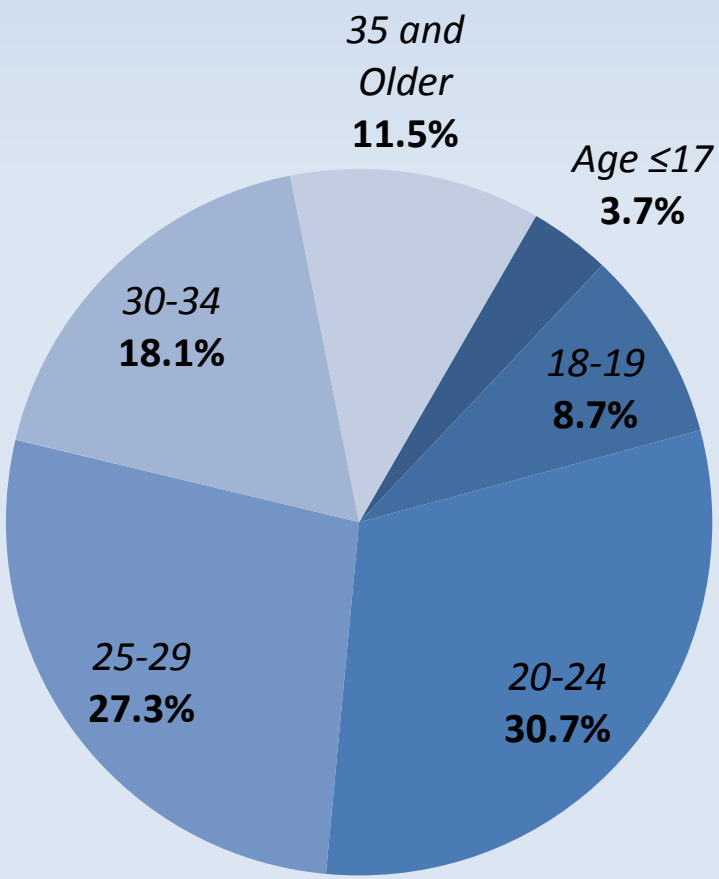
California Resident Hospital Births 2011

Medi-Cal Maternal Demographics

Age
Race/Ethnicity
Nativity
Education Level

Maternal Age

Medi-Cal Births by Maternal Age

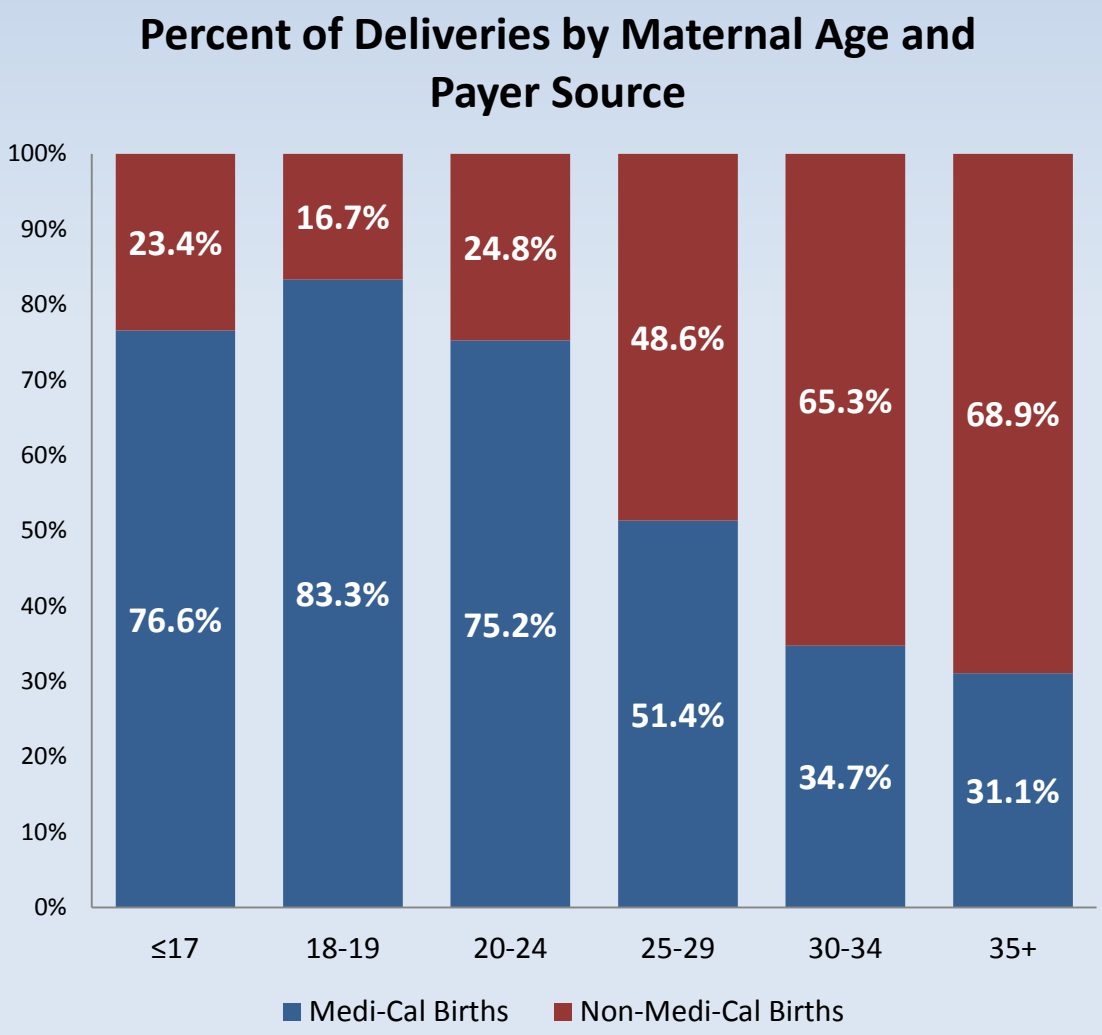


Mothers whose births were financed by Medi-Cal were, on average, younger than mothers whose births were financed by other non-Medi-Cal sources.

Among Medi-Cal financed births, the mean maternal age was 26.4 years (median = 26 years), while the mean maternal age among non-Medi-Cal births was 30.8 years (median = 31 years).

California Resident Hospital Births 2011

Maternal Age & Payer Source

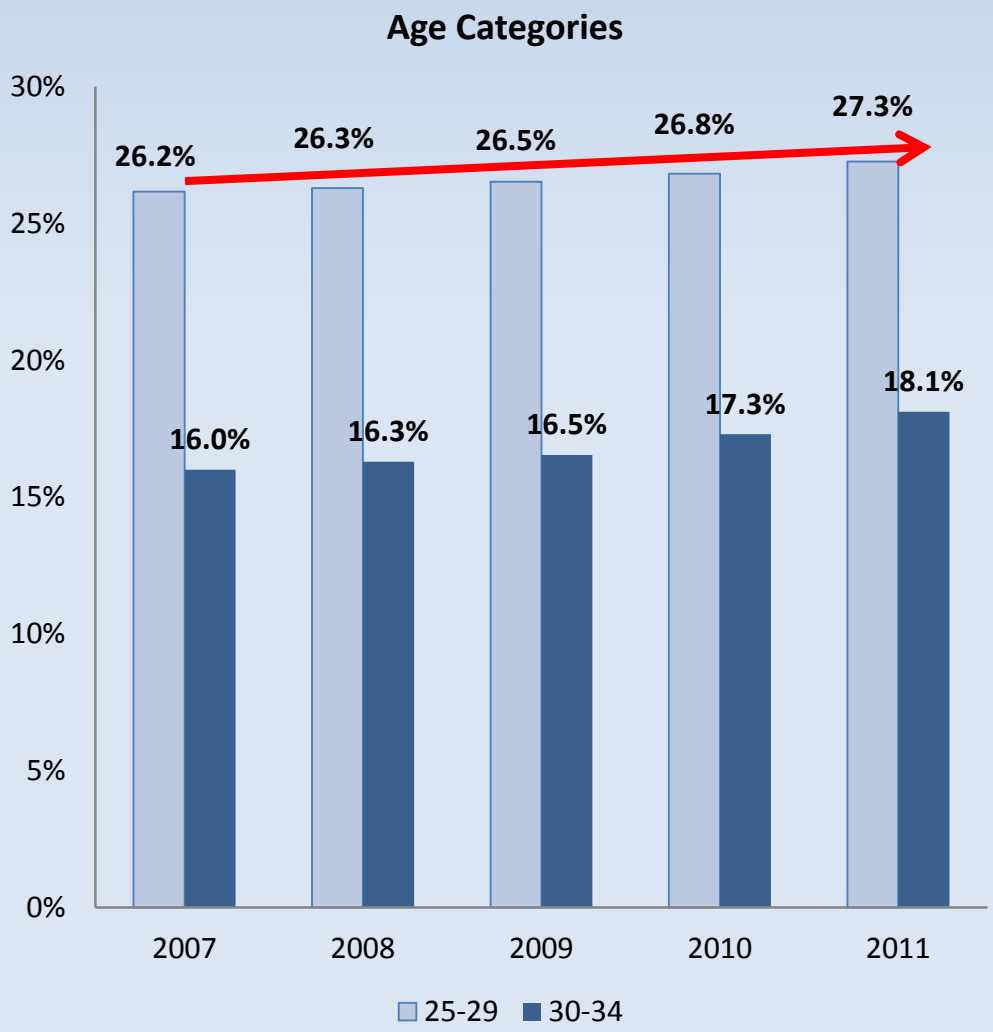


Medi-Cal financed a significant percentage of California's births for younger women. Among all California resident hospital births, Medi-Cal financed 76.6% of the births to women less than or equal to 17 years of age, 83.3% of the births to women between 18 and 19 years of age, and 75.2% of the births to women between 20 and 24 years of age.

Births to teen mothers are of particular concern since they are more likely to be premature and of low birthweight. Premature and low birthweight newborns are at increased risk for death and a host of disabling health conditions.

California Resident Hospital Births 2011

Medi-Cal Trends – Age Categories, 2007-2011

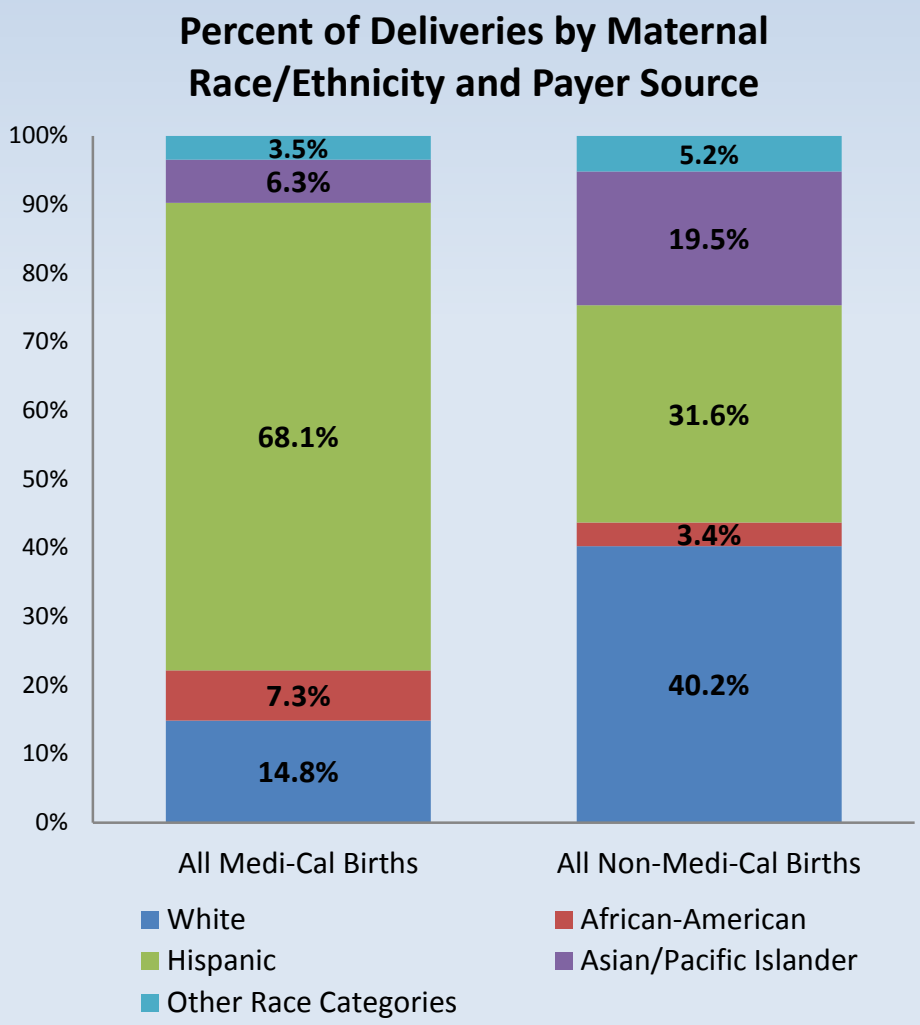


Medi-Cal has been funding an increasing percent of births to women between 25 and 35 years of age.

The percentage of births to mothers 19 years old and younger has decreased in the same time period.

California Resident Hospital Births

Maternal Race/Ethnicity



Note: Percentages may not add to 100.0 due to rounding.

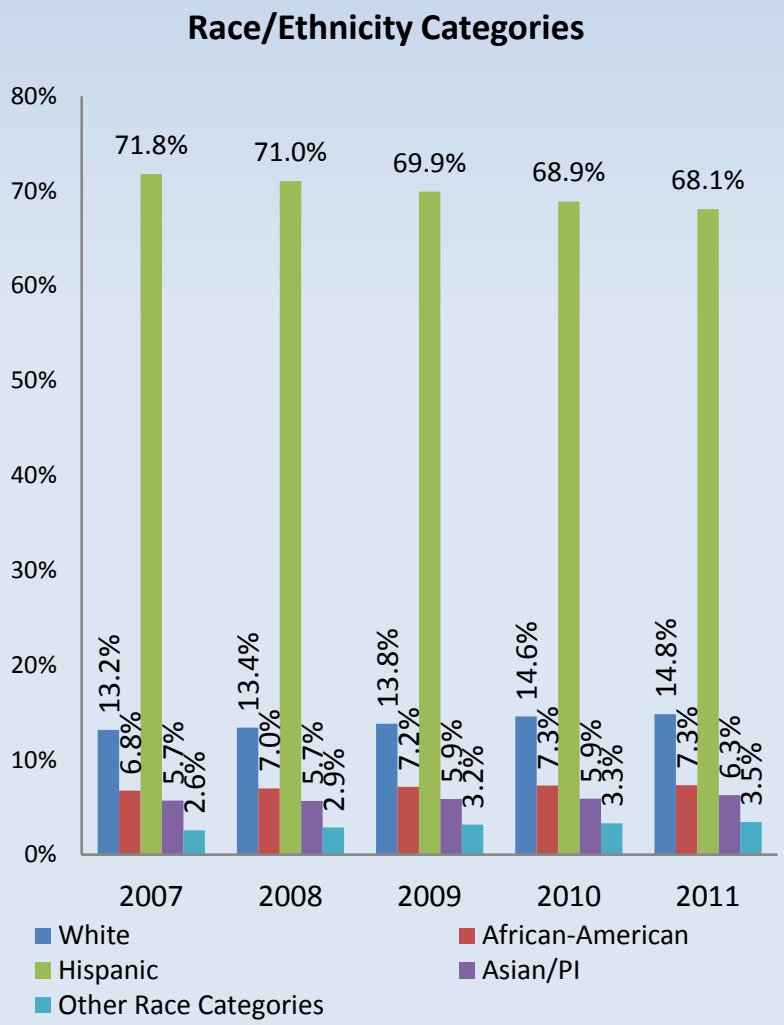
California Resident Hospital Births 2011

68.1% of Medi-Cal births were to mothers of Hispanic decent, while only 31.6% of mothers whose births were financed by other sources were of Hispanic decent.

Births to White mothers represented 40.2% of all non-Medi-Cal births, but only 14.8% of Medi-Cal births. Similarly Asian/Pacific Islander mothers constituted 19.5% of non-Medi-Cal births, but only 6.3% of Medi-Cal births.

Of the total Medi-Cal births, 7.3% were to African-American mothers, while only 3.4% of non-Medi-Cal births were to African-American mothers.

Medi-Cal Trends – Race/Ethnicity Categories, 2007-2011

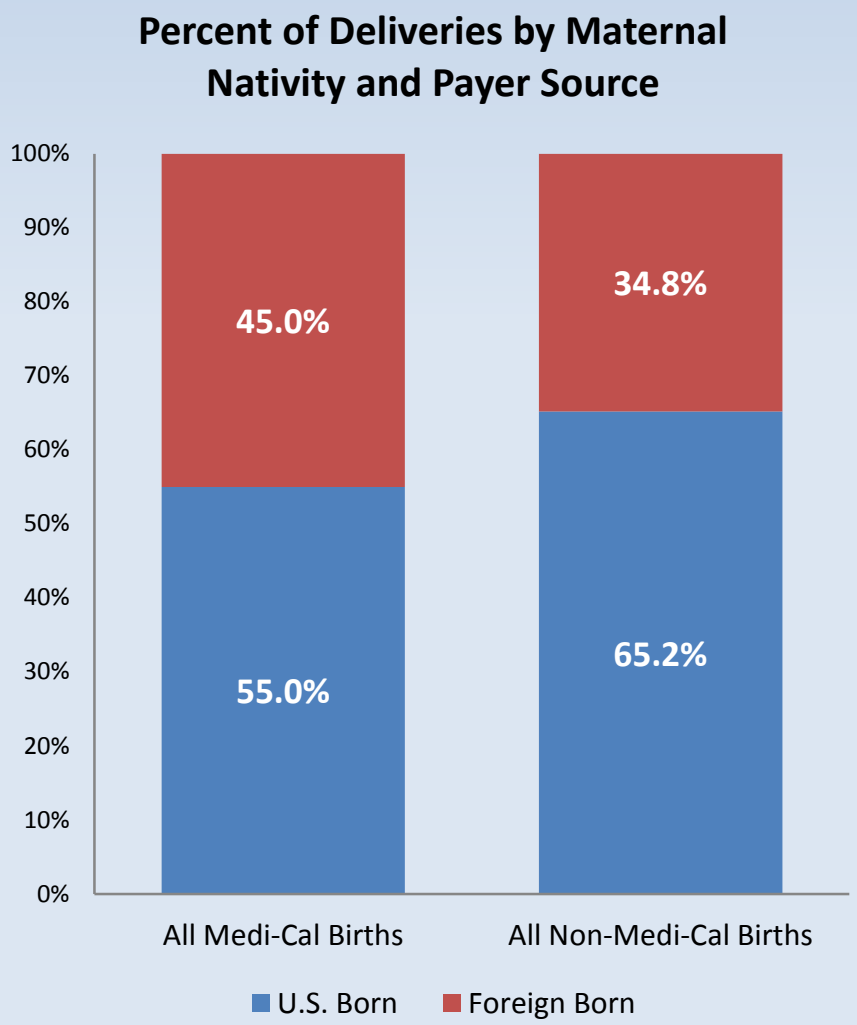


Changing racial demographics, although small, are closely tied to the Great Recession. As families and women lost employer sponsored insurance, they began to seek coverage through Medi-Cal. The decline in Hispanic women who were pregnant, reflects the recession's impact of the undocumented returning to their country of origin due to job loss. Medi-Cal experienced a slight negative trend in enrollment among this subpopulation over the last few years.

- The percentages of White and African-American mothers increased.
- Hispanic mothers made up large percent of Medi-Cal births, but have slowly declined over the period 2007-2011.
- The percentage of Asian mothers remained fairly static from year to year, until 2011, when it increased.

California Resident Hospital Births

Maternal Nativity

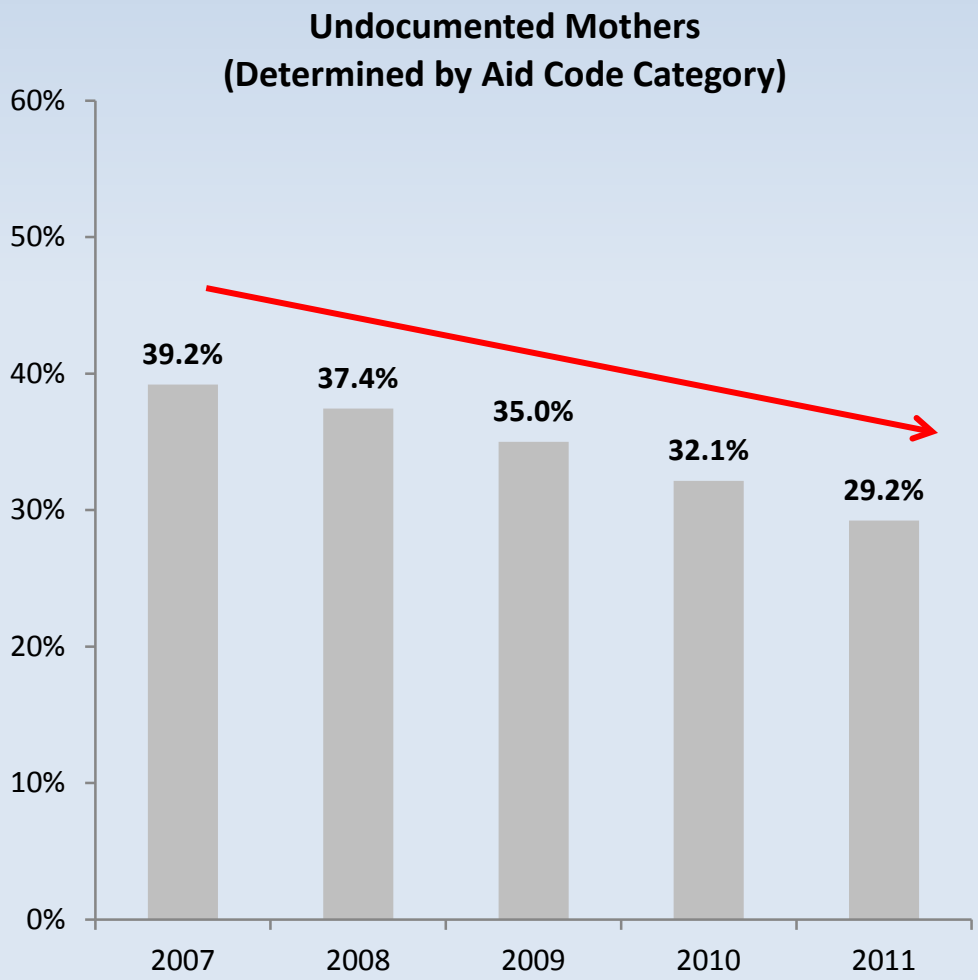


Differences between U.S.-born and foreign-born mothers with regard to low birthweight and premature births have long been reported in the literature. Foreign-born mothers of virtually every racial and ethnic group in the U.S. experience better birth outcomes compared to their U.S.-born counterparts, despite their low socioeconomic status, low educational attainment, and lack of or late initiation of prenatal care.

Among Medi-Cal financed births, 55.0% were to U.S.-born mothers and 45.0% were to foreign-born mothers.

California Resident Hospital Births 2011

Medi-Cal Trends – Undocumented Mothers, 2007-2011



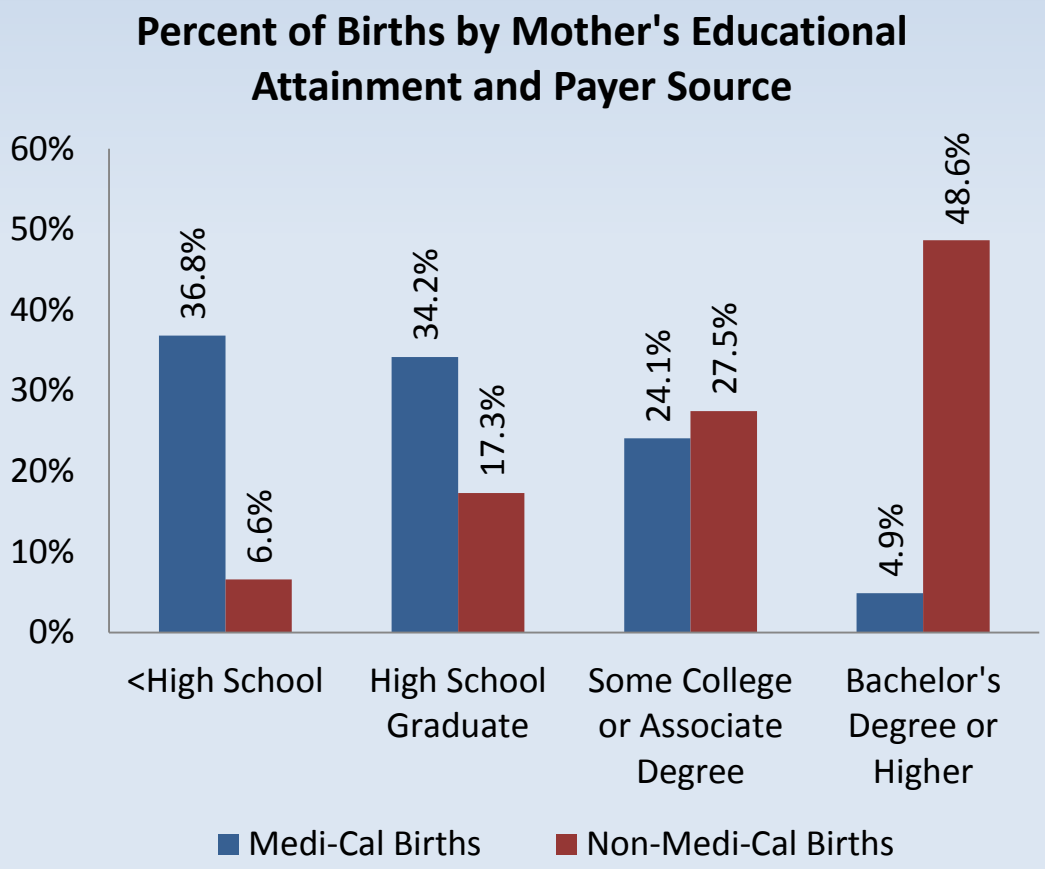
* Differences between 2007 and 2011 are statistically significant.

California Resident Hospital Births

Medi-Cal has covered a smaller percentage of births year-over-year for foreign born and undocumented mothers since the recession began.

High unemployment rates in the U.S. are believed to have motivated immigrants to return to their county of origin combined with the influx of native born women losing employer sponsored insurance has resulted in a smaller percentage of foreign born and undocumented mothers.

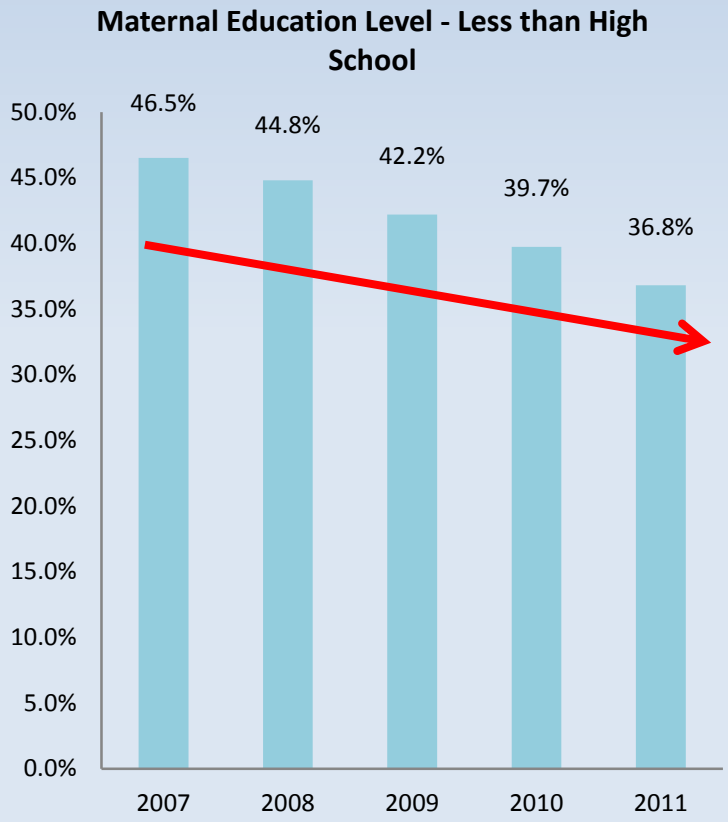
Maternal Education Level

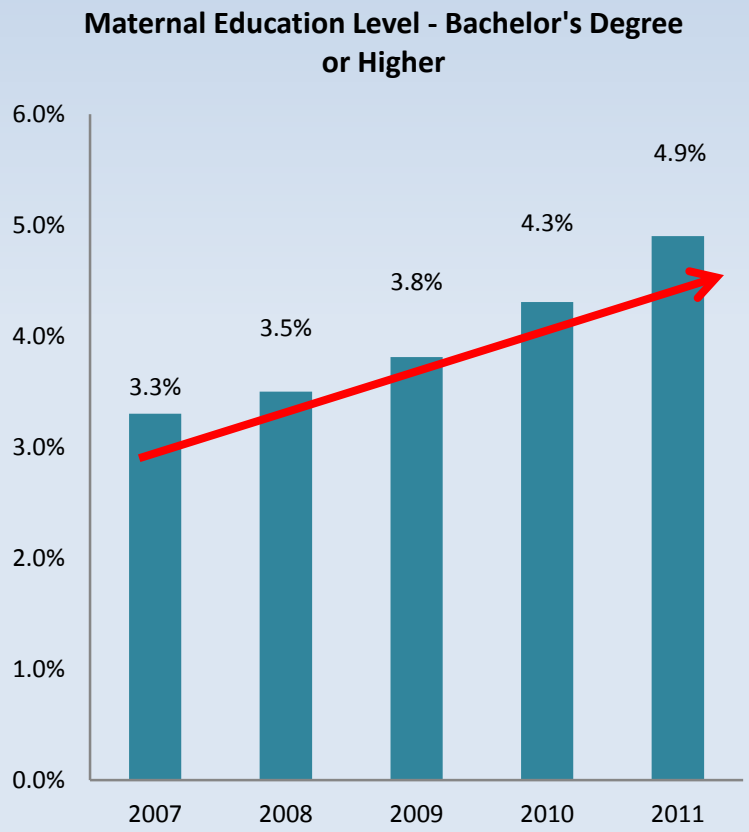


Higher parity levels, closer birth spacing, having an unwanted pregnancy, and an increased prevalence of smoking during pregnancy are associated with lower maternal educational attainment. A mother's education level is also strongly related to adverse birth outcomes such as preterm and low birthweight births, and an increased risk of stillbirth as well as neonatal and post neonatal deaths.

California Resident Hospital Births 2011

Medi-Cal Trends – Education Levels, 2007-2011





Complementing the shifts in the age categories for Medi-Cal births and further reflecting the impact of the recession, the maternal educational patterns have changed. The percent of women with lower educational levels have dropped, while women who have higher educational attainment levels have increased slightly.

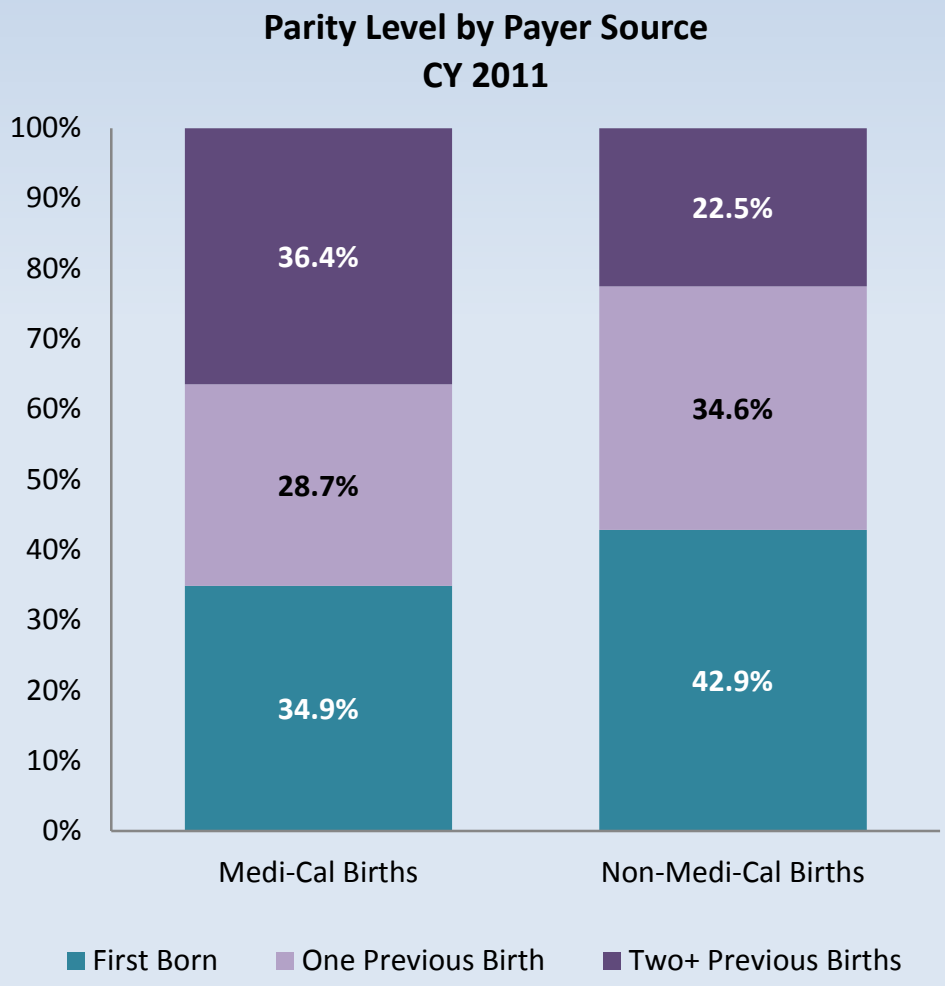
* Differences between 2007 and 2011 are statistically significant.

California Resident Hospital Births

Medi-Cal Birth Characteristics

Parity
Multiple Gestation Births
Prenatal Care
Delivery Method

Parity



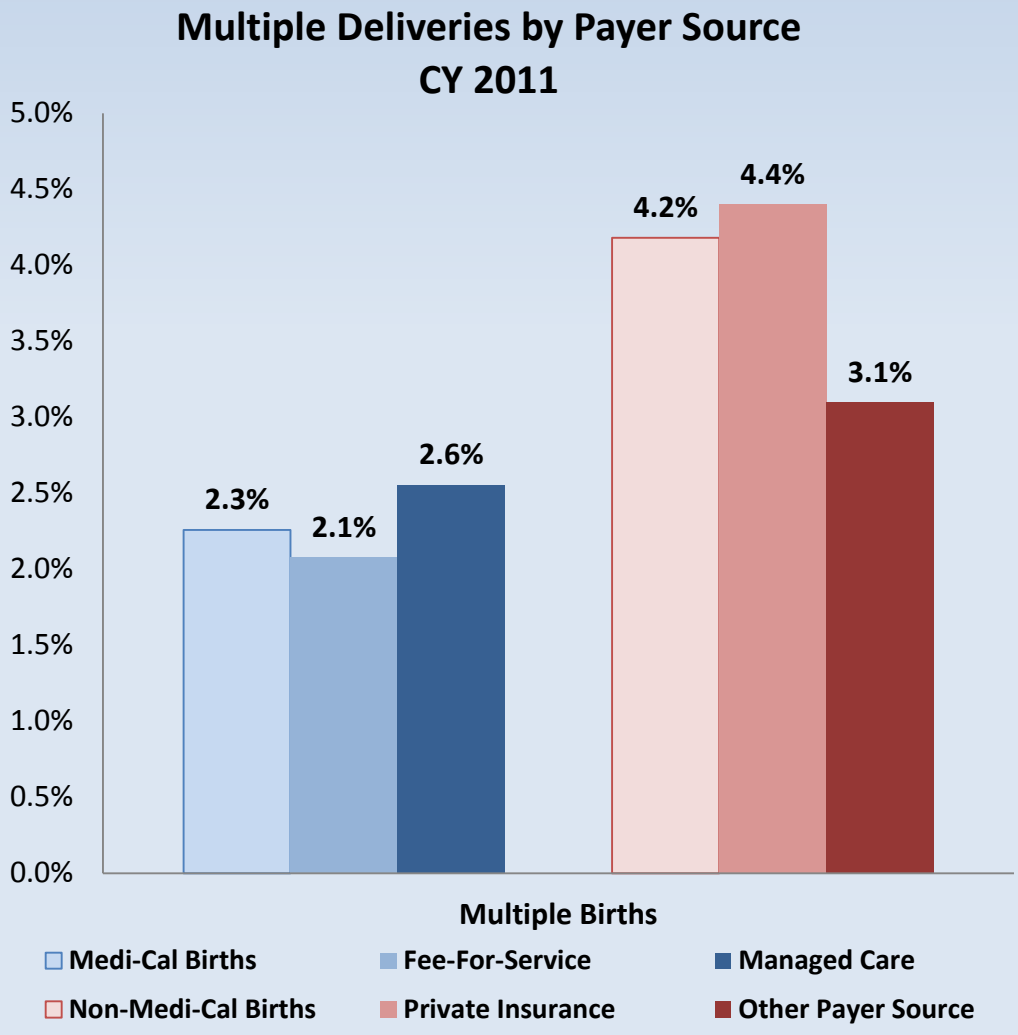
Parity is the number of pregnancies a woman has during her reproductive years. A pregnancy is defined as 20 or more weeks gestation regardless of whether the infant(s) is alive or dead at birth. Multiple births count as one the current pregnancy does not count.

High parity may increase the risk for adverse birth outcomes such as low birthweight, premature birth, stillbirth, and neonatal death.

Among Medi-Cal mothers in 2011, 34.9% were first time mothers, 28.7% had one previous birth, and 36.4% had two or more previous births.

California Resident Hospital Births 2011

Multiple Gestation Births



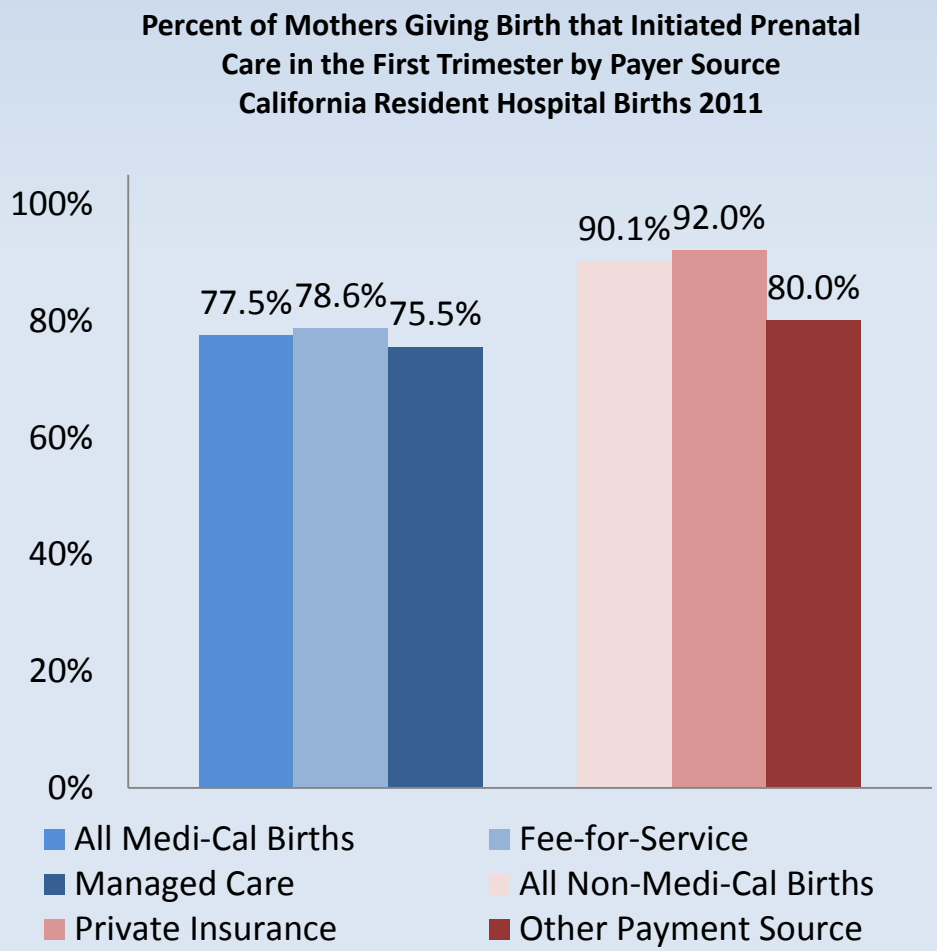
Babies born in multiple gestation births (twins or higher) are more likely to be of low birthweight or born prematurely. Multiple gestation births are more common among older mothers or mothers using artificial reproductive technology, and are also more likely to be delivered via cesarean section.

Multiple gestation births were more common among non-Medi-Cal mothers (4.2%) than Medi-Cal mothers (2.3%).

Among Medi-Cal mothers, those participating in managed care had the highest rates of multiple gestation births at 2.6%.

California Resident Hospital Births 2011

Prenatal Care



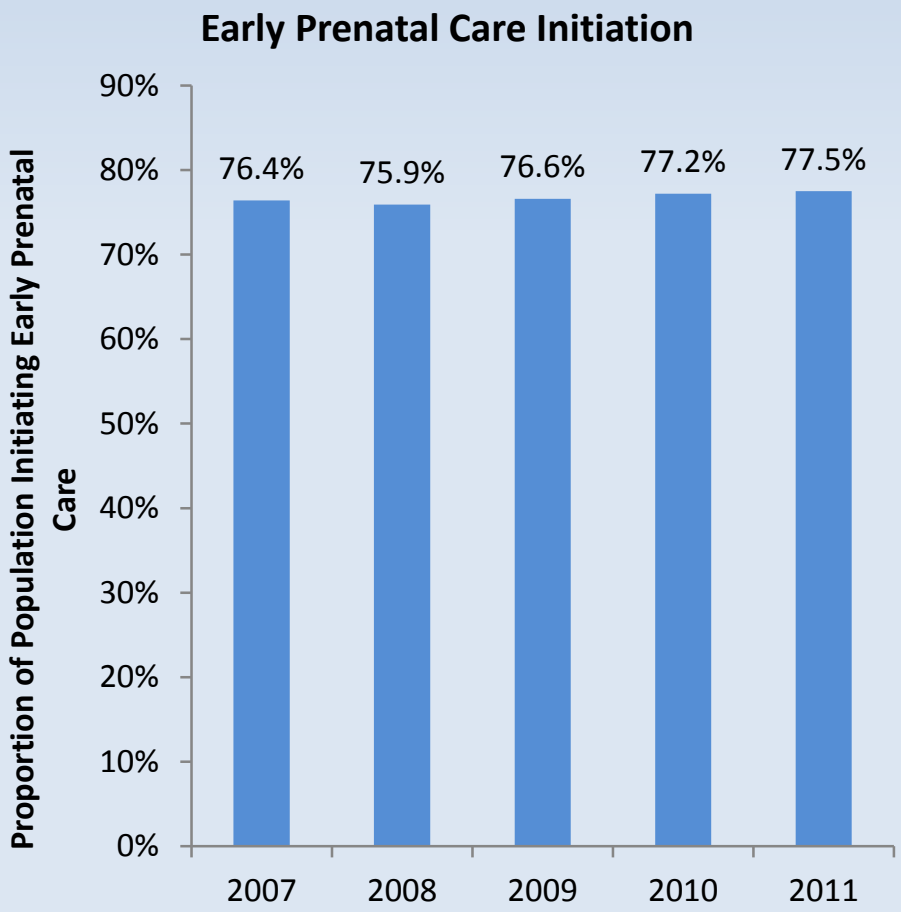
Since important developments occur within the fetus in the first 12 weeks of pregnancy, timely prenatal care is essential. Women who initiate prenatal care later in their pregnancies are at increased risk for having a preterm or low birthweight newborn, and having a baby requiring care in an intensive care unit.

The Healthy People 2020 goal of 77.9% or more of all pregnant women in the US receiving prenatal care in their first trimester of pregnancy reflects the strong relationship between early prenatal care and healthier births.

Among all Medi-Cal mothers, 77.5% initiated prenatal care during their first trimester of pregnancy.

California Resident Hospital Births 2011

Medi-Cal Trends – Early Prenatal Care Initiation, 2007-2011



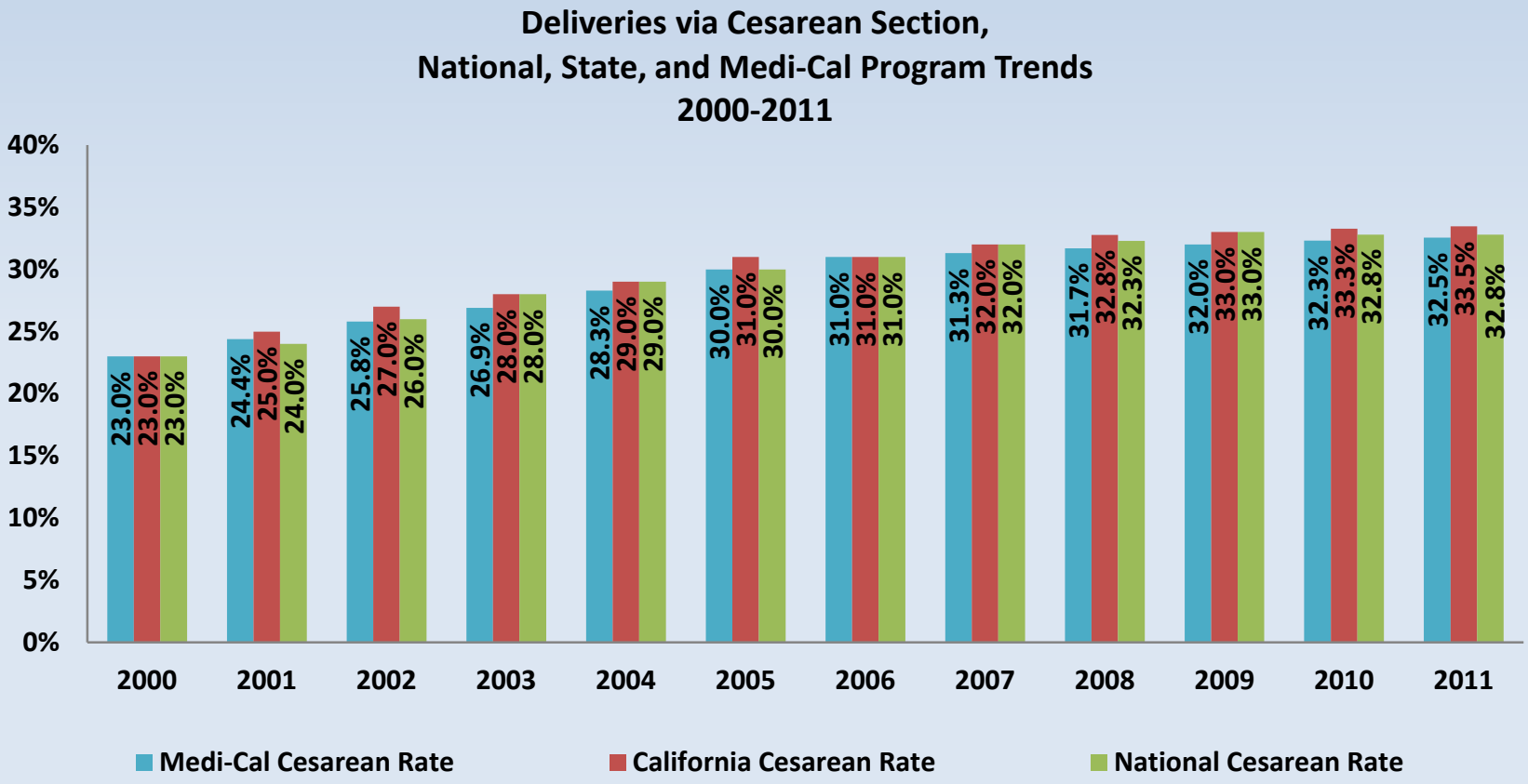
Medi-Cal has made progress in initiating early prenatal care.

The percentage of Medi-Cal eligibles initiating early prenatal care has been climbing since 2008, and in 2010 was just slightly below the Healthy People 2020 goal of 77.9%.

In 2011, the percentage of Medi-Cal mothers initiating early prenatal care exceeded the Healthy People 2020 goal.

California Resident Hospital Births

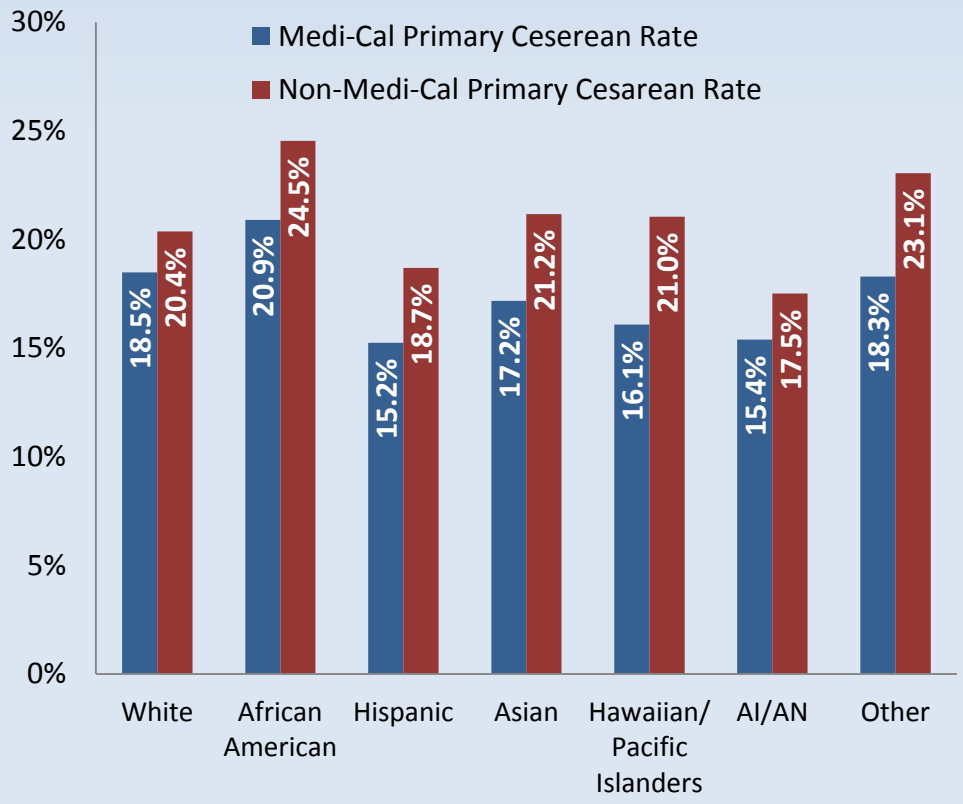
Delivery Method



Cesarean section rates rose nationally, statewide, and within Medi-Cal, but have flattened out from 2009 through 2011. Compared with vaginal births, cesarean sections are costly and poses additional health risks for mother and child. Clear clinical indications exist for undergoing a cesarean delivery, but non-medical factors also influence these rates and include maternal choice and physician practice patterns.

Medi-Cal Trends – Delivery Methods, 2007-2011

Primary Cesarean Section Rate by Race and Payer Source, California Resident Hospital Births 2011



A primary cesarean section is defined as a Cesarean Section performed on a patient who has previously never had a Cesarean Section.

The Center for Disease Control and Prevention (CDC) states that the Cesarean Section rate in the United States has exceeded 32%*. Since 1985, The World Health Organization (WHO) has recommended that the national C/S rate not exceed 15%. In the US, Healthy People 2020 recommend a Primary Cesarean Section rate at or below 23.9%**.

Primary cesarean section rates were lower among Medi-Cal than among non-Medi-Cal births (16.4% and 20.3%, respectively).

Among Medi-Cal mothers, the primary cesarean section rate was highest among mothers ages 18 to 19 (18.8%), women over age 35 (18.2%), African-American women (20.9%) and women who self-identified as Other race categories (18.3%), and white women (18.5%).

**Information from the "National Vital Statistic Reports, Nov 2011"*

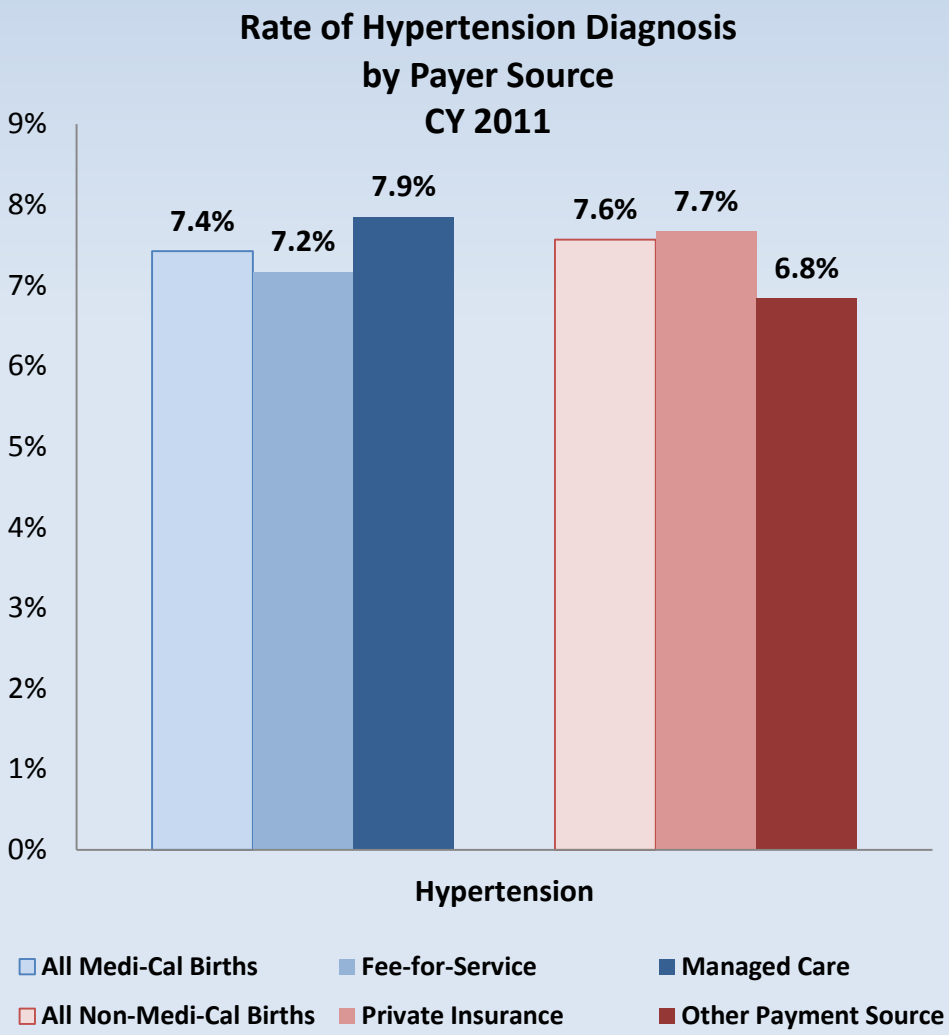
***Based on "Healthy People 2020" recommendations.*

California Resident Hospital Births

Maternal Comorbidities and Behavioral Risk Factors

Hypertension
Diabetes
Pre-Pregnancy Weight
Smoking
Substance Use

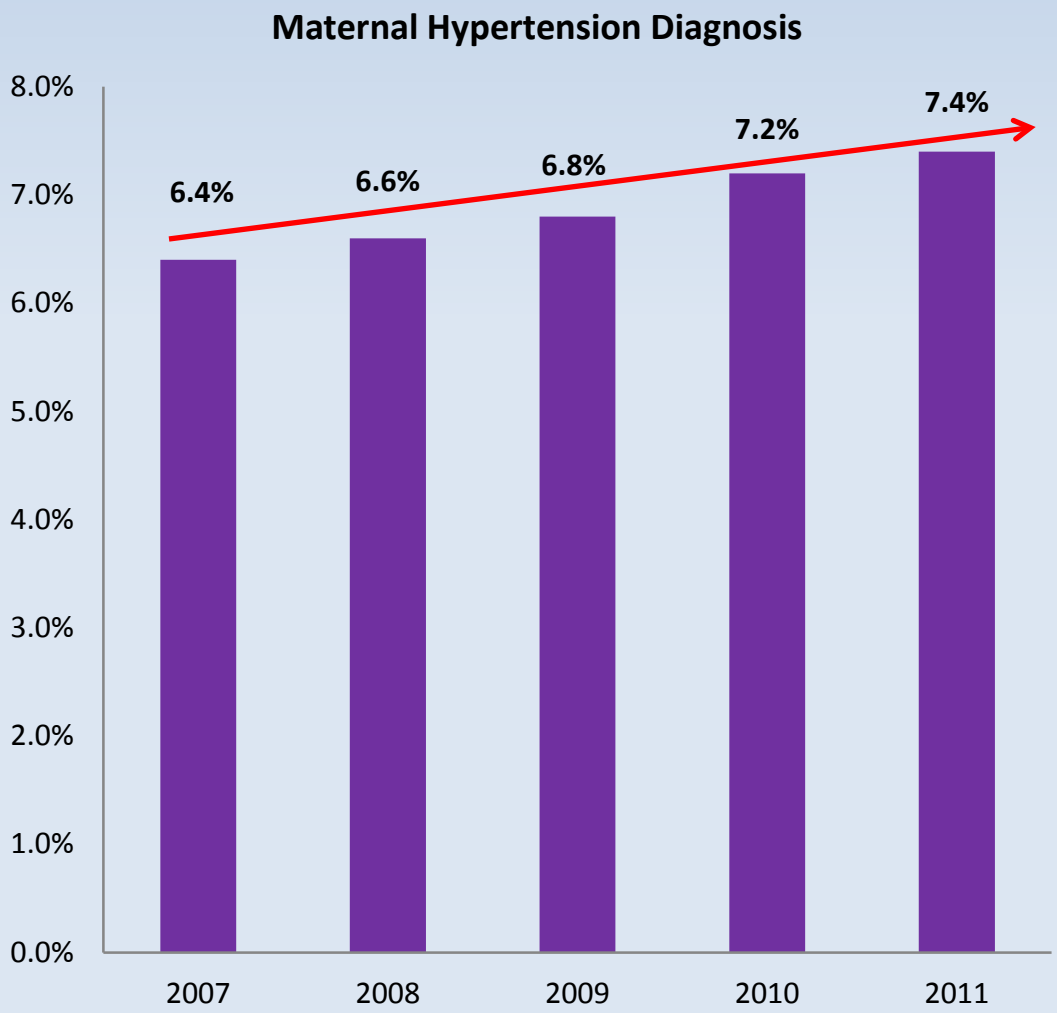
Hypertension



Hypertension is a condition characterized by high blood pressure. Gestational hypertension is a variation of hypertension that develops as a result of pregnancy and diminishes after childbirth. Whether chronic or gestational, hypertension during pregnancy is dangerous to both the mother and the fetus. Approximately 11% of the pregnancy-related maternal deaths in 2006 and 2007 were attributed to hypertension. The adverse birth outcomes linked to hypertension include low birthweight, preterm birth, and placental abruption. Women who are obese prior to pregnancy, under 20 years old or over 40 years old, or have diabetes are at a greater risk for developing hypertension during pregnancy.

California Resident Hospital Births 2011

Medi-Cal Trends – Comorbidities, 2007-2011

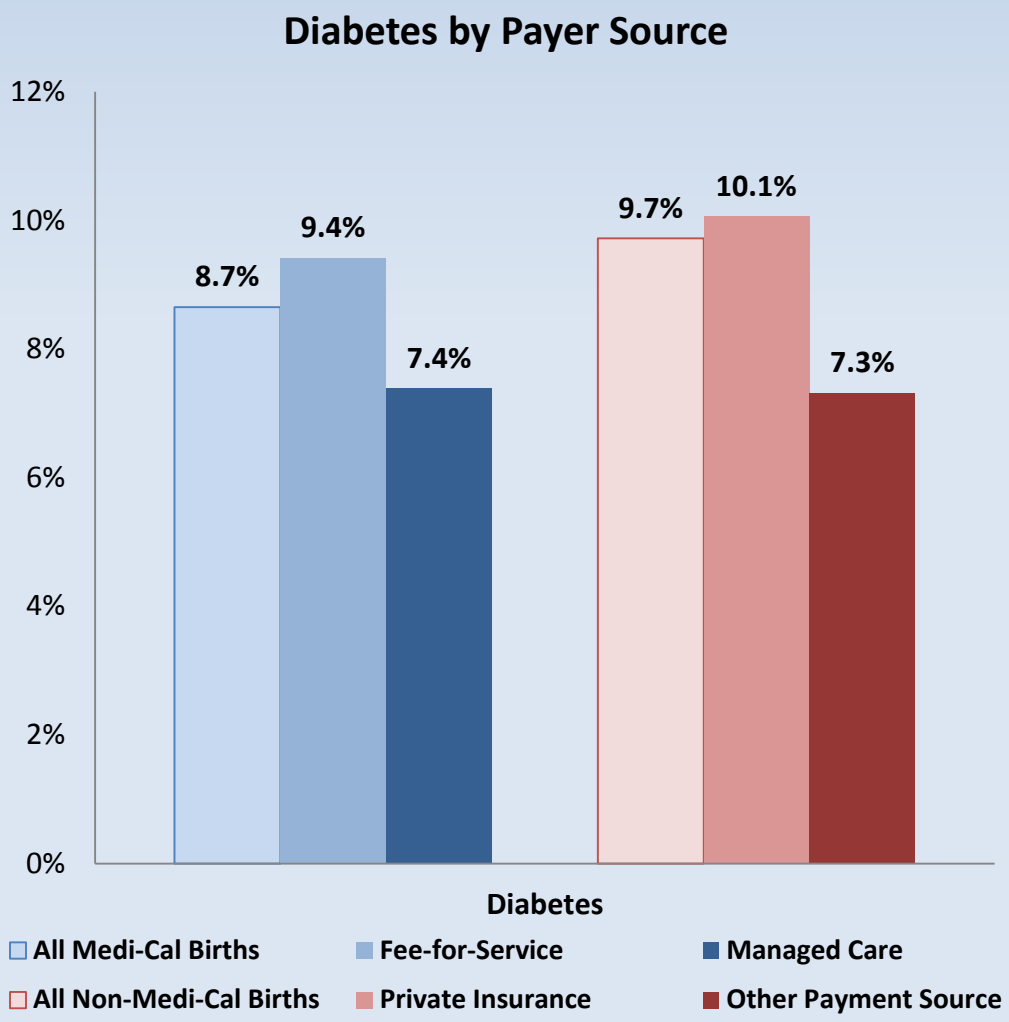


A slight rise in the percent of Medi-Cal mothers diagnosed with hypertension was recognized over the period 2007 through 2011. This trend is consistent with the population changes associated with the Great Recession, specifically, an increase in older mothers within the Medi-Cal population.

* Difference between CY 2011 and CY 2007 is statistically significant.

California Resident Hospital Births

Diabetes

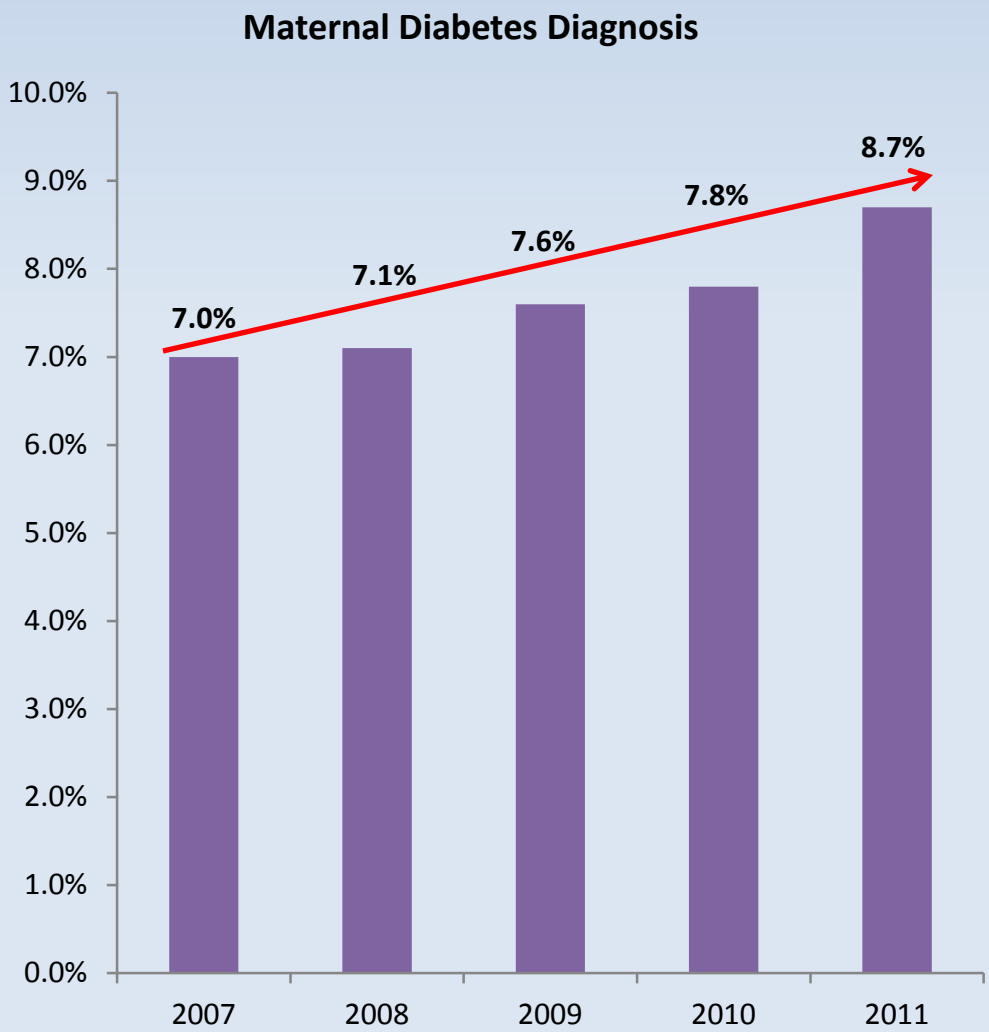


Maternal diabetes is associated with several adverse birth outcomes, including large-for-gestational-age births (LGA), preterm birth, miscarriage, stillbirth, or congenital birth defects. Because of their larger size, newborns born to mothers with diabetes are more likely to be born via cesarean section or to be injured during vaginal delivery.

Maternal diabetes can have long-term negative effects on the mother and newborn. Children born to mothers with diabetes are more likely to be overweight later in life and develop diabetes themselves, while 35% to 60% of women with gestational diabetes (a temporary disorder brought on by pregnancy) develop Type 2 diabetes within 10 years of delivery.

California Resident Hospital Births 2011

Medi-Cal Trends – Comorbidities, 2007-2011

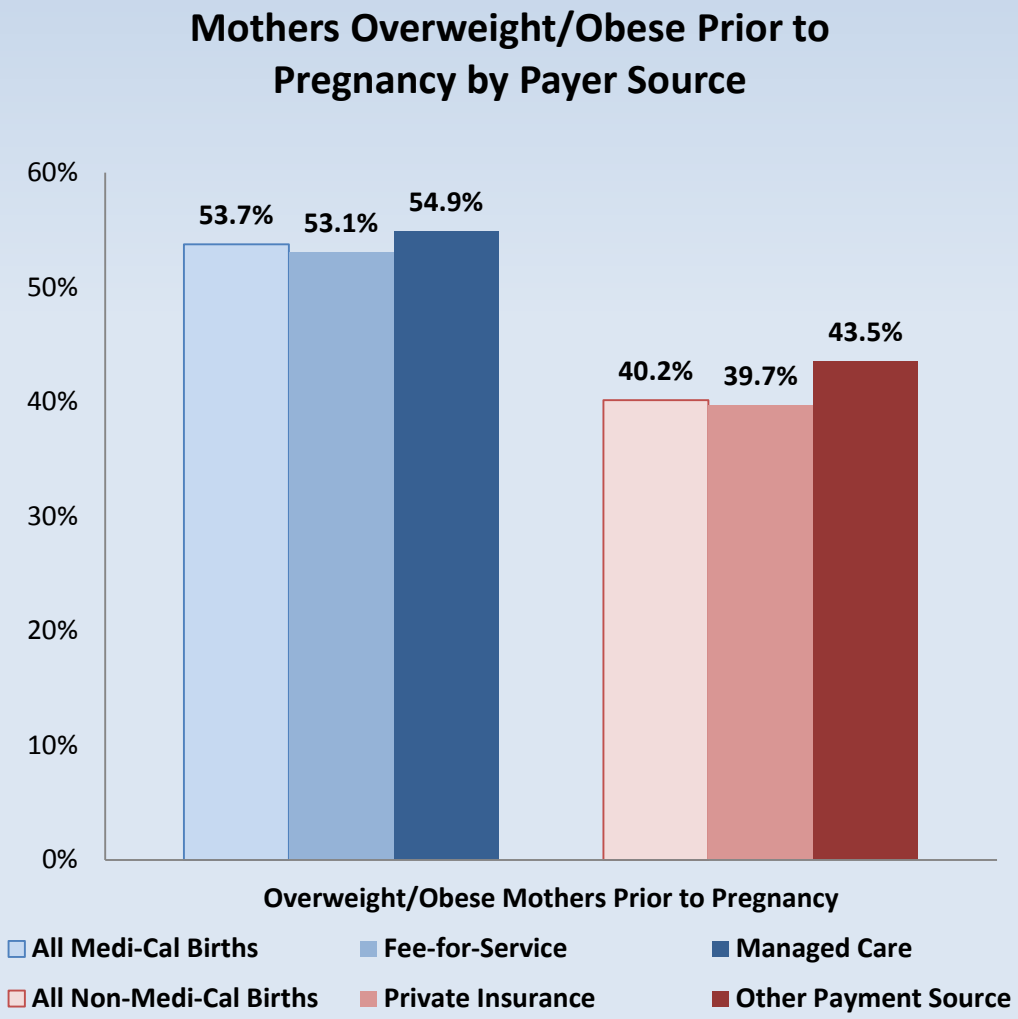


* Difference between CY 2011 and CY 2007 is statistically significant.

California Resident Hospital Births

Similar to hypertension, we see an upward trend in the percentage of Medi-Cal mothers diagnosed with diabetes. This trend fits with the population changes associated with the Great Recession, specifically, an increase in older mothers within the Medi-Cal population as well as a decrease in foreign born mothers.

Pre-Pregnancy Weight



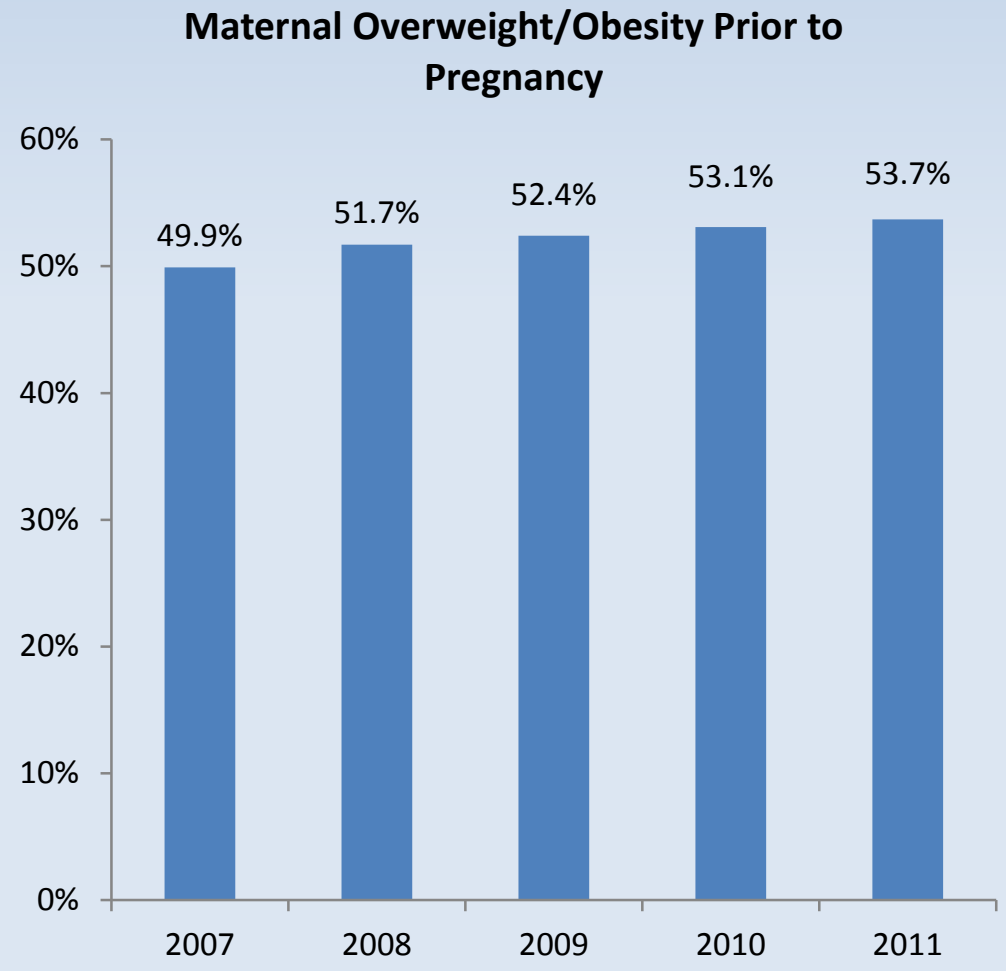
Maternal pre-pregnancy weight ranging outside of normal is associated with many adverse birth outcomes such as LGA, macrosomia, neural tube defects, stillbirth, neonatal death, and congenital heart defects (the leading cause of infant death when attributed to birth defects).

Newborns who are born LGA or affected by macrosomia also have an increased risk of future obesity and diabetes.

Women within normal weight range are less likely to deliver preterm, develop gestational hypertension or diabetes, or require a cesarean section in comparison to women who are overweight or obese.

California Resident Hospital Births 2011

Medi-Cal Trends - Pre-Pregnancy Weight, 2007-2011



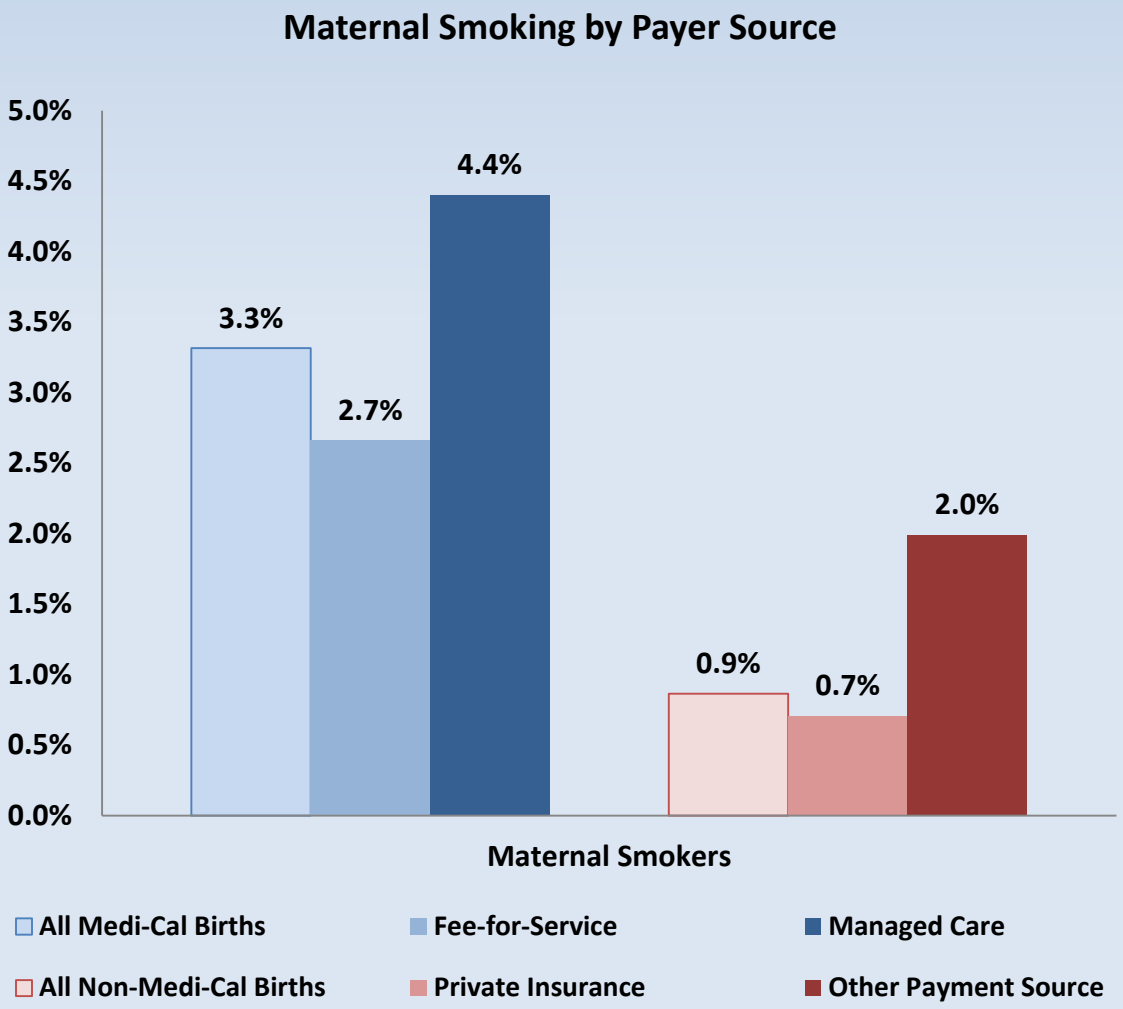
Similar to national trends, obesity rates have steadily increased for Medi-Cal mothers.

The California birth certificate captured mother's height and weight for the first time in 2007, with weight recorded prior to pregnancy as well as at the time of delivery. Pre-pregnancy height and weight were used to calculate a mother's BMI.

* Difference between 2007 and 2011 is statistically significant.

California Resident Hospital Births

Smoking



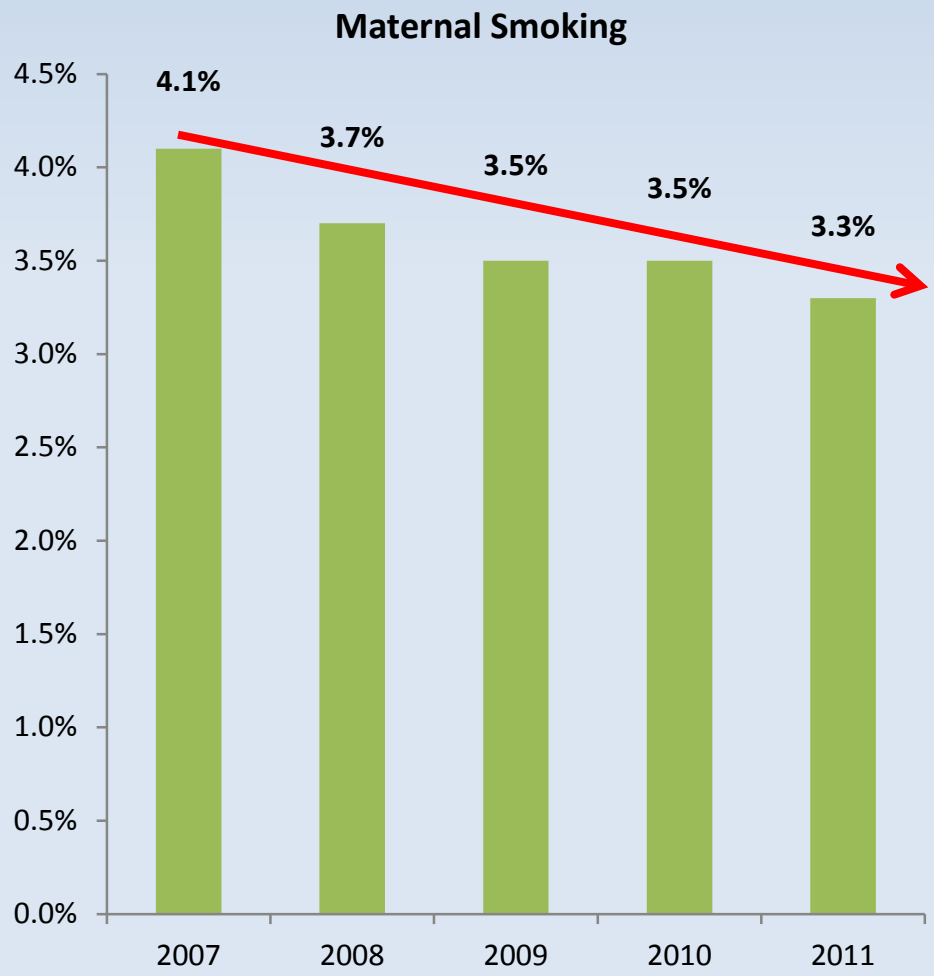
Smoking during pregnancy is less common in California (2.2% of births in 2011) than in the rest of the U.S. According to the CDC's PRAMS data, 15.6% of U.S. mothers smoked during their last three months of pregnancy in 2010.

Smoking during pregnancy is associated with the potential for spontaneous abortion, low birthweight, stillbirth, growth retardation, preterm delivery, lung or brain tissue damage, and a higher occurrence of sudden infant death syndrome (SIDS).

Women who smoke during pregnancy are more likely to be young mothers, white or African-American, low income earners, and to be enrolled in a Medicaid program or have no insurance.

California Resident Hospital Births 2011

Medi-Cal Trends – Behavior Risk Factors , 2007-2011



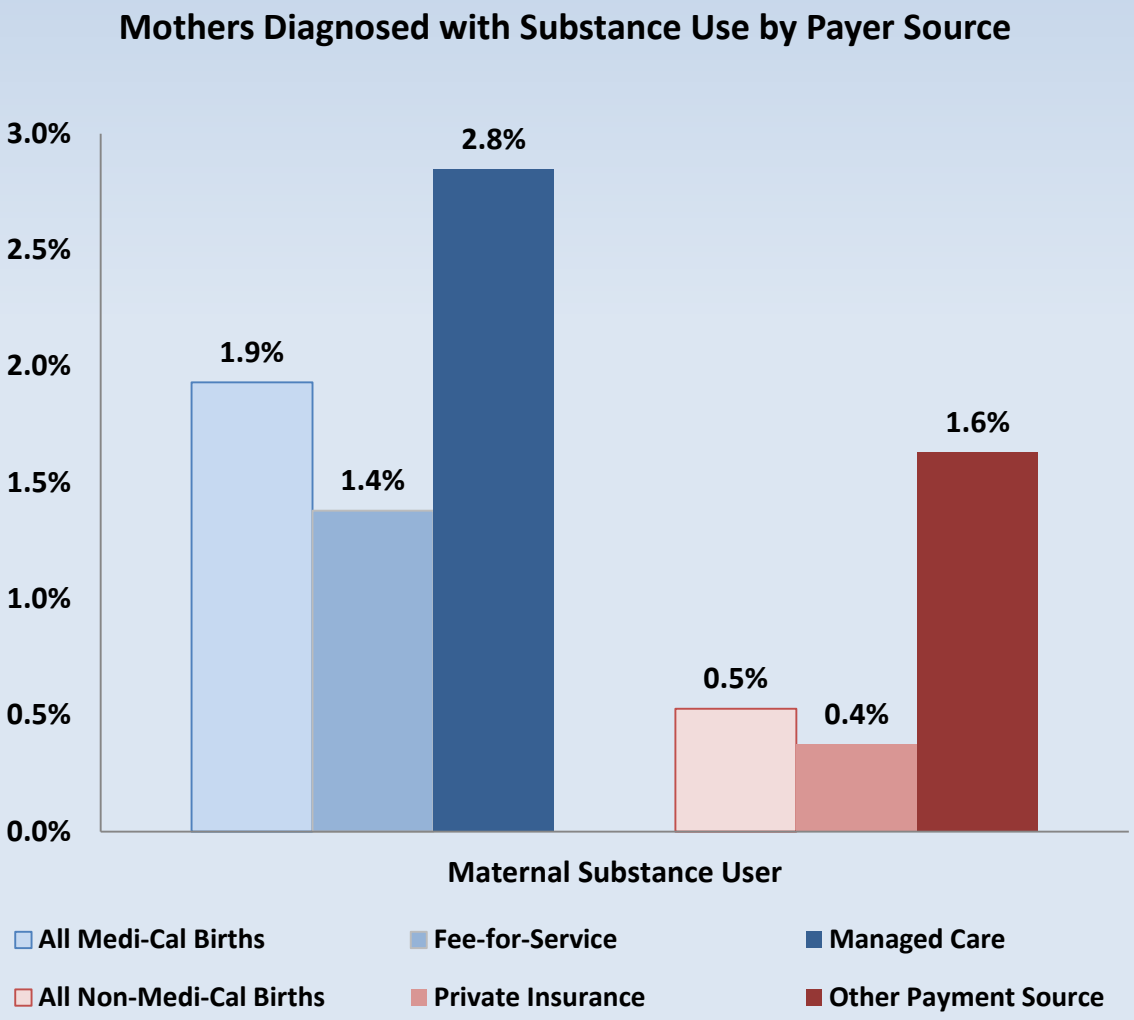
Falling smoking rates could again be attributed to an influx of women who are older, have higher educational attainment, as well as overall falling smoking rates in California.

Women who smoke during pregnancy are more likely to be young mothers, white or African-American, low income earners, and to be enrolled in a Medicaid program or have no insurance.

* Difference between CY 2011 and CY 2007 is statistically significant.

California Resident Hospital Births

Substance Use



California Resident Hospital Births 2011

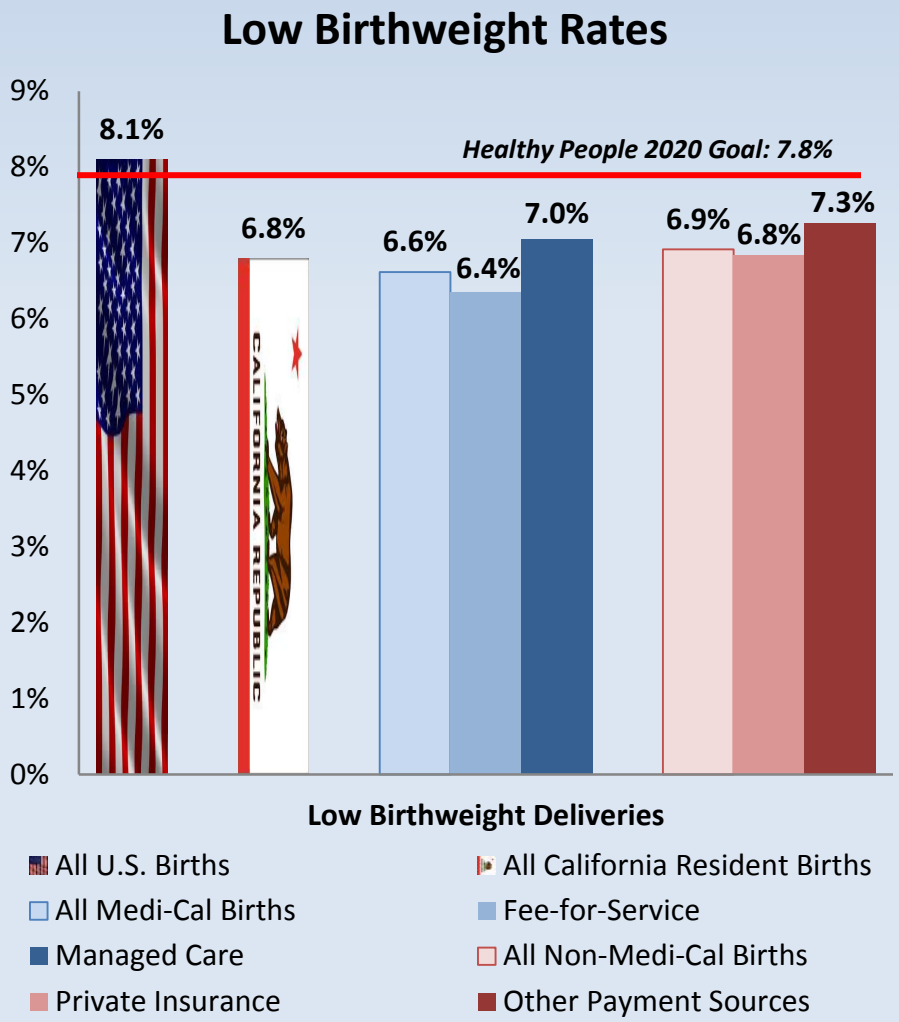
An estimated 4% of pregnant women in the U.S. are substance abusers. Recent data suggests that while the maternal abuse of alcohol and cocaine has decreased, use of marijuana and methamphetamines has increased dramatically among young mothers.

The birth outcomes and developmental problems commonly associated with substance abuse during pregnancy include spontaneous miscarriage, low birthweight, preterm birth, stillbirth, fetal withdrawal symptoms, small head size, abnormal facial features, learning disabilities, speech/language delays, and vision/hearing problems.

Birth Outcomes

Low Birthweight, Very Low Birthweight,
Preterm, Very Preterm Births, and Infant Mortality

Low Birthweight Deliveries

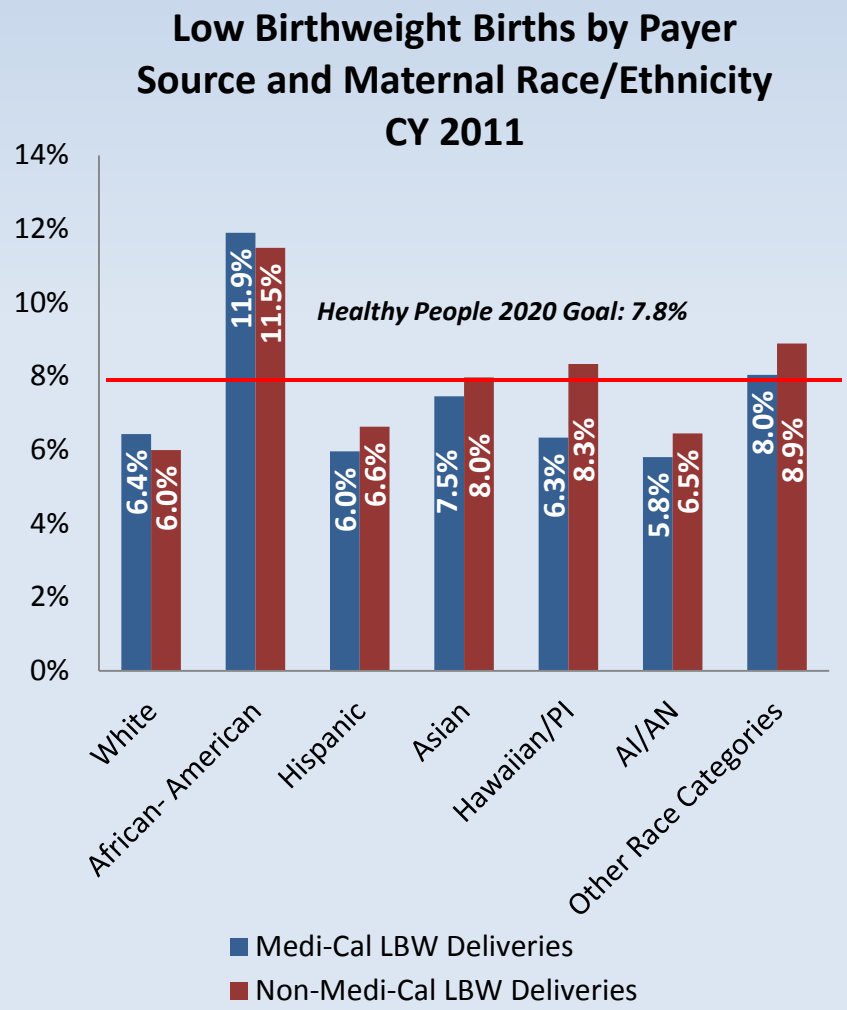


Low birthweight (<2500 grams) is a major contributor to infant mortality. In the U.S., the three leading causes of infant death are congenital-defects, low birthweight, and sudden infant death syndrome (SIDS), all of which account for 44% of infant deaths nationally.

Hospital costs for newborns delivered in the low birthweight and very low birthweight ranges (<1500 grams) are substantially higher than for normal birthweight newborns (≥2500 grams). In addition, newborns delivered at low or very low birthweight are at increased risk for life-long and disabling health conditions. The overall low birthweight rate among Medi-Cal births was 6.6%, compared to 6.9% among all non-Medi-Cal births.

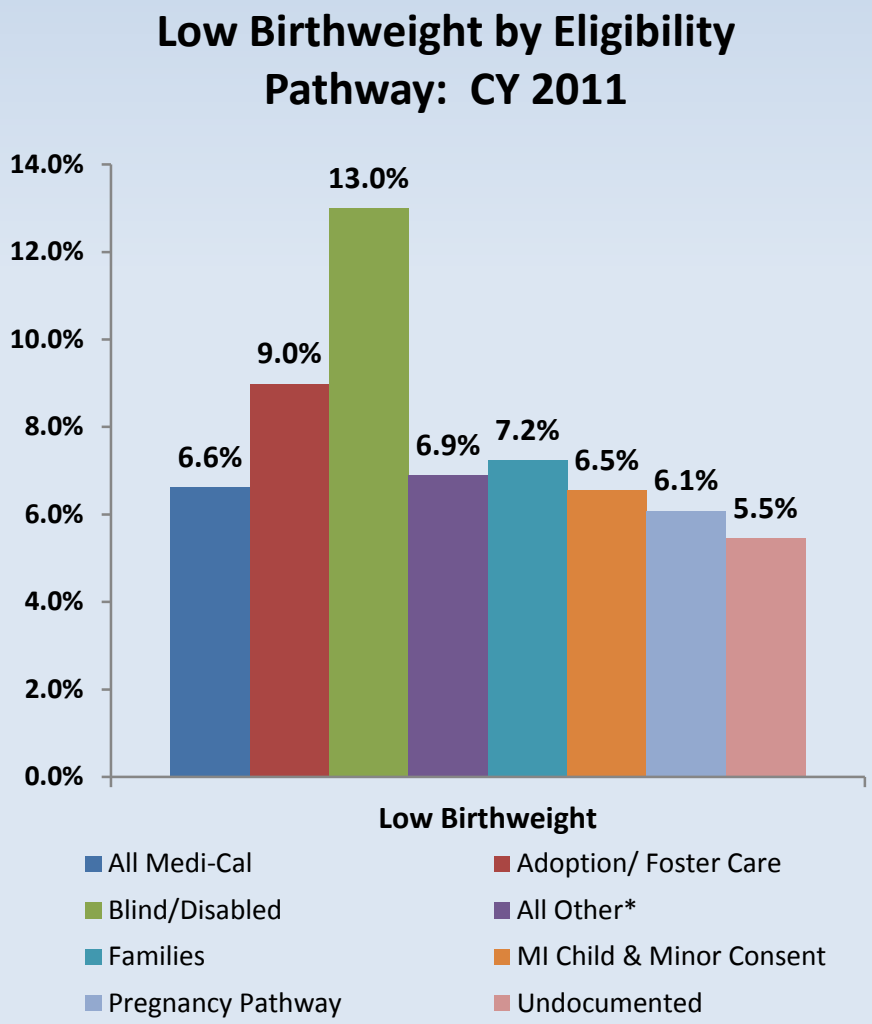
California Resident Hospital Births 2011

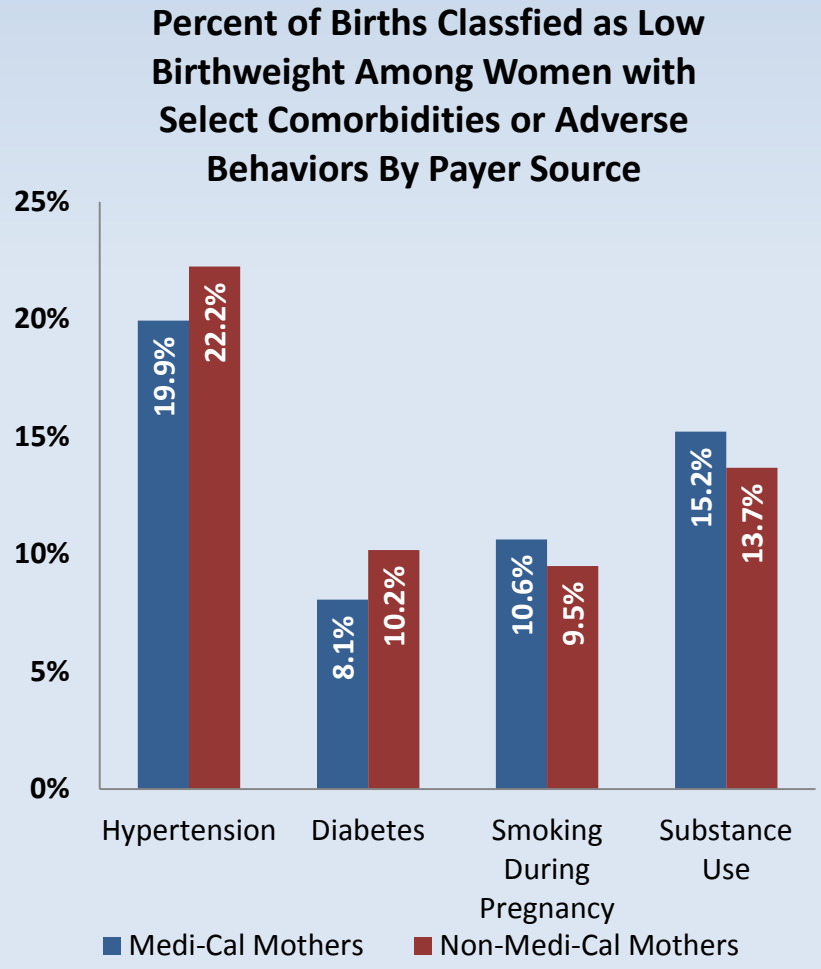
Low Birthweight Deliveries



California Resident Hospital Births 2011

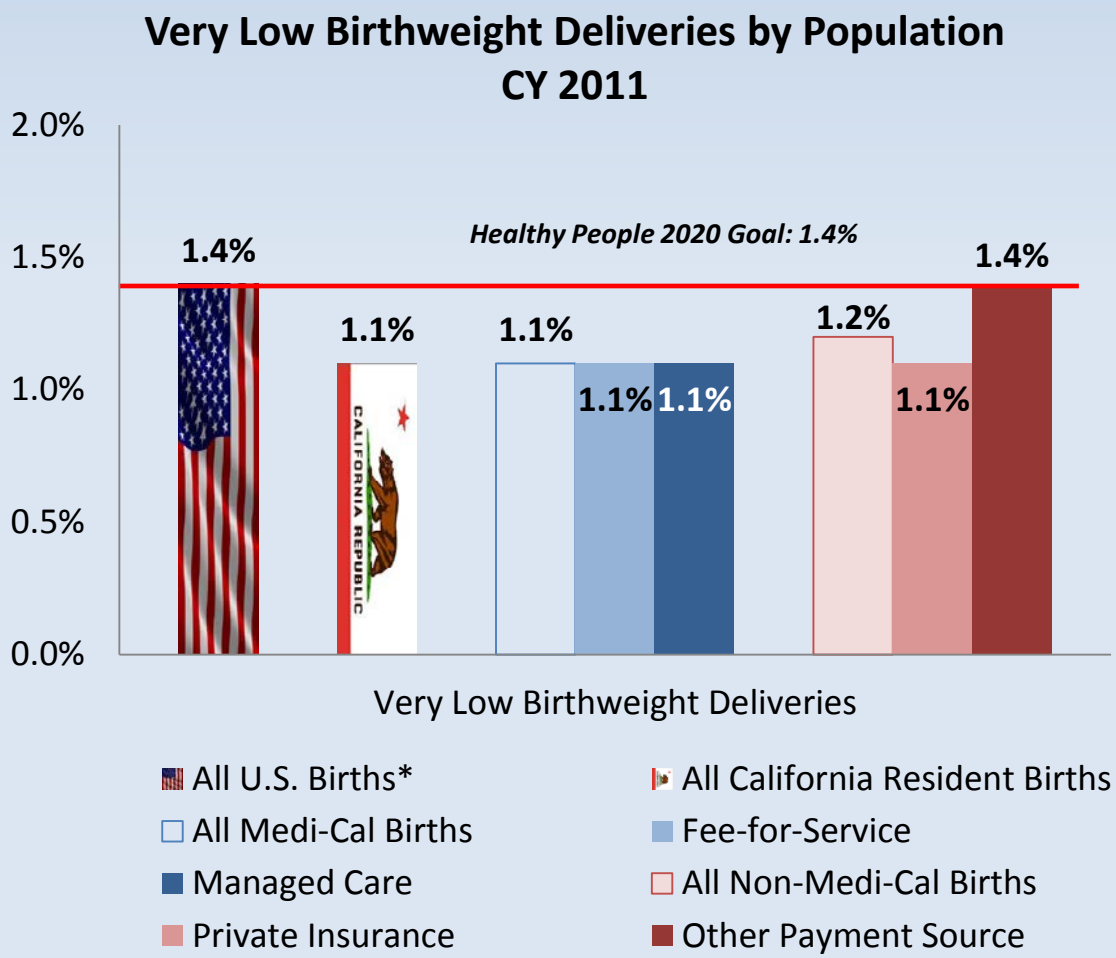
Low Birthweight Maternal Comorbidities & Health Behaviors





California Resident Hospital Births 2011

Very Low Birthweight Deliveries



California Resident Hospital Births 2011

Newborns delivered at a very low birthweight (<1500 grams) account for over half (53.1%) of all infant deaths in the U.S. Among all births financed by Medi-Cal, the percent of very low birthweights was 1.1%. The Healthy People 2020 goal is to reduce the rate of very low birthweight births to 1.4% or below.

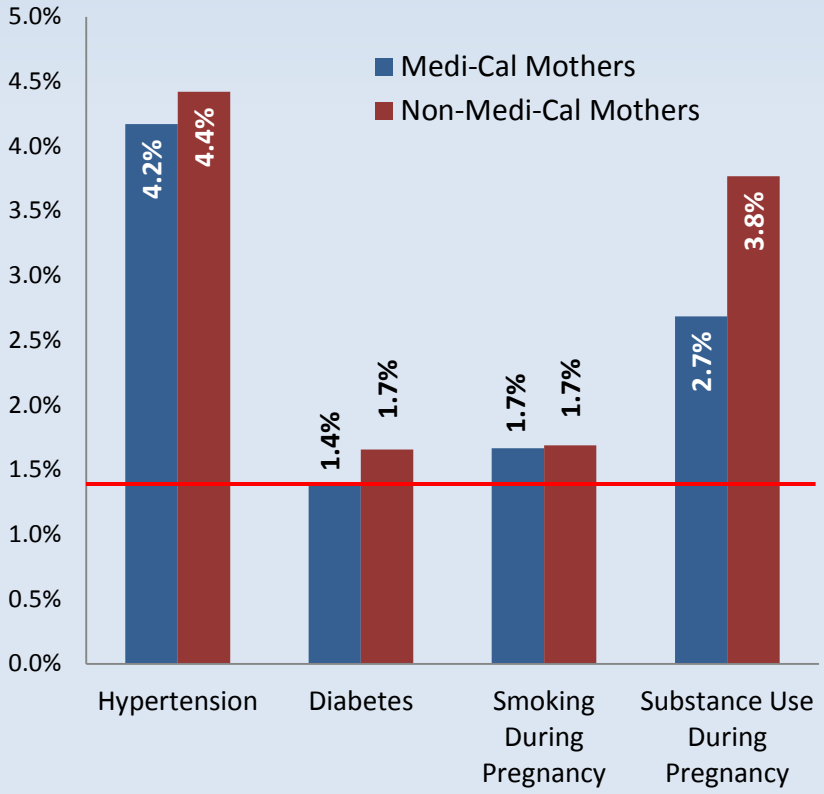
The very low birthweight rate was the same for births to Medi-Cal managed care beneficiaries (1.1%), Medi-Cal FFS beneficiaries (1.1%), and births financed by private insurance (1.1%).

Medi-Cal Trends – Very Low Birthweight

RASD found that these factors were associated with higher percentages of very low birthweight deliveries among Medi-Cal mothers:
- **Multiple gestation births**
- **Hypertension**
- **Substance use**
- **African-American mothers**
- **Blind/Disabled mothers**
- **Mothers over age 35**

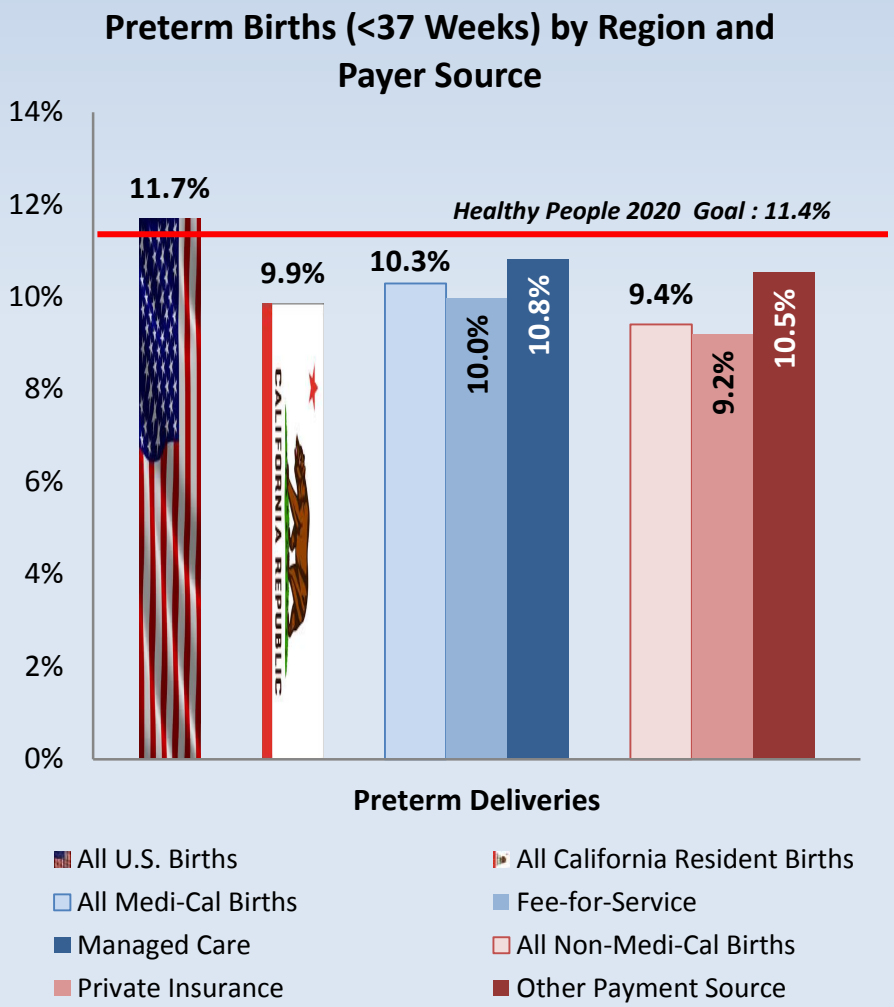
The following factors were associated with lower percentages of very low birthweight among Medi-Cal mothers:
- **Mothers without SIS**
- **Singleton births**
- **Age 20-24**
- **One previous birth**
- **Hispanic, Asian, or white mothers**
- **Less than a high school education**

Very Low Birthweight Deliveries Among Women with Selected Comorbidities or Adverse Behaviors By Payer Source California Resident Hospital Births 2011



California Resident Hospital Births

Preterm Deliveries



The rate of preterm births is almost twice as high in the U.S. compared to other developed countries. Babies born prematurely (<37 complete weeks of gestation) are at increased risk for death and life-long disabling conditions including hearing and vision loss, respiratory problems, mental retardation and cerebral palsy. The Healthy People 2020 goal is to reduce the rate of preterm births to 11.4%.

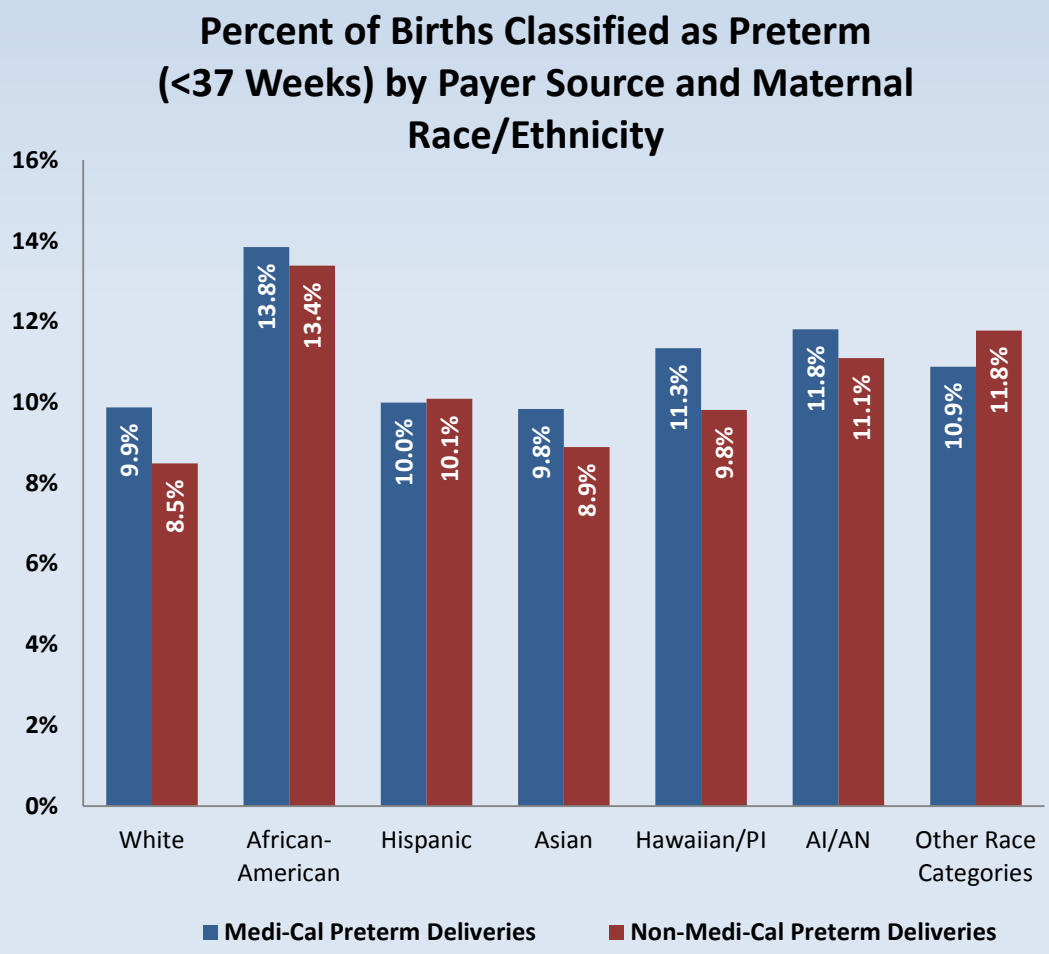
In 2011, 9.9% of hospital births to all California resident mothers were premature. Preterm rates were higher among Medi-Cal financed births (10.3%) than non-Medi-Cal financed births (9.4%). Preterm rates were slightly higher among Medi-Cal FFS beneficiaries (10.0%) than births financed by private insurance (9.2%), and more prevalent among Medi-Cal managed care beneficiaries (10.8%) and births financed by other funding sources (10.5%).

California Resident Hospital Births 2011

Preterm Deliveries

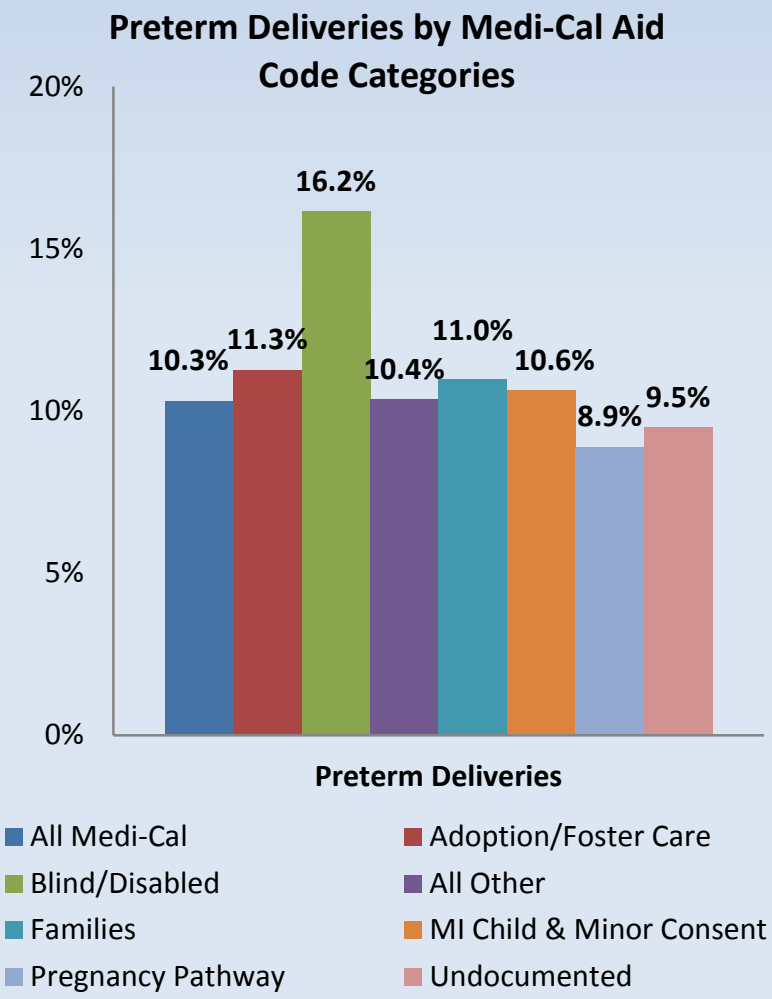
Medi-Cal categories with higher percentages of preterm births:
- Multiple gestation births
- Hypertension
- Substance use
- Blind/Disabled aid category
- Diabetes

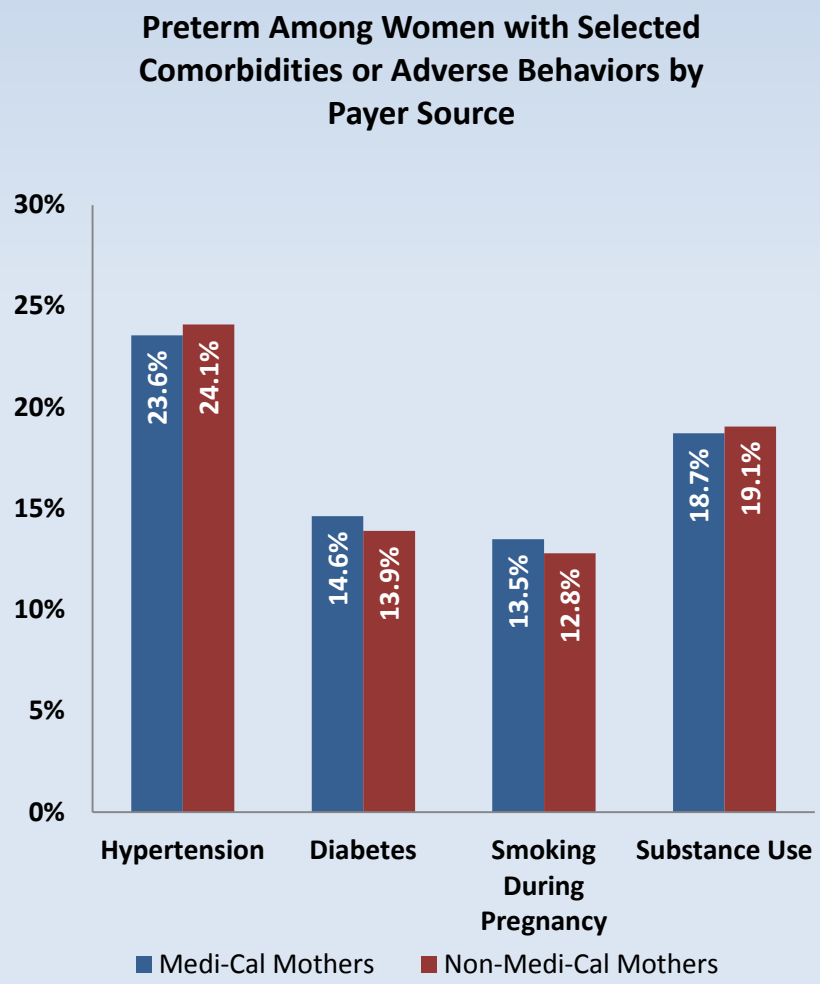
Medi-Cal categories with lower percentages of preterm births:
- Singleton birth
- Pregnancy-related aid category
- Ages 20-24
- First-born child
- Bachelor's degree or higher
- Foreign-born mothers



California Resident Hospital Births 2011

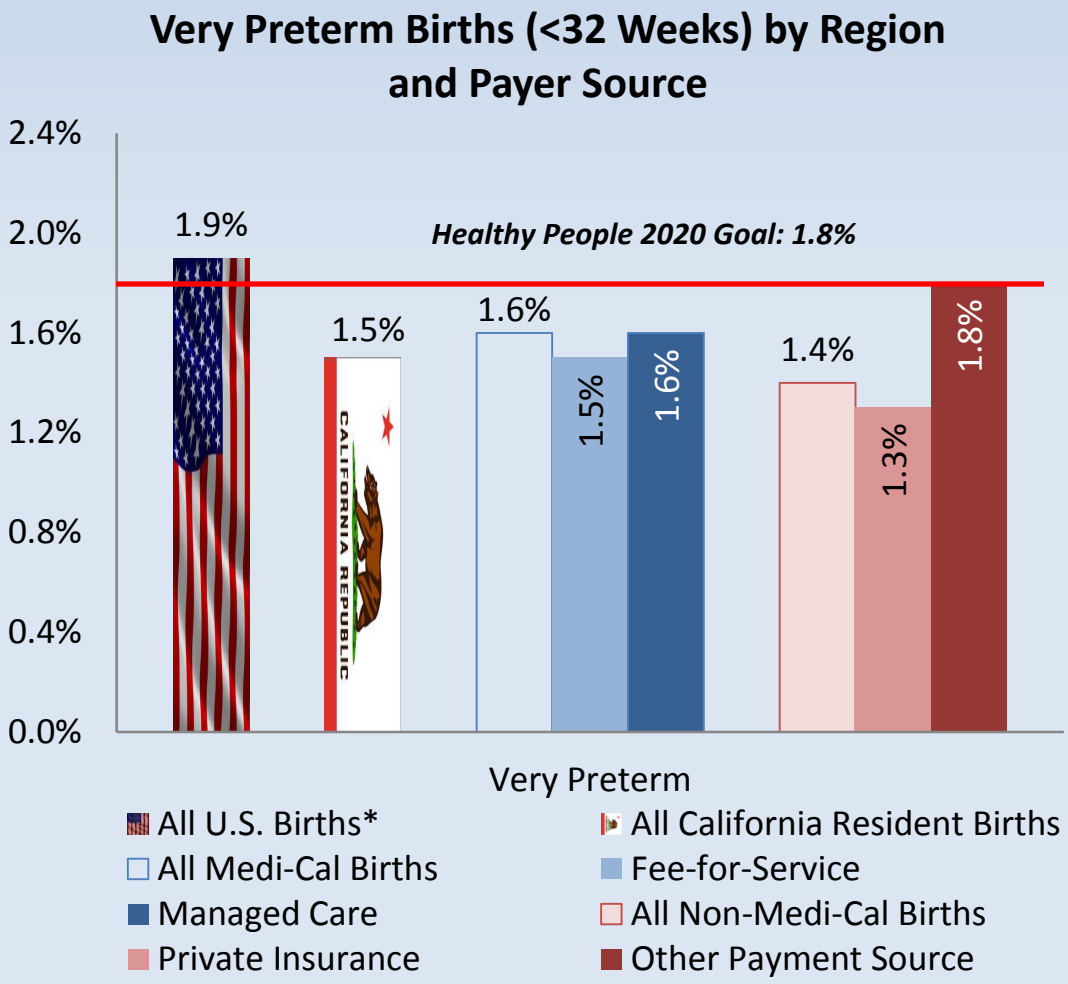
Preterm Deliveries





California Resident Hospital Births 2011

Very Preterm Deliveries

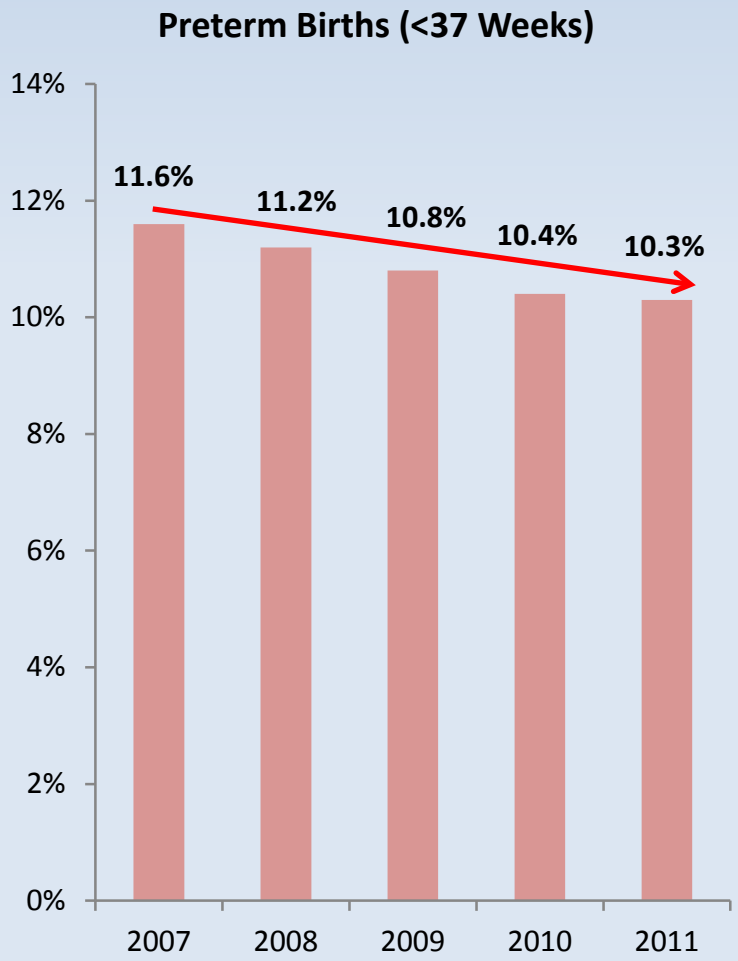


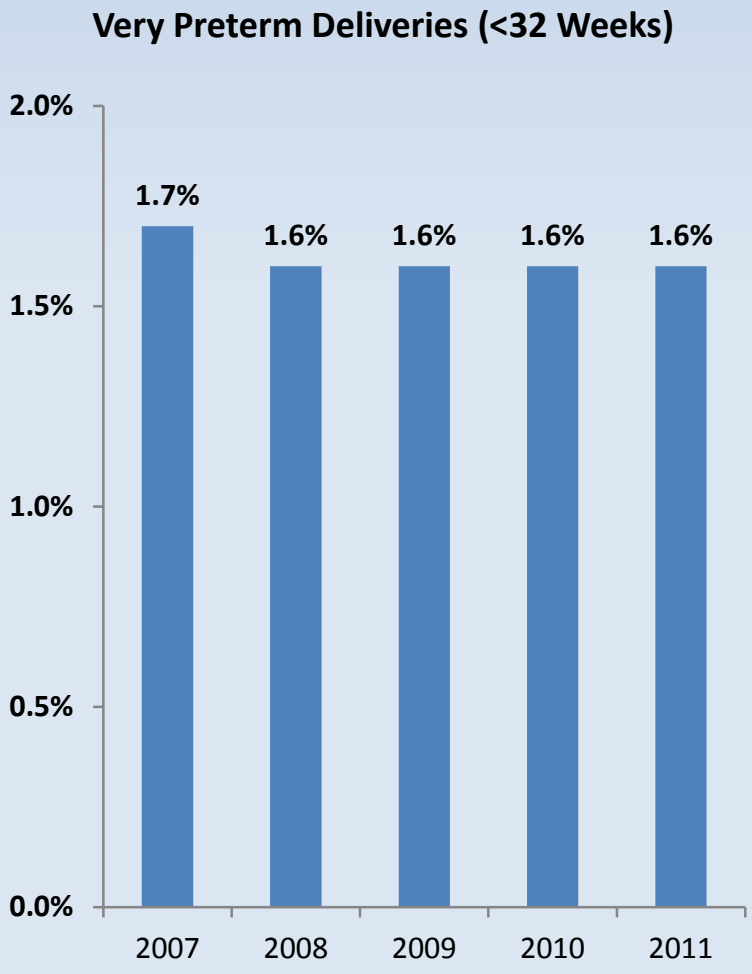
Very preterm births are those that occur at less than 32 weeks of pregnancy. Nationally, 8.3% of babies were born at 34 to 36 weeks' gestation, 1.5% of babies were born at 32-33 weeks, and 1.9% were "very preterm" (less than 32 weeks). Martin, Hamilton, Ventura, Osterman, and Mathews. (2013).

In California, the rate of very preterm births (1.5%) was lower than the national average. Very preterm births were slightly higher among Medi-Cal births (1.6%) than non-Medi-Cal births (1.4%). Among Medi-Cal financed births, very preterm delivery rates were similar among births financed by the FFS delivery system (1.5%) and births to mothers participating in Medi-Cal managed care (1.6%). The Healthy People 2020 goal is to reduce the rate to very preterm births to 1.8% or less.

California Resident Hospital Births 2011

Medi-Cal Trends – Preterm and Very Preterm Rates, 2007-2011





* Difference between 2007 and 2011 is statistically significant.

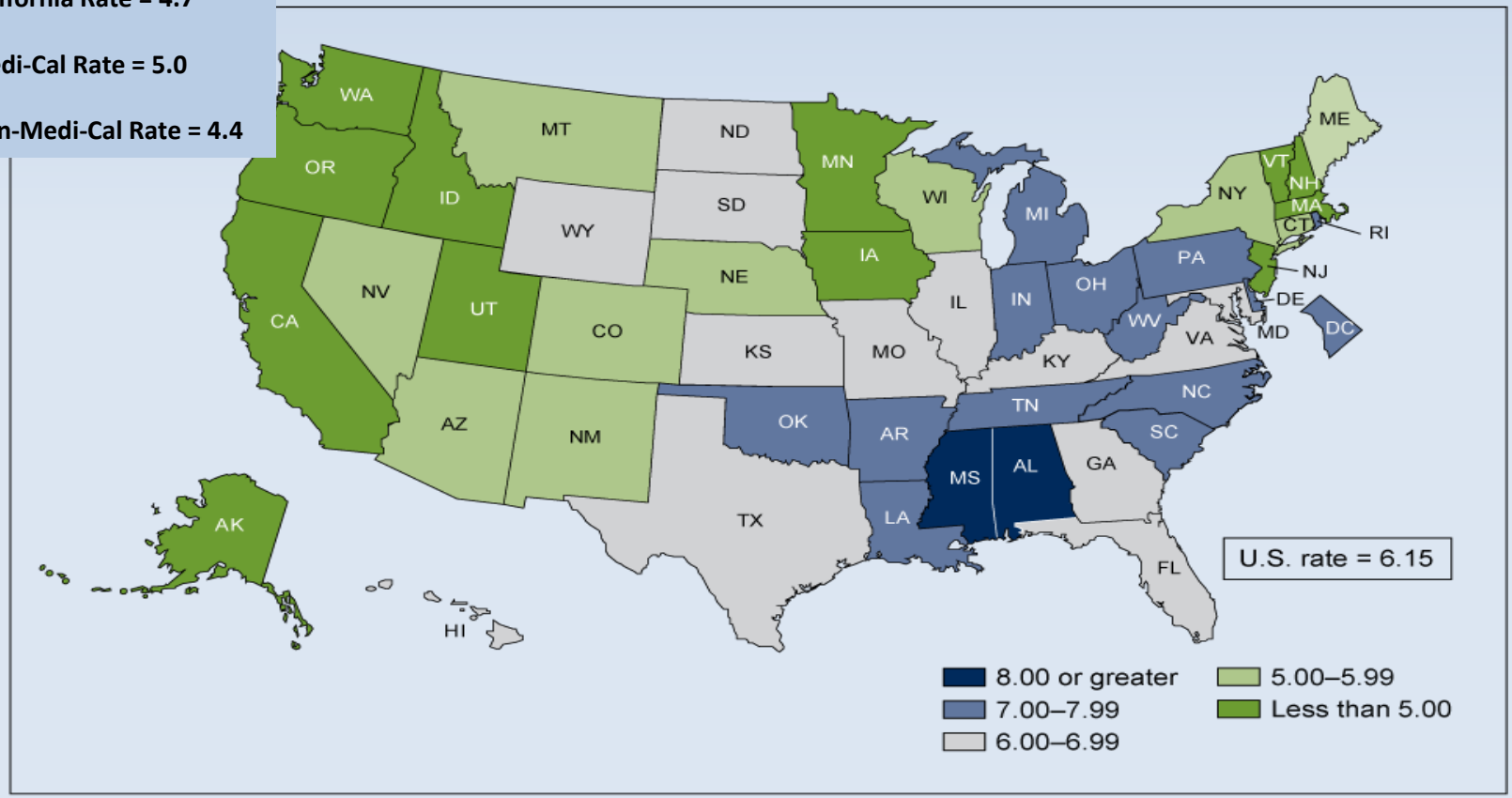
California Resident Hospital Births

2010 U.S., California, and Medi-Cal Infant Mortality Rates

California Rate = 4.7

Medi-Cal Rate = 5.0

Non-Medi-Cal Rate = 4.4

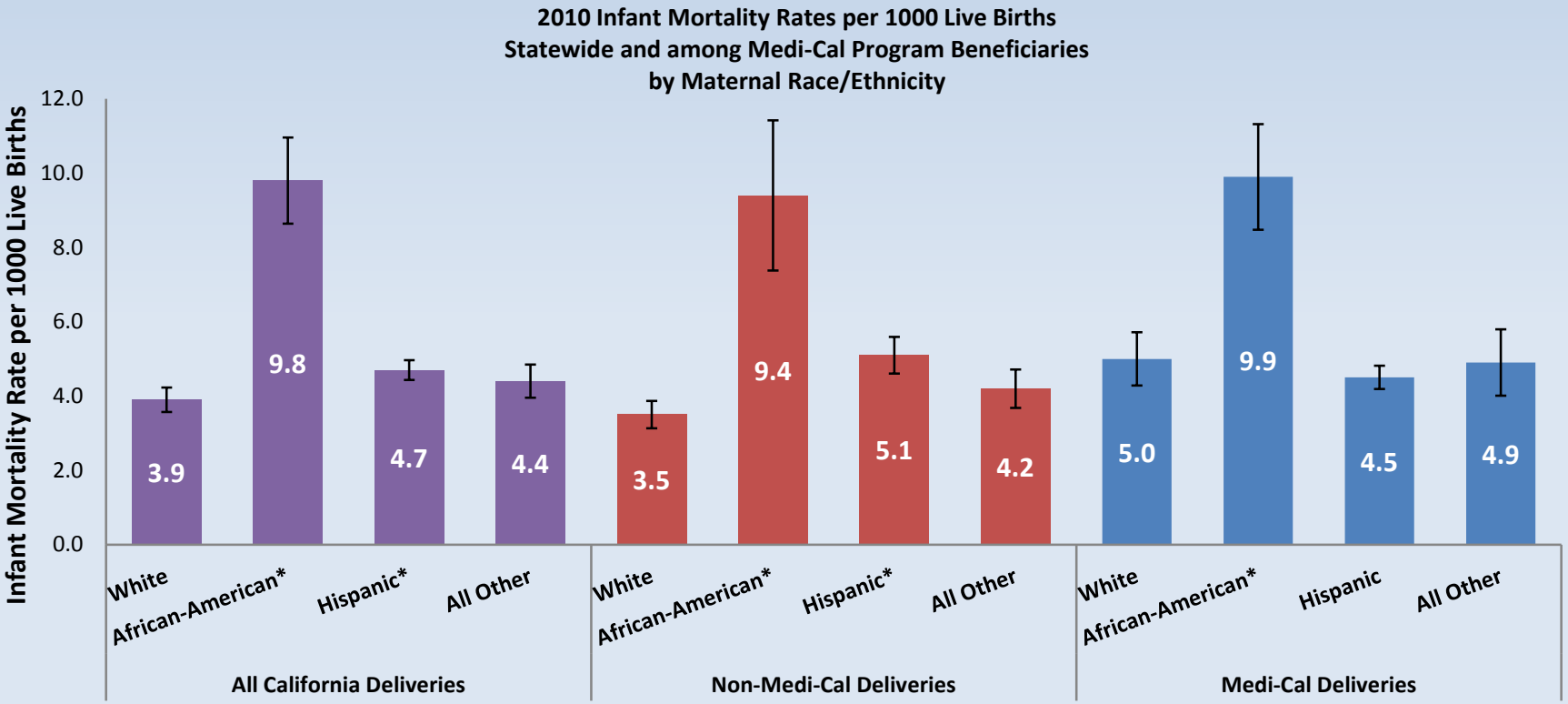


NOTE: Access data table for Figure 5 at: http://www.cdc.gov/nchs/data/databriefs/db120_table.pdf.
SOURCE: CDC/NCHS, National Vital Statistics System, mortality data set.

California Rate:	***4.7*** *(95% CI: 4.5, 4.9)*
Medi-Cal Rate:	***5.0*** *(95% CI:4.8, 5.3)*
Non-Medi-Cal Rate:	***4.4*** *(95% CI:4.1,4.7)*

The Medi-Cal infant mortality rate is 5.0, which is slightly higher than the overall California rate of 4.7.
Differences in these two rates are not statistically significant.

2010 Infant Mortality Rates for California and Medi-Cal

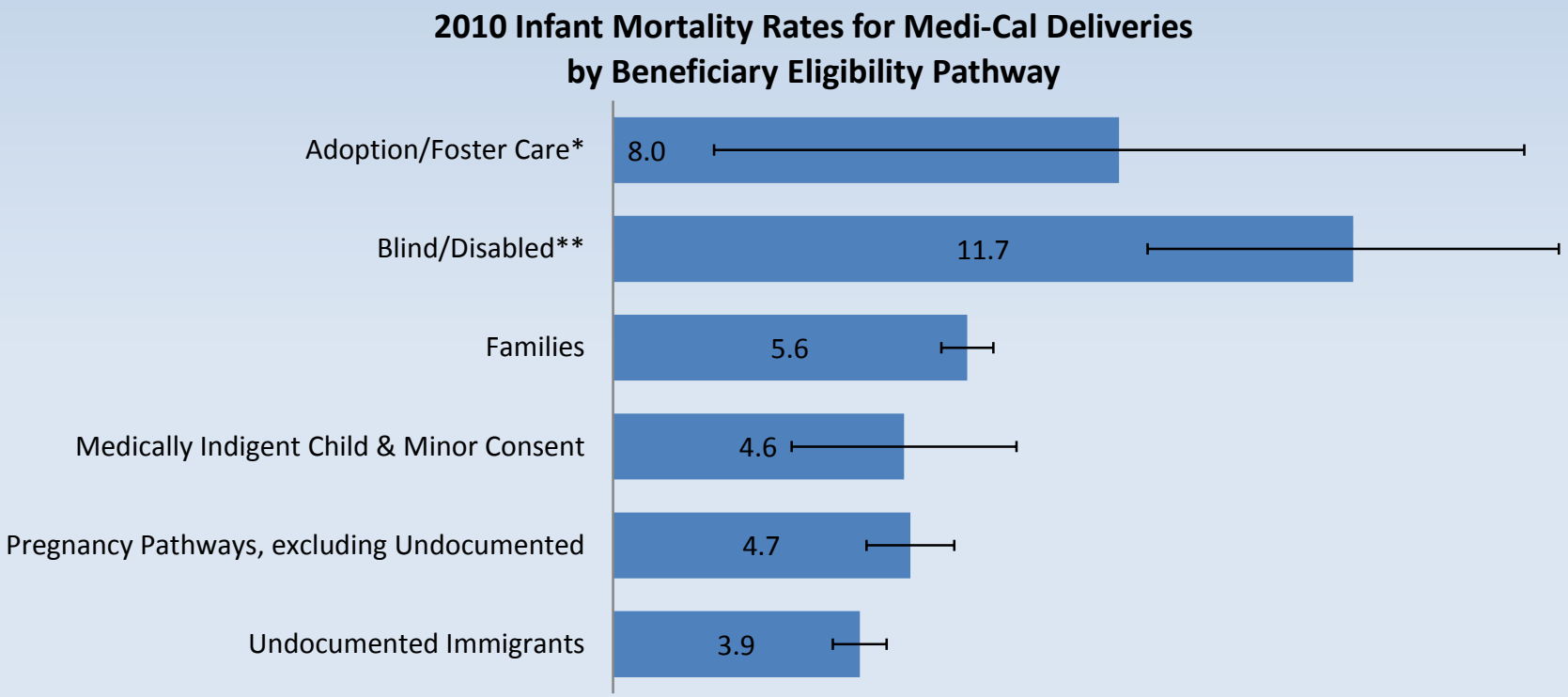


In the U.S., race/ethnic disparities in infant mortality rates have persisted for decades. Infants born to African-American mothers have a mortality rate 2.5 times higher than infants born to non-Hispanic White mothers. In the Medi-Cal program, infant mortality rates for African-Americans are just under 2 times that for non-Hispanic Whites. Infant mortality rates for California's Hispanics are also significantly higher than for non-Hispanic Whites, but differences between Hispanics vs. Whites are not statistically significant within the Medi-Cal program.

Source: *Analysis performed by the Research and Analytic Studies Branch of data from the Vital Statistics 2010 Birth Cohort File amended with Medi-Cal eligibility data from the Medi-Cal Eligibility Determination System (MEDS) 2010.*

**Infant mortality rates to women of this subgroup are statistically different from rates among White mothers.*

2010 Medi-Cal Infant Mortality Rates

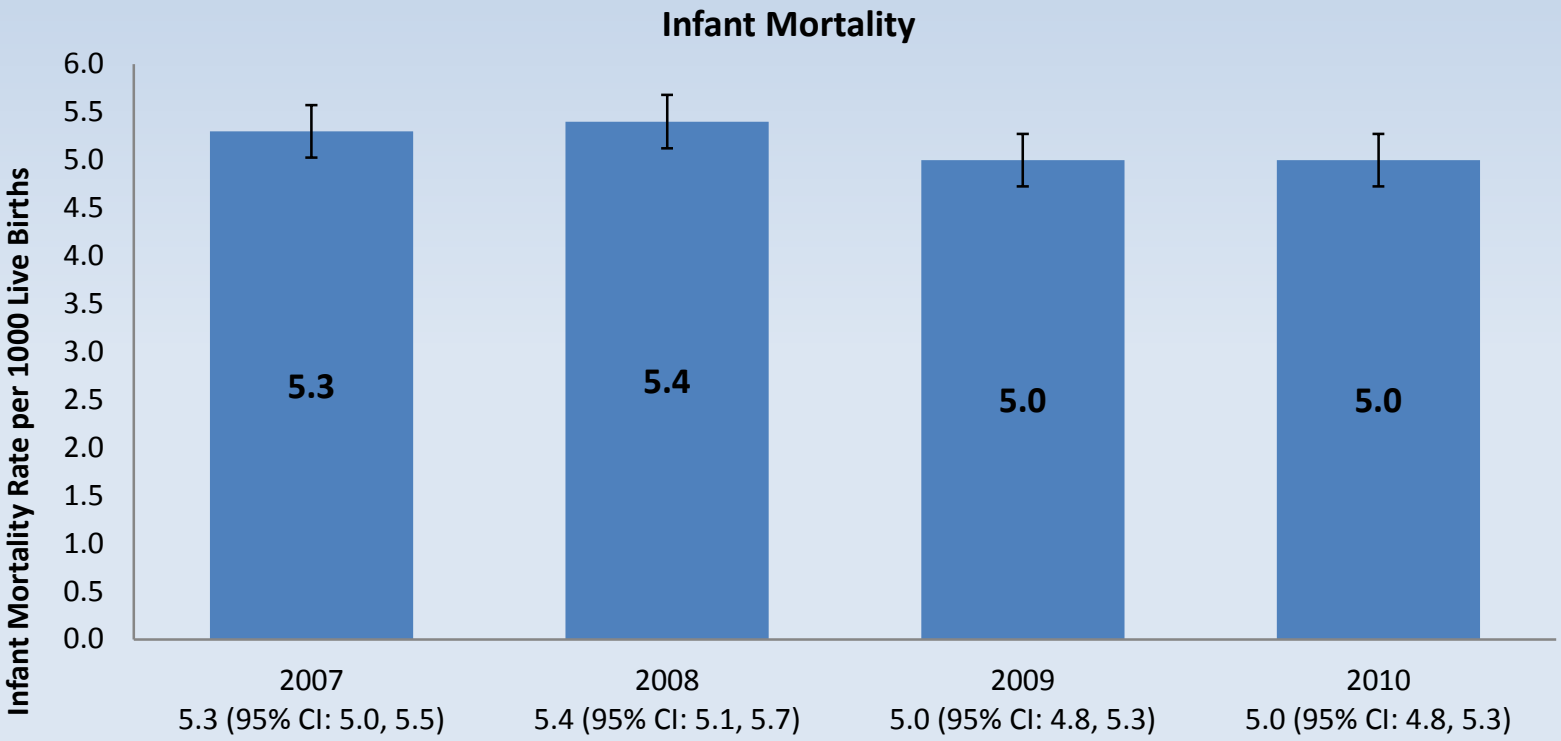


Source: *Analysis performed by the Research and Analytic Studies Branch of data from the Vital Statistics 2010 Birth Cohort File amended with Medi-Cal eligibility data from the Medi-Cal Eligibility Determination System (MEDS) 2010.*

**Infant mortality rates for those enrolled in Adoption/Foster Care are statistically unstable (relative error >30%) and should be interpreted with caution.*
***Infant mortality rates to women of this subgroup are statistically different from rates among mothers enrolled in Families aid codes.*

Women entering pregnancy in an unhealthy state are those most likely to experience poor birth outcomes. In the Medi-Cal program, infant mortality rates are highest among babies born to women enrolled under the Blind/Disabled aid categories. Infant mortality rates are lowest for undocumented immigrants, and may be due to the "Hispanic Paradox" or "healthy immigrant effect". The "Hispanic Paradox" refers to the epidemiological finding that most Hispanics have health outcomes that are unexpectedly better than their U.S. White counterparts.

Medi-Cal Trends – Infant Mortality, 2007-2010



Source: *Analysis performed by the Research and Analytic Studies Branch of data from the Vital Statistics 2007-2010 Birth Cohort File amended with Medi-Cal eligibility data from the Medi-Cal Eligibility Determination System (MEDS) 2007-2010.*

In the U.S., infant mortality rates have experienced a 12% decline from 6.87 per 1,000 live births in 2005 to 6.05 per live births in 2011 (NCHS Brief #120).

In the Medi-Cal program, infant mortality rates have fallen slightly from 5.3 per 1,000 live births in 2007 to 5.0 per 1,000 live births in 2010. Although infant mortality rates are slightly lower in 2009 and 2010 as compared to earlier years, these declines are not statistically significant.

Medi-Cal Trends and Healthy People 2020 Goals

Objectives	Healthy People 2020 Targets	Medi-Cal Results						
		2007	2008	2009	2010	2011	5-Year Trends	Statistically Significant Difference: 2007 & 2011
Low Birthweight (<2500 grams)	7.8%	6.7%	6.7%	6.6%	6.7%	6.6%		Yes
Very Low Birthweight (<1500 grams)	1.4%	1.1%	1.1%	1.1%	1.1%	1.1%		Yes
Preterm Birth (<37 weeks of gestation)	11.4%	11.6%	11.2%	10.8%	10.4%	10.3%		Yes
Very Preterm Birth (<32 weeks of gestation)	1.8%	1.7%	1.6%	1.6%	1.6%	1.6%		Yes
Infant Mortality (Deaths/1000 live births)	6.0	5.3	5.4	5.0	5.0	NA*		No
Maternal Smoking	1.4%	4.1%	3.7%	3.5%	3.5%	3.3%		Yes
Maternal Substance Use	0.0%	1.8%	1.6%	1.6%	1.8%	1.9%		Yes
Abnormal Pre-Pregnancy Weight	46.6%	49.9%	51.7%	52.4%	53.1%	53.7%		Yes
Early Prenatal Care	77.9%	76.4%	75.9%	76.6%	77.2%	77.5%		Yes

Resources

RASB Medi-Cal and Women's Health

UCLA Center for Health Policy Research

California Health Care Foundation

Centers for Disease Control

Kaiser Family Foundation

The Guttmacher Institute

March of Dimes

National Institutes of Health

The Urban Institute

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42 U.S.C. Section 1396r-1; Cal. Welf. & Inst. Code Section 14148.7; ACWDL # 93-78 (Oct. 27, 1993), 95-74 (Nov. 23, 1995); Medi-Cal Eligibility Procedures Manual Article 5M.

42 U.S.C. Sections 1396a(a) (10) (A) (i) (IV), (VI), 1396a(I(1) (A); Cal. Welf. & Inst. Code Section 14148(f); Medi-Cal Eligibility Procedures Manual, Article 5F.

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