

Public Health
Prevent. Promote. Protect.

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INTRODUCTION

This report characterizes provisional data on live births delivered in 2010 and has been compiled by the Public Health Department's Maternal, Child and Adolescent Health (MCAH) Program using data from the local birth certificate registry which is locally managed by the Health Services Agency's Vital Statistics office. The majority of the data presented in this report pertain strictly to mothers who have identified themselves as residents of Santa Cruz County. However, we also collect data on mothers who deliver in Santa Cruz County, even if they are residents of a different county. Tables and figures will either refer to RESIDENTS (mothers who *live* in Santa Cruz County, regardless of where they delivered) or the combination of both OCCURRENCE (mothers who *delivered* in Santa Cruz County, regardless of where they normally reside) and RESIDENTS.

In this report, adequacy of prenatal care is measured using the Kotelchuck Index--also called the Adequacy of Prenatal Care Utilization (APNCU) Index. The measure uses two crucial elements obtained from birth certificate data: when prenatal care began, and the number of prenatal visits. Areas of residence have been categorized using the city of residence where "Mid-County" includes Aptos, Capitola, La Selva Beach and Soquel (note: La Selva Beach was re-categorized from "South County" to "Mid-County" beginning with this year's report); "Santa Cruz" includes Bonny Doon, Davenport, Live Oak and Santa Cruz; "Santa Cruz Mountains (Mtns)" includes Ben Lomond, Big Basin, Boulder Creek, Brookdale, Felton, Lompico, Los Gatos and Mt. Hermon; and "South County" includes Aromas, Corralitos, Freedom, Royal Oaks and Watsonville. When viewing ethnicity data (which includes the concept of race in this report), all categories are mutually exclusive; however, since race is collected separately from ethnicity, this report combines the two and defines Latino as Latino regardless of which race is chosen, and the remaining categories reflect non-Latino ethnicities.

The author has attempted to organize and format the information to be useful to the community for analyses and planning. However, additional data requests are welcome; please use the contact info listed below. All the data in this report, unless otherwise noted, are from the Santa Cruz County Automated Vital Statistics System where birth certificate data are maintained, accessed in 2011 and analyzed using Cal Birth Information System. Of note, when this report uses the term "significant" it does mean "statistically significant" at the 95% confidence level (or stated another way, the probability is less than 5% that the observed difference was due to chance). The statistical test is comparing the difference of two proportions and assumes a normal distribution of the data.

Key findings in this report:

- In 2010, there were **3,170** live births among mothers who reside in Santa Cruz County, which is 120 fewer births than in 2009. An additional 460 births occurred in Santa Cruz County to mothers who are residents of other counties. The majority (77%) of births from out-of-county residents were to mothers who live in Monterey County.
- Teen births decreased as a percentage of overall births from 10% in 2009 to **8%** in 2010. The number of teen births also decreased from 319 in 2009 to **258** in 2010. The decrease is seen for both teen age groups: 15 to 17 and 18 to 19.
- **55%** of deliveries to residents were funded by Medi-Cal in 2010, compared to 51% in 2009.

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1. DEMOGRAPHICS

The California Department of Finance estimated the total population in Santa Cruz County to be 268,018 residents in 2010.¹ In California, Santa Cruz is considered a mid-sized population county, and it ranked 24th largest among California's 58 counties in 2010.²

GENDER & AGE

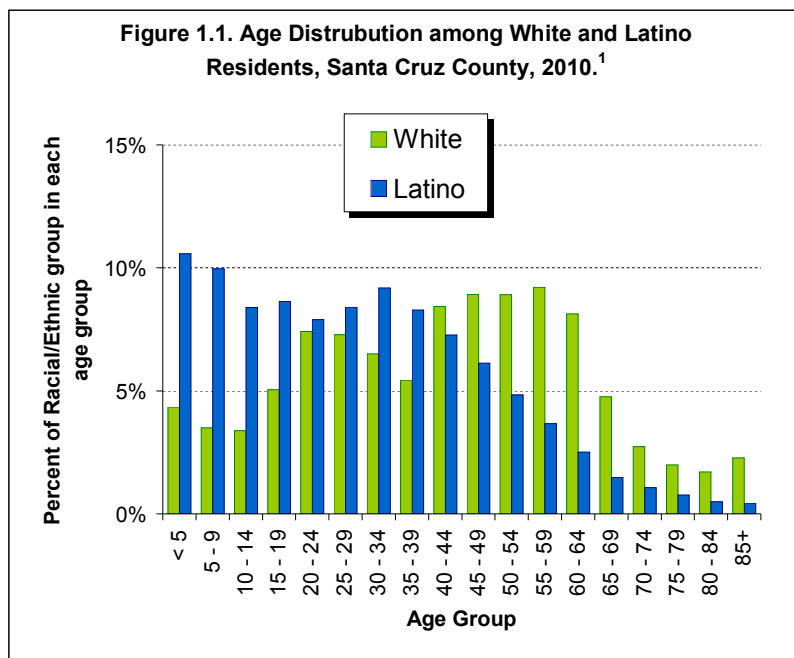
Nearly equal numbers of males and females reside in Santa Cruz County, with slightly more females than males – especially in older age groups.

	#	%
Gender		
Male	133,939	50%
Female	134,077	50%
Age		
Under 5	17,615	7%
5 - 19	48,211	18%
20 - 44	100,578	38%
45 - 64	75,042	28%
65 and Over	26,570	10%
Ethnicity / Race		
Hispanic	95,178	36%
White	149,546	56%
Asian	13,491	5%
Black	2,715	1%
Pacific Islander	368	0.1%
Other	6,718	3%
TOTAL	268,016	100

ETHNICITY & RACE

Over 90% of the county's population is either White (56%) or Latino (36%).¹ The remaining groups account for much smaller fractions of the population: Asians (5%), Blacks (1%), Pacific Islanders (0.1%) and other/multi-racial groups (3%).

Children make up a far larger proportion of the Hispanic population than of the White population. This difference continues through every age group under 40, whereas in every older age group (40 and over), Whites are more frequently represented compared to Latinos (see Figure 1.1).



Sources

1. State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 2000–2050*. Sacramento, CA, July 2007. <http://www.dof.ca.gov/research/demographic/data/race-ethnic/2000-50/>
2. "July 1, 2010 County Estimates Ranked by Size, Numeric and Percent Change since July 1, 2009." *Research and Demographics Unit*. California Department of Finance. http://www.dof.ca.gov/research/demographic/reports/estimates/county_rankings/2009-10/documents/County_Estimates_Tables_7-2010.xls

2. KEY HEALTH MEASURES

AGE OF MOTHER

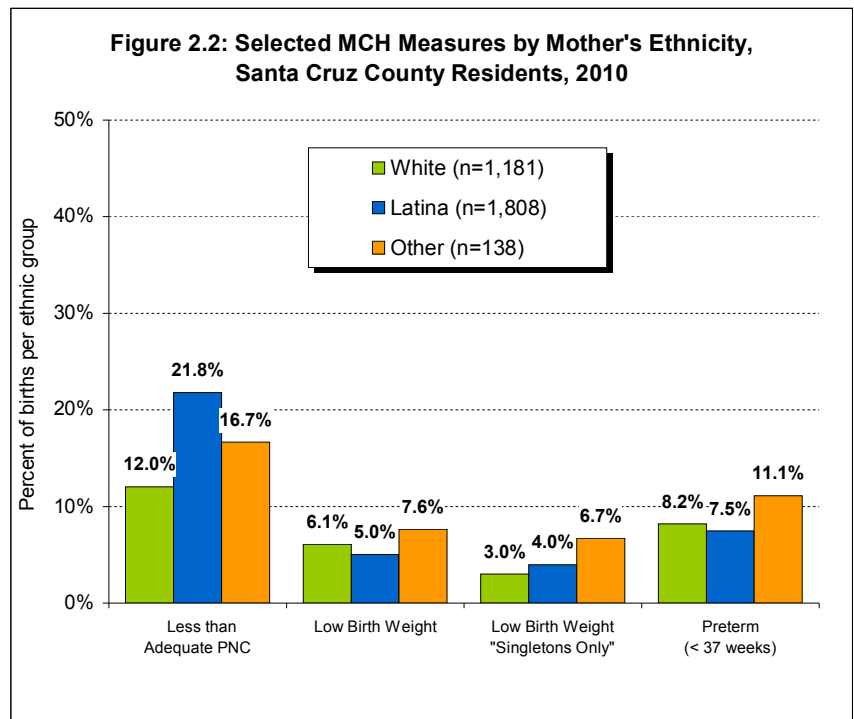
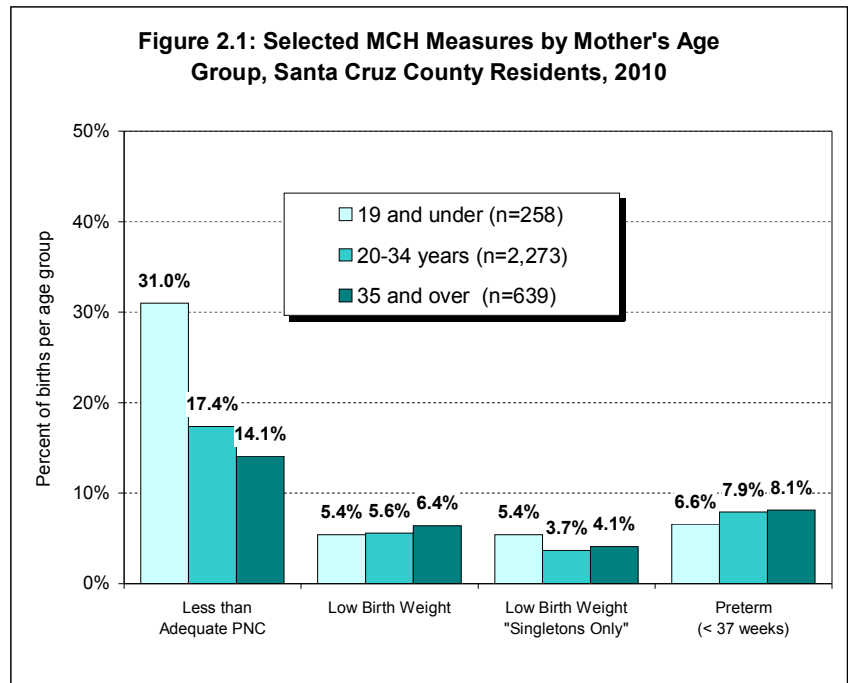
In 2010, younger mothers were significantly more likely underutilize prenatal care than their older counterparts (see Figure 2.1). Teenage mothers (age 19 and under) had the highest rate of underutilization with almost 1 in 3 teenagers not receiving adequate prenatal care.

This year's report provides low birth weight (LBW, < 5.5 lbs) data both for all births and for singleton births (excluding multiples: twins and triplets). In 2010, there were 106 births to multiples—of which 60% were LBW. Multiples are more common among the older age groups, which largely explains the different distributions by age group for the two LBW categories. Neither LBW categories nor preterm percentages were significantly different by age group.

ETHNICITY OF MOTHER

Latina mothers had a significantly higher rate of less than adequate prenatal care compared to White mothers (see Figure 2.2). LBW was not different by ethnicity until multiple births were removed; then there was a significant difference between births to White and Other mothers—a difference that seems to be primarily attributable to Pacific Islander mothers. Preterm births did not differ significantly by ethnicity.

Note: "Other" race category includes Asian, Black, Pacific Islander, Native American/Alaska Native, multi-race, and others not listed.

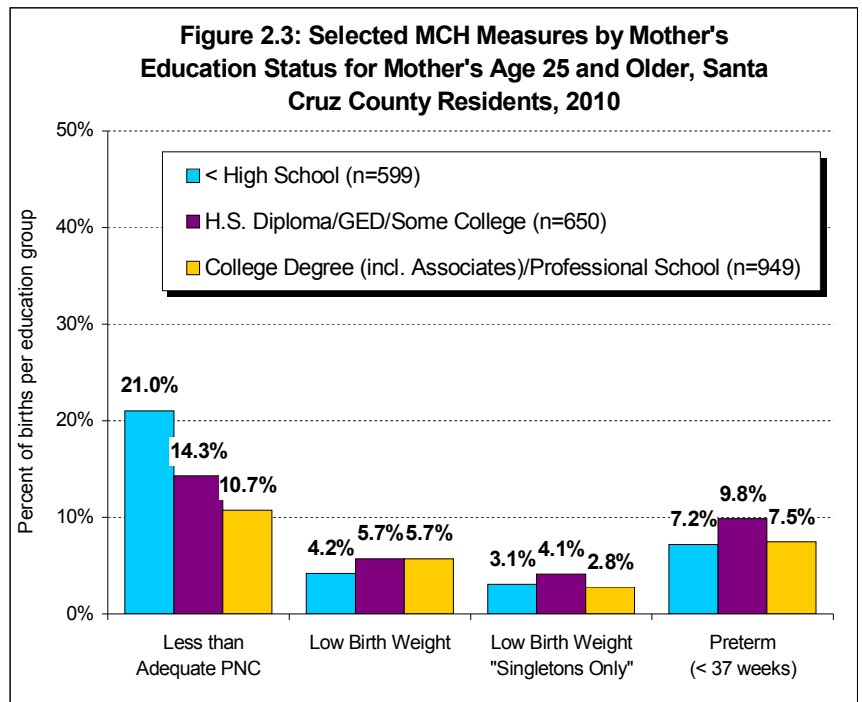


2. KEY HEALTH MEASURES (CONT.)

MOTHER'S EDUCATION

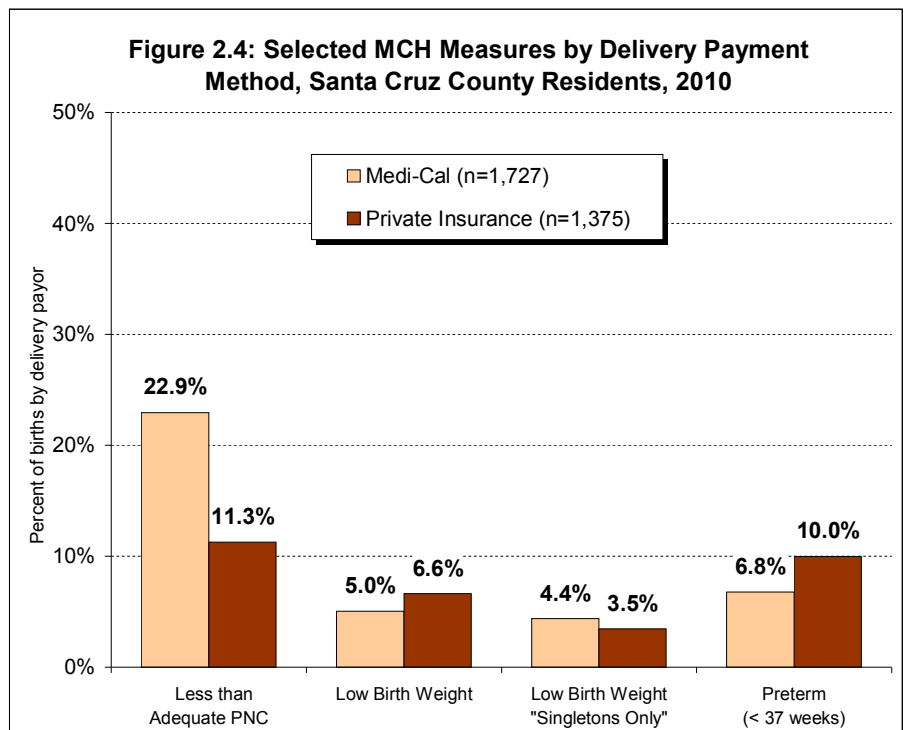
In 2010, 27% of mothers (ages 25 and older) did not have a high school diploma or its equivalent (i.e., GED). Of those mothers, 21% received less than adequate prenatal care—nearly twice that of their college educated counterparts.

There was a significant difference between education categories when looking at less than adequate utilization of prenatal care. Low birth weight and preterm births did not differ significantly by education status.



DELIVERY PAY METHOD

Medi-Cal births increased significantly from 51% in 2009 to 55% in 2010. Medi-Cal funded deliveries had a significantly more mothers who received less than adequate prenatal care compared to mothers with private insurance. The other measures shown in Figure 2.4 were also significantly different by delivery payment method, except for LBW percentages for all births (not excluding singletons).



3. BIRTHS BY MOTHER'S AGE, RESIDENTS

TABLE 3.1: Characteristics of Mothers by Age Groups, Santa Cruz County, 2010

	AGE OF MOTHER (years)										TOTAL	
	17 and Under		18-19		20-24		25-34		35 and Over		#	%
ETHNICITY												
Asian	0	0%	0	0%	2	0.4%	40	2%	21	3%	63	2%
Black	0	0%	1	1%	9	1%	11	1%	4	1%	25	1%
Latina	82	93%	143	86%	468	77%	855	52%	260	41%	1,808	58%
Pacific Islander	0	0%	1	1%	3	0.5%	17	1%	12	2%	33	1%
White	6	7%	21	13%	123	20%	702	43%	329	52%	1,181	38%
Other ¹	0	0%	1	1%	0	0%	14	1%	2	0.3%	17	1%
AREA OF RESIDENCE												
Mid-County	2	2%	11	7%	42	7%	238	14%	100	16%	393	12%
Santa Cruz Mtns	1	1%	3	2%	32	5%	142	9%	68	11%	246	8%
Santa Cruz	16	18%	28	17%	120	20%	433	26%	208	33%	805	25%
Scotts Valley	1	1%	1	0.3%	14	2%	79	5%	41	6%	136	4%
South County	69	78%	126	75%	403	66%	770	46%	222	35%	1,590	50%
PARITY												
1st Child	83	93%	134	79%	322	53%	559	34%	162	26%	1,260	40%
2nd - 3rd Child	6	7%	34	20%	272	45%	929	56%	345	54%	1,586	50%
4th+ Child	0	0%	1	1%	16	3%	173	10%	128	20%	318	10%
PRENATAL CARE²												
Early (1st Trimester)	55	63%	116	69%	450	75%	1,409	86%	546	87%	2,576	83%
Late (>1st Trimester)	33	38%	46	28%	148	25%	220	13%	80	13%	527	17%
Adequate/Adequate+	59	66%	114	67%	444	73%	1,357	82%	517	81%	2,491	79%
Less than Adequate	29	33%	51	30%	145	24%	250	15%	90	14%	565	18%
Early & Adequate	52	58%	100	59%	383	63%	1,252	75%	482	75%	2,269	72%
No Prenatal Care	0	0%	5	3%	2	0.3%	7	0.4%	3	0.5%	17	0.5%
BIRTH OUTCOMES												
LBW (<5.5 lbs) ³	4	4.5%	10	5.9%	37	6.1%	90	5.4%	41	6.4%	139	4.4%
VLBW (<2.5 lbs)	2	2.2%	1	0.6%	7	1.1%	26	1.6%	8	1.3%	23	0.7%
Preterm (< 37 wks)	4	4.5%	13	7.7%	45	7.4%	135	8.1%	63	9.9%	260	8.2%
Very Preterm (< 32 wks)	2	2.2%	2	1.2%	8	1.3%	25	1.5%	10	1.6%	47	1.5%
DELIVERY METHOD												
Primary C	10	11%	36	21%	95	16%	237	14%	119	19%	497	16%
Repeat C	2	2%	5	3%	65	11%	261	16%	123	19%	456	14%
Vaginal	77	87%	128	76%	451	74%	1151	69%	386	60%	2,193	69%
VBAC ⁴	0	0%	0	0%	0	0%	13	1%	11	2%	24	1%
PAYMENT OF DELIVERY												
Medi-Cal	73	82%	149	88%	506	83%	796	48%	203	32%	1,727	55%
Private Insurance	12	13%	17	10%	99	16%	826	50%	421	66%	1,375	43%
Other	1	1%	0	0%	0	0%	7	0.4%	1	0.2%	9	0.3%
No Insurance	3	3%	3	2%	6	1%	32	2%	13	2%	57	2%
TOTAL	89	3%	169	5%	611	19%	1,663	52%	639	20%	3,170	100%

(1) "Other" race/ethnicity includes Native Americans, mixed races and other groups not listed; (2) Where percentages do not add up to 100% for prenatal care utilization (adequate or better versus less than inadequate), the remaining percentage is due to missing data fields. When the missing percentage is higher than 2%, the remaining rates becomes unreliable; (3) LBW: Low birth weight and VLBW: very low birth weight; (4) VBAC: Vaginal birth after C-section.

Note: Percentages within the table are out of the total number within the age group; however, the percentages in the bottom TOTAL row are out of the total of all births and represent the percentage of mothers who are in each age group. Aside from Birth Outcomes and Prenatal Care, percentages that do not add up to 100% are due to rounding.

Source: 2010 Santa Cruz County Automated Vital Statistics System, accessed in 2011. Analyzed using Cal Birth Information System (except adequacy of PNC, or Kotelchuck Index, was analyzed which with SAS).

4. MOTHER'S DEMOGRAPHICS

AGE

Among mothers residing in Santa Cruz County, each of the different age groups is significantly associated with each of the selected demographics shown in Figure 4.1. For example, a significantly higher percentage (86%) of deliveries to females 19 and under are funded by Medi-Cal compared to 32% among females age 35 and over.

The largest number of births is among women 25-29 years old—although 30-34 year olds are very close behind (see Table 4.1). However, when looking at the number of births per population in a specific age category, the age-specific rate is highest among mothers between ages 30-34 with 83.5 births per 1,000 women in that age group (see Figure 4.2).

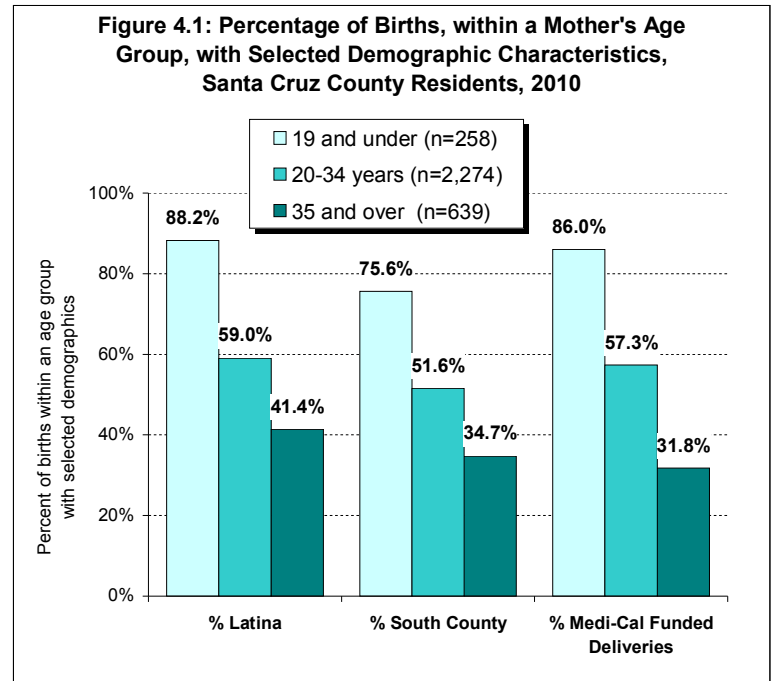
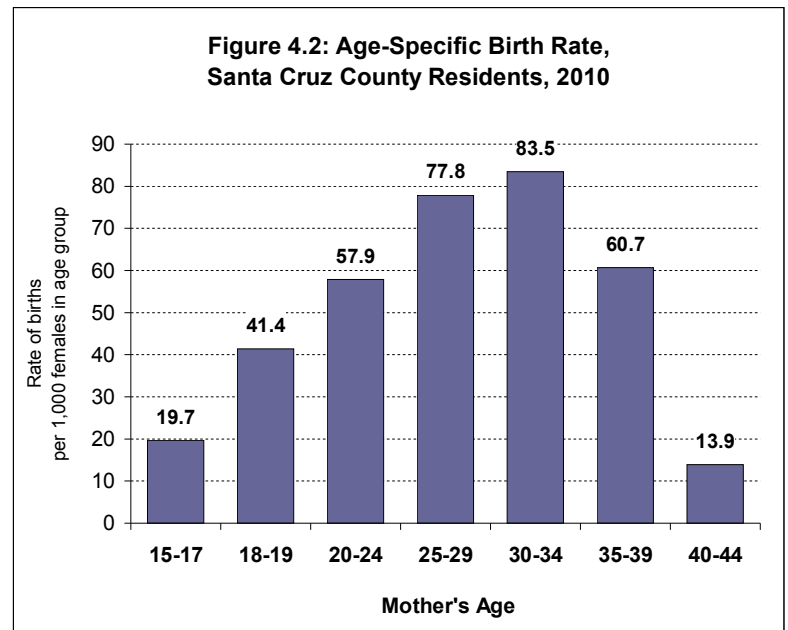


Table 4.1: Mother's Age Group and Age-Specific Birth Rate per 1,000, Santa Cruz County Residents, 2010

Mother's Age Group	# births	% of births	Total Female Popl'n	Birth Rate per 1,000 Popl'n
14 and Under	1	0.0%	N/A	N/A
15-17	88	3%	4,471	19.7
18-19	169	5.3%	4,086	41.4
20-24	611	19%	10,561	57.9
25-29	845	26.7%	10,868	77.8
30-34	817	26%	9,784	83.5
35-39	486	15.3%	8,011	60.7
40-44	142	4%	10,208	13.9
45 and Over	11	0.3%	N/A	N/A
TOTAL	3,170	100%	59,468	54.7

Note: Rates are age-specific and are calculated by dividing the total number of births by the total female population in an age group. The *TOTAL* birth rate in this table is also known as the "General Fertility Rate." It is the total number of births divided by the overall female population ages 15-44 ("primary childbearing age").
N/A: Not applicable.

Source: 2010 Santa Cruz County Automated Vital Statistics System, accessed in 2011. 2010 Population data from State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2000-2050. Sacramento, CA, July 2007.



4. MOTHER'S DEMOGRAPHICS (CONT.)

ETHNICITY

Among the “primary childbearing age” population (defined as females ages 15-44) in Santa Cruz County, approximately 38% are Latina and 52% are White. However, Latinas make up 58% of births to 15-44 year olds, whereas Whites account for 38% of births to the same age group.

The difference by ethnicities can be readily explained by comparing fertility rates (Figure 4.4). For example, the fertility rate (births per 1,000 women ages 15 to 44) is over twice as high among Latinas (81.4) as among Whites (38.7).

Among Pacific Islanders of primary childbearing age, which the California Department of Finance projected to be 86 individuals in 2010, 33 gave birth – for a fertility rate of 383.7 per 1,000 females. Even with fairly small numbers and thus a wide range, the rate is still significantly higher than any other ethnic group in Santa Cruz County. However, it is not known how accurate the projection of the total population of Pacific Islanders aged 15-44 is.

Figure 4.3: Percent of Births among 15 - 44 Year Olds by Mother's Ethnicity (n=3,127), Santa Cruz County Residents, 2010

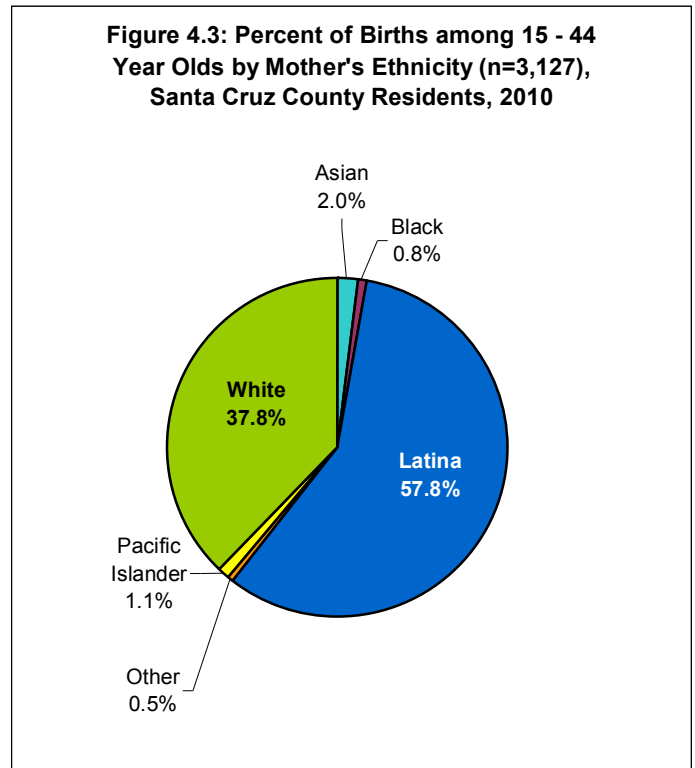


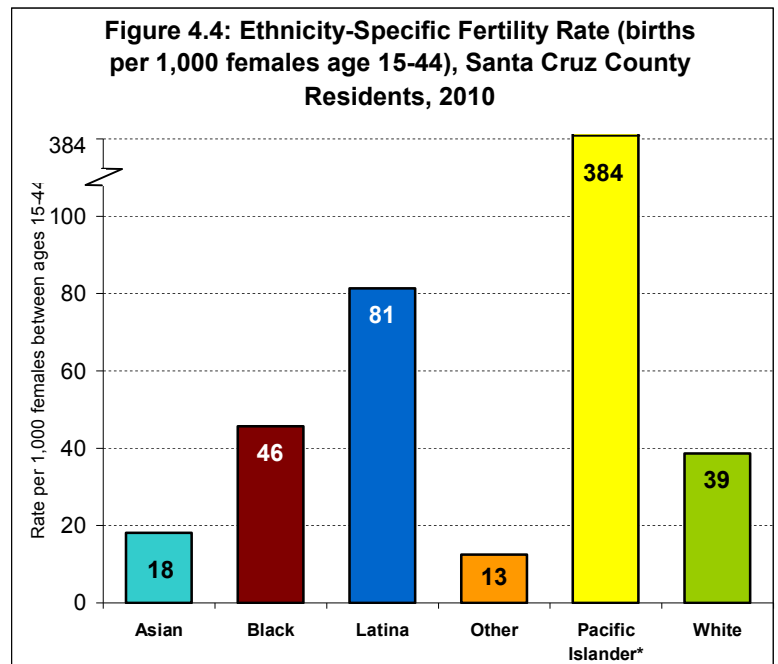
Table 4.2: Mother's Ethnicity and Fertility Rate, Santa Cruz County Residents, 2010

Mother's Ethnicity	# of births	% of births	Total Female Popl'n (Ages 15-44)	Fertility Rate per 1,000 Females
Asian	63	2.0%	3,481	18.1
Black	25	0.8%	547	45.7
Latina	1,808	58%	22,200	81.4
Other	17	0.5%	1,356	12.5
Pacific Islander	33	1.1%	86	383.7
White	1,181	38%	30,319	38.7
TOTAL	3,127	100%	57,989	54.5

Note: There are 43 mothers for whom ethnicity is unknown. Also, the "Fertility Rate" is calculated using only the number of births divided by the total female population ages 15-44 per racial/ethnic group. "Other" includes Native Americans and persons with multiple races.

Source: 2010 Santa Cruz County Automated Vital Statistics System, accessed in 2011. 2010 Estimated Population data from the State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2000–2050. Sacramento, CA, July 2007.

Figure 4.4: Ethnicity-Specific Fertility Rate (births per 1,000 females age 15-44), Santa Cruz County Residents, 2010

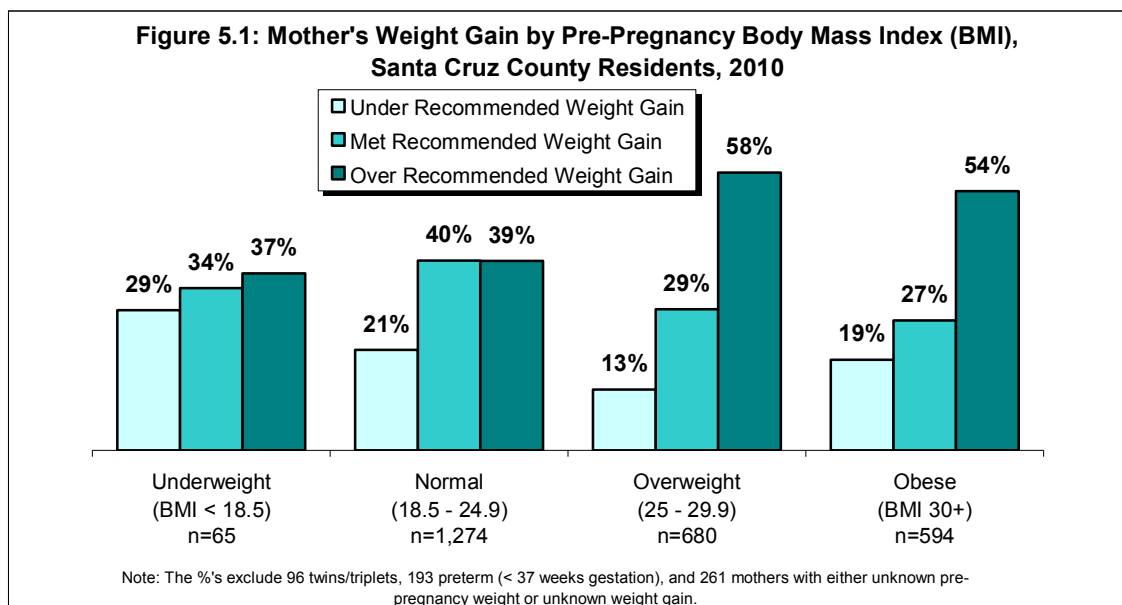


5. MOTHER'S WEIGHT GAIN AND SMOKING STATUS

In 2009, the Institute of Medicine and the National Research Council released a report recommending new guidelines for weight gain during pregnancy. The report updates guidelines that were last set in 1990 and takes into account changing US demographics, particularly the increase in the numbers of women of childbearing age who are overweight and obese. The new guidelines are based on World Health Organization cutoff points for body mass index (BMI) categories, unlike the earlier guidelines, which were based on weight categories taken from the Metropolitan Life Insurance tables. They also recommend a more narrow range of weight gain for obese women.

The recommended weight gain for each category of pre-pregnancy BMI is as follows:

- Underweight (< 18.5 kg/m²); total weight gain range: 28 to 40 pounds
- Normal weight (18.5 - 24.9 kg/m²); total weight gain range: 25 to 35 pounds
- Overweight (25.0 - 29.9 kg/m²); total weight gain range: 15 to 25 pounds
- Obese (≥ 30.0 kg/m²); total weight gain range: 11 to 20 pounds



Smoking status was added to the California birth certificate form in 2008. The number and percentage of females who self-reported smoking at least one cigarette a day during different points before and throughout conception are shown below for births in 2010.

TABLE 5.2: Mother's Smoking Status During Pregnancy, 2010

Mother's Smoking Status	3 Months Before Conception		During 1st Trimester		During 2nd Trimester		During 3rd Trimester	
	#	%	#	%	#	%	#	%
Smoked at least 1 cigarette per day								
Yes	76	2.4%	47	1.5%	26	0.8%	26	0.8%
No	3,070	97.6%	3,101	98.5%	3,123	99.2%	3,123	99.2%
TOTAL	3,146	100%	3,148	100%	3,149	100%	3,149	100%

Note: This table does not include births for whom mother's cigarette smoking status was unknown: 26 women for 3 mo. before conception; 23 for during 1st trimester; 22 for during 2nd trimester; and 22 for during 3rd trimester.

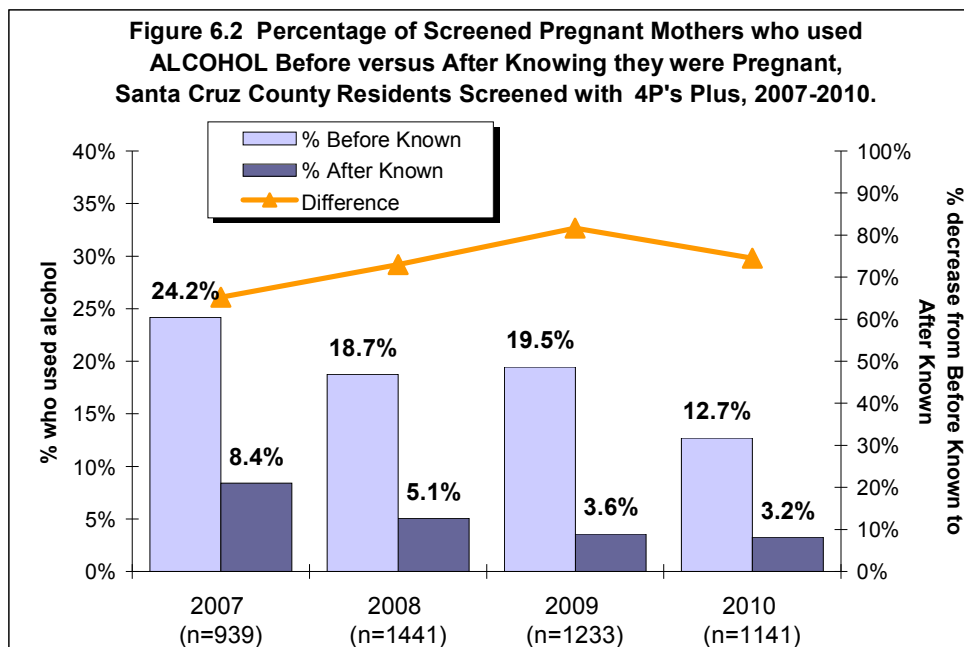
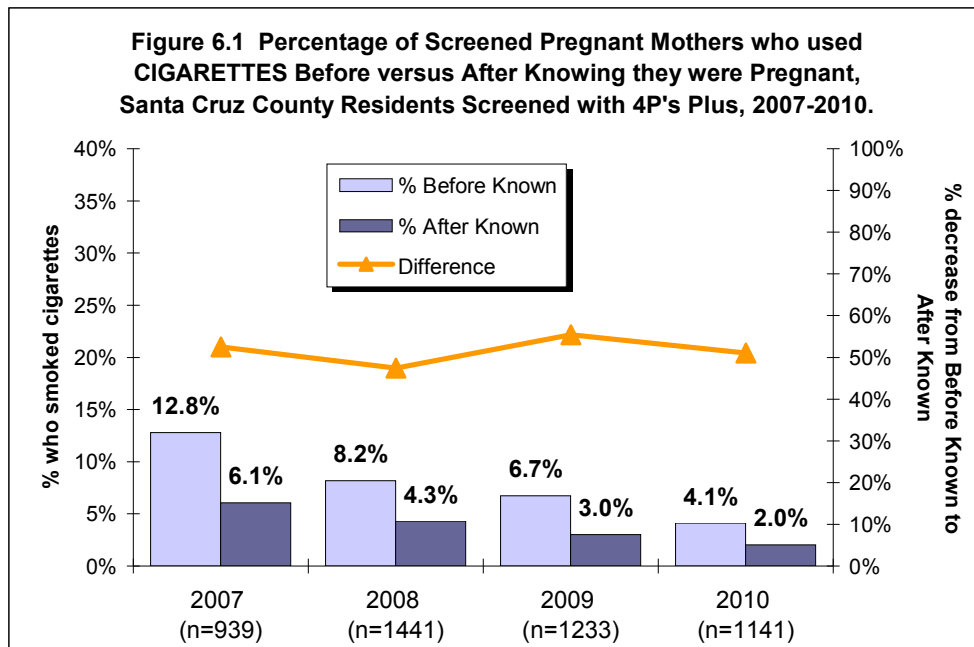
Healthy People 2010 Objective: Increase abstinence from cigarette smoking to 99% or more of all pregnant women.

Source: 2010 Santa Cruz County Automated Vital Statistics System, accessed in 2011.

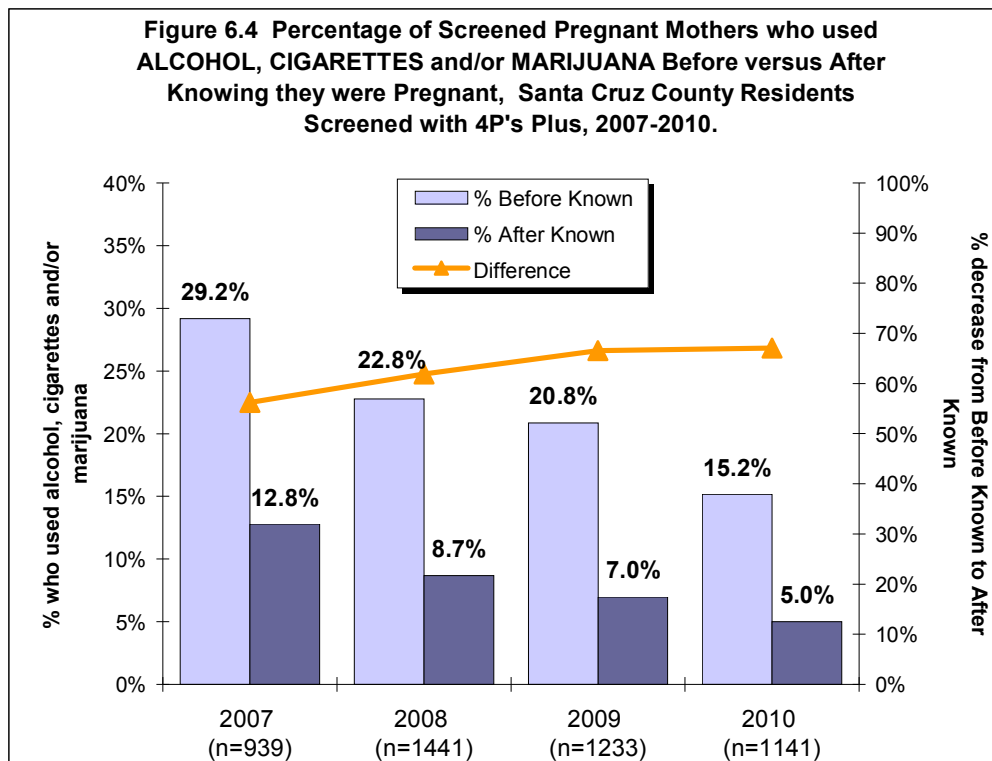
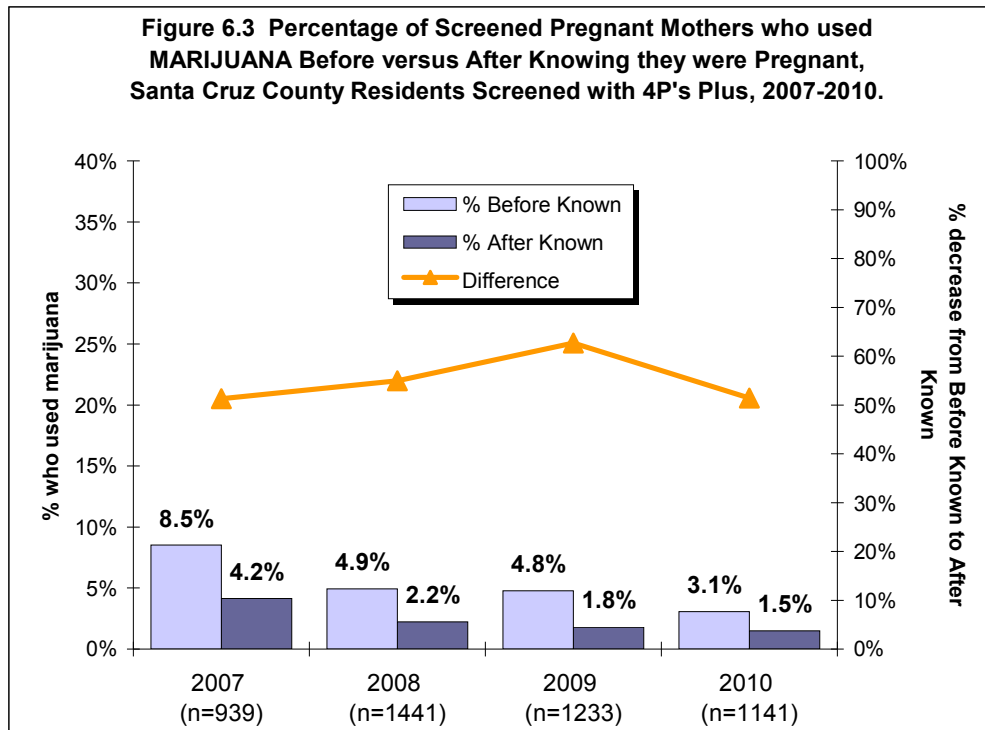
6. 4P's Plus Prenatal Substance Use Screening

4Ps Plus from NTI Upstream is an evidence-based prenatal substance use screening tool created by Dr. Ira Chasnoff. The tool continues to be adopted by medical practitioners nationally with the intent of facilitating substance use discussions between the clinician and the patient. Santa Cruz County Public Health is committed to encouraging the use of 4P's Plus and continues to find funding to renew our contract so this invaluable tool can be used in our county. Since December 2006, six local prenatal care provider groups have utilized the tool in their practice—allowing for the screening of approximately 35% of all county births since then. However, the data displayed below should not be used to interpret countywide substance use patterns among the entire prenatal population, since the patients seeing those six providers are likely different than total prenatal population (for example, in 2010, approximately 87% of those screened had Medi-Cal, compared to 55% of all deliveries).

Figure 6.1 below shows the percent of screened pregnant mothers who smoked cigarettes before knowing they were pregnant, the percent who continued to smoke after knowing they were pregnant, and the percent change from before known versus after known. Figures 6.2-6.4 address the following substances with the same method: alcohol consumption, marijuana use, and the use of any of the above three (cigarettes, alcohol and/or marijuana).

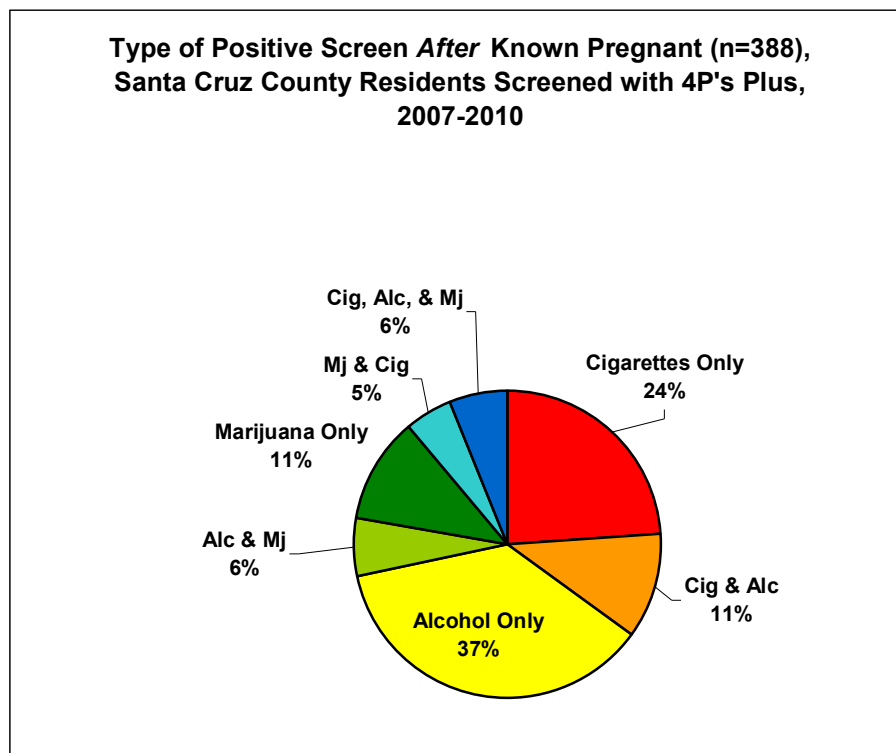
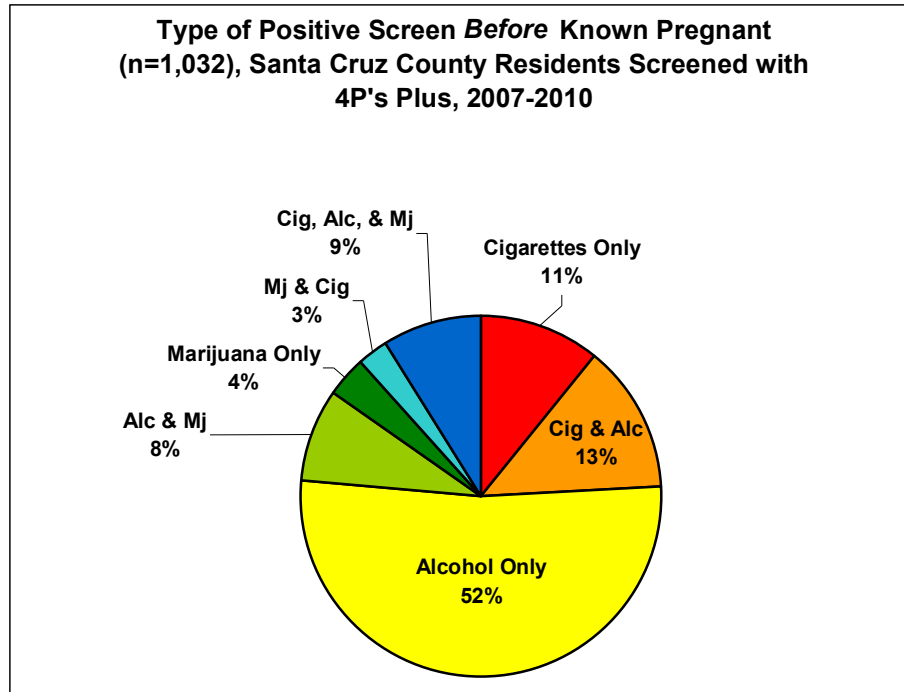


6. 4P's Plus Prenatal Substance Use Screening (CONT.)



6. 4P's Plus Prenatal Substance Use Screening (CONT.)

Among the 4,754 women initially screened with 4P's Plus between 2007 and 2010, 1032 (or 21.7%) had a positive screen for alcohol, cigarettes and/or marijuana before knowledge of pregnancy; Figure 6.5 shows the type of positive screen. Figure 6.6 displays the type of continued substance use among the 388 pregnant women who acknowledged use of alcohol, cigarettes and/or marijuana after knowing they were pregnant.



7. BIRTHS BY FATHER'S AGE, MOTHERS ARE RESIDENTS

TABLE 7.1: Characteristics of Fathers by Age Group, Santa Cruz County, 2010

	AGE OF FATHER (years)										TOTAL	
	17 and Under		18-19		20-24		25-34		35 and Over		#	%
AGE OF MOTHER												
17 and Under	8	40%	30	36%	28	7%	2	0%	0	0%	68	2%
18 - 19	7	35%	36	43%	74	18%	33	2%	0	0%	150	5%
20 - 24	5	25%	14	17%	237	57%	277	19%	19	2%	552	19%
25 - 34	0	0%	3	4%	68	16%	1,073	72%	434	46%	1,578	53%
35 and Over	0	0%	0	0%	7	2%	107	7%	495	52%	609	21%
ETHNICITY OF FATHER												
Asian	0	0%	0	0%	2	0.5%	21	1%	26	3%	49	2%
Black	0	0%	0	0%	8	2%	16	1%	11	1%	35	1%
Latino	19	95%	75	91%	345	83%	878	60%	359	39%	1,676	57%
Pacific Islander	0	0%	1	1%	1	0.2%	15	1%	11	1%	28	1%
White	1	5%	6	7%	55	13%	530	36%	517	55%	1,109	38%
Other	0	0%	0	0%	3	1%	9	1%	8	0.9%	20	0.7%
EDUCATION OF FATHER												
8th Grade & Under	3	15%	16	20%	86	21%	275	19%	145	16%	525	18%
Some High School	14	70%	35	44%	92	23%	219	15%	76	8%	436	15%
HS Diploma or GED	3	15%	23	29%	164	41%	424	29%	171	19%	785	28%
At Least Some College	0	0%	6	8%	59	15%	522	36%	508	56%	1,095	39%
TOTAL	20	1%	83	3%	414	14%	1,492	50%	948	32%	2,957	100%

There are 213 (6.7%) fathers without age information, 40 fathers without an ethnicity, and 116 without education information.

Note: Percentages within the table are out of the total number within the age group; however, the percentages in the bottom *TOTAL* row are out of the total of all births and represent the percentage of fathers who are in each age group. Percentages that do not add up to 100% are due to rounding.

Source: 2010 Santa Cruz County Automated Vital Statistics System, accessed in 2011. Analyzed using Cal Birth Information System.

8. BIRTHS BY HOSPITAL/LOCATION

TABLE 8.1 Characteristics of Births by Hospital/Location, Residents and Occurrence, 2010

	PLACE OF BIRTH										TOTAL	
	Watsonville		Dominican		Sutter		Non-Hospital		Out of County		#	%
AGE OF MOTHER												
17 and Under	82	5%	17	2%	8	1%	0	0%	1	1%	108	3%
18 - 19	124	8%	42	5%	20	2%	1	2%	7	4%	194	5%
20 - 24	392	26%	153	16%	148	16%	3	5%	20	10%	716	20%
25 - 34	717	47%	495	53%	557	59%	35	63%	107	55%	1,911	53%
35 and Over	195	13%	221	24%	209	22%	17	30%	60	31%	702	19%
ETHNICITY OF MOTHER												
Asian	3	0.2%	25	3%	28	3%	1	2%	10	6%	67	2%
Black	3	0.2%	13	1%	12	1%	0	0%	5	3%	33	1%
Latina	1,426	94%	382	42%	272	29%	7	13%	48	27%	2,135	60%
Pacific Islander	11	1%	13	1%	9	1%	0	0%	3	2%	36	1%
White	63	4%	472	52%	598	64%	44	85%	113	63%	1,290	36%
Other ¹	4	0.3%	3	0.3%	14	2%	0	0%	0	0%	21	1%
MOTHER'S EDUCATION²												
8th Grade & Under	543	36%	55	6%	14	2%	0	0%	14	8%	626	18%
Some High School	396	26%	80	9%	35	4%	1	2%	7	4%	519	15%
HS Diploma or GED	341	23%	263	30%	243	27%	5	10%	23	14%	875	25%
At least Some College	228	15%	468	54%	610	68%	46	88%	126	74%	1,478	42%
PRENATAL CARE³												
Early (1st Trimester)	1,063	71%	847	93%	799	88%	46	82%	164	85%	2,919	82%
Late (>1st Trimester)	440	31%	52	6%	111	12%	7	13%	27	14%	637	18%
Adequate/Adequate+	1,129	75%	722	78%	797	85%	50	89%	141	72%	2,839	78%
Less than Adequate	375	25%	121	13%	112	12%	6	11%	53	27%	667	18%
Early & Adequate	967	64%	700	75%	736	78%	43	77%	132	68%	2,578	71%
None	2	0.1%	10	1%	1	0.1%	3	5%	3	2%	19	1%
BIRTH OUTCOMES												
LBW (<5.5 lbs) ⁴	61	4.0%	84	9.1%	8	0.8%	0	0%	44	22.6%	197	5.4%
VLBW (<2.5 lbs)	10	0.7%	18	1.9%	0	0%	0	0%	21	10.8%	49	1.3%
Preterm (< 37 wks)	85	5.6%	136	14.7%	21	2.2%	1	1.8%	46	23.6%	289	8.0%
Very Preterm (< 32wks)	13	0.9%	19	2.0%	0	0%	0	0.0%	21	10.8%	53	1.5%
METHOD OF DELIVERY												
Primary C	193	13%	159	17%	136	14%	0	0%	61	31%	549	15%
Repeat C	283	19%	134	14%	89	9%	0	0%	22	11%	528	15%
Vaginal	1,023	68%	631	68%	699	74%	56	100%	109	56%	2,518	69%
VBAC ⁵	11	1%	4	0.4%	18	2%	0	0%	3	2%	36	1%
PAYMENT FOR DELIVERY												
Medi-Cal	1,275	84%	407	44%	293	31%	2	4%	36	18%	2,013	55%
Private Insurance	217	14%	512	55%	642	68%	20	36%	153	78%	1,544	43%
Other ⁶	0	0%	2	0.2%	3	0.3%	0	0%	4	2%	9	0.2%
No Insurance	17	1%	6	1%	3	0.3%	34	61%	2	1%	62	2%
TOTAL	1,510	42%	928	26%	942	26%	56	2%	195	5%	3,631	100%

(1) "Other" race/ethnicity includes Native Americans, mixed races and other groups not listed; (2) Education is for all ages--in the past it was limited to those 25 years and older (3) Where percentages do not add up to 100% for prenatal care utilization (adequate or better versus less than inadequate), the remaining percentage is due to missing data fields. When the missing percentage is higher than 2%, the remaining rates becomes unreliable; (4) LBW: Low birth weight includes VLBW (very low birth weight) and neither excludes multiple births as it did last year--of the 118 multiples born in 2010, 58% were LBW; (5) VBAC: Vaginal birth after C-section; and (6) Other" payment of delivery includes unattended births, other/govt programs, and others not listed.

Note: Percentages within the table are out of the total number within the age group; however, the percentages in the bottom TOTAL row are out of the total of all births and represent the percentage of mothers who are in each age group. Aside from Birth Outcomes and Prenatal Care, percentages that do not add up to 100% are due to rounding.

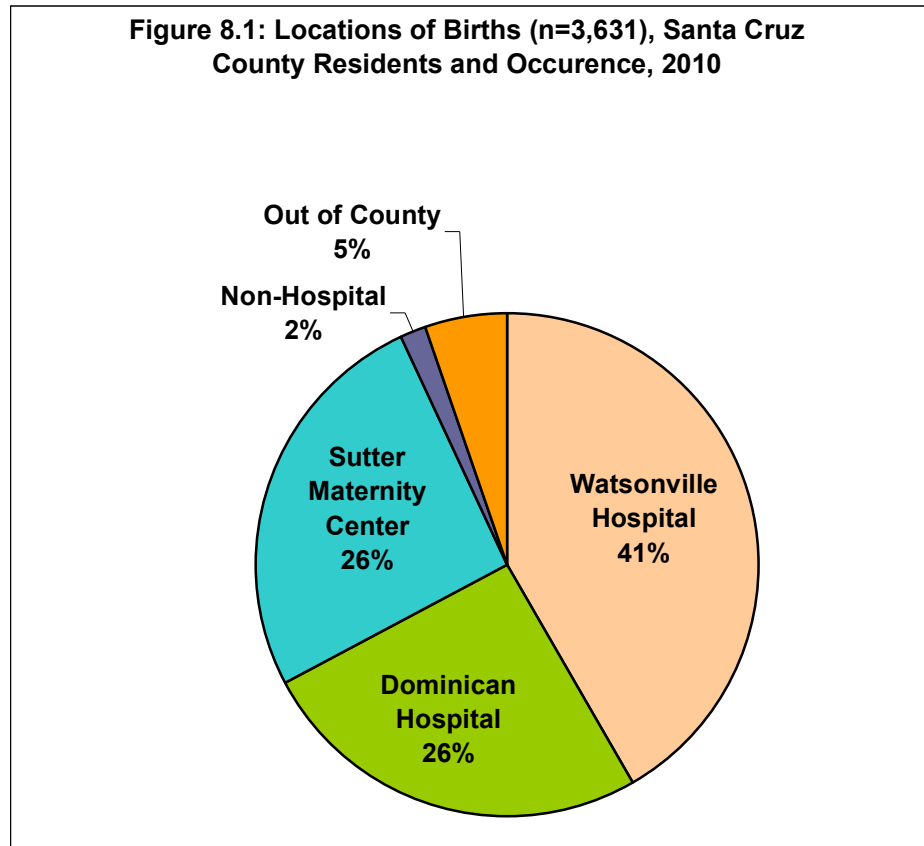
Source: 2010 Santa Cruz County Automated Vital Statistics System, accessed in 2011. Analyzed using Cal Birth Information System (except adequacy of PNC, the Kotelchuck Index, which was analyzed with SAS).

8. BIRTHS BY HOSPITAL/LOCATION (CONT.)

TABLE 8.2: Mother's Area of Residence by Location of Birth, Residents and Occurrence, 2010

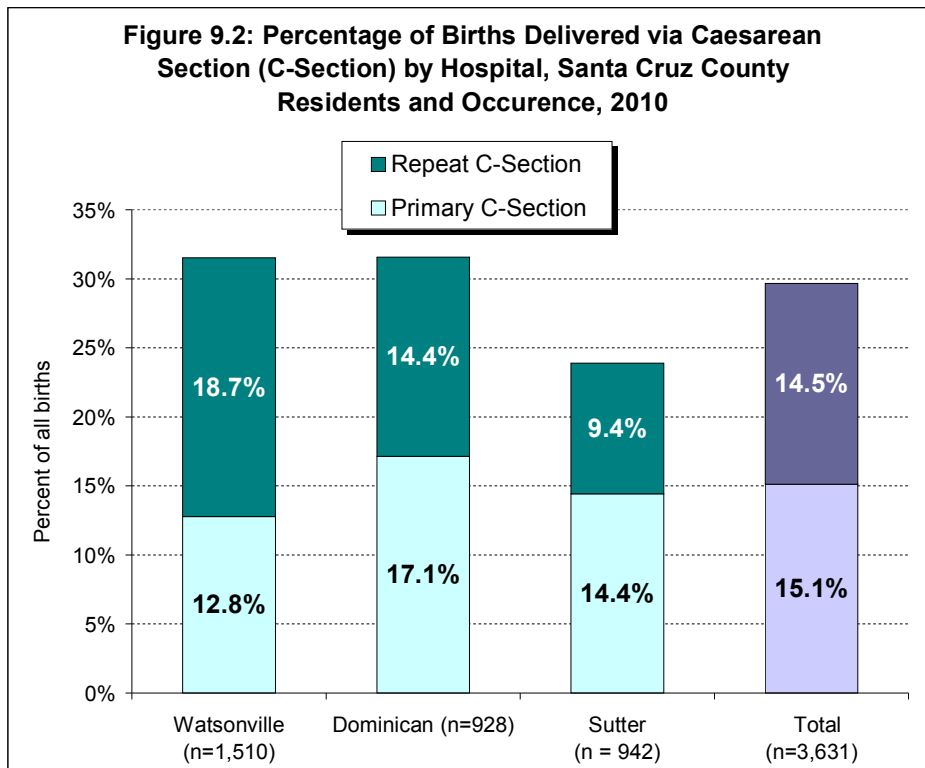
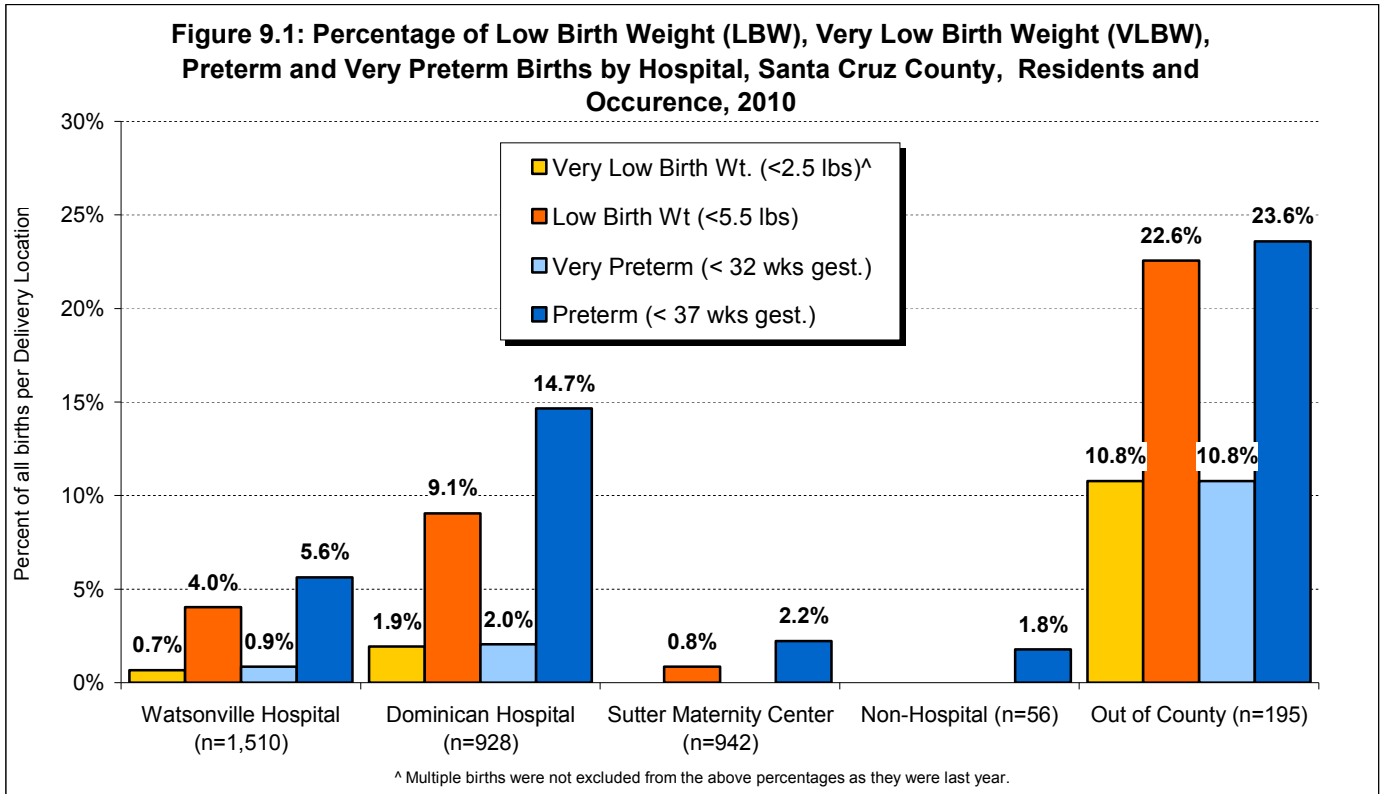
	PLACE OF BIRTH										TOTAL	
	Watsonville		Dominican		Sutter		Non-Hospital		Out of County		n	%
AREA OF RESIDENCE												
SANTA CRUZ Co.	1,213	80%	861	93%	845	90%	56	100%	195	100%	3,170	87%
<i>Mid-County</i>	8	1%	177	21%	170	20%	10	18%	28	14%	393	12%
<i>Santa Cruz Mtns.</i>	3	0.2%	70	8%	111	13%	13	23%	49	25%	246	8%
<i>Santa Cruz</i>	4	0.3%	406	47%	330	39%	29	52%	36	18%	805	25%
<i>Scotts Valley</i>	0	0.0%	63	7%	48	6%	0	0%	25	13%	136	4%
<i>South County</i>	1,198	99%	145	17%	186	22%	4	7%	57	29%	1590	50%
MONTEREY Co.	263	17%	35	4%	55	6%	-	-	-	-	353	8%
SAN BENITO Co.	18	1%	10	1%	11	1%	-	-	-	-	39	1%
SANTA CLARA Co.	9	1%	15	2%	26	3%	-	-	-	-	50	1%
Other Counties	7	0.5%	7	1%	5	1%	-	-	-	-	19	1%
TOTAL	1,510	42%	928	26%	942	26%	56	2%	195	5%	3,631	100%

Figure 8.1: Locations of Births (n=3,631), Santa Cruz County Residents and Occurrence, 2010



9. BIRTH OUTCOMES BY HOSPITAL/LOCATION

The authority to handle high-risk birth outcomes varies by hospital. Oftentimes when a resident travels out of county, it is to deliver at a hospital that is designated as having the ability to deliver very high-risk births. In Santa Cruz County, Dominican Hospital has the only Level 3 Neonatal Intensive Care Unit—which greatly influences their outcome data since other hospitals may send high-risk pregnant women to Dominican Hospital for delivery.



10. TEEN BIRTHS (Age 19 and Under), RESIDENTS

TABLE 10.1: Characteristics of Teenage Mothers by Age Group, Santa Cruz County Residents, 2010

	TEENAGE MOTHERS						TOTAL	
	14 and Under		15-17		18-19		#	%
MOTHER'S ETHNICITY								
Asian	0	0%	0	0%	0	0%	0	0%
Black	0	0%	0	0%	1	1%	1	0.4%
Latina	1	100%	81	93%	143	86%	225	88%
Pacific Islander	0	0%	0	0%	1	1%	1	0.4%
White	0	0%	6	7%	21	13%	27	11%
Other ¹	0	0%	0	0%	1	1%	1	0.4%
AREA OF RESIDENCE								
Mid-County	0	0%	2	2%	11	7%	13	5%
Santa Cruz Mtns	0	0%	1	1%	3	2%	4	2%
Santa Cruz	0	0%	16	18%	28	17%	44	17%
Scotts Valley	0	0%	1	1%	1	1%	2	1%
South County	1	100%	68	77%	126	75%	195	76%
PRENATAL CARE²								
Early (1st Trimester)	0	0%	55	63%	116	69%	171	67%
Late (>1st Trimester)	1	100%	32	37%	46	28%	79	31%
Adequate/Adequate +	0	0%	59	67%	114	67%	173	67%
Less than Adequate	1	100%	28	32%	51	30%	80	31%
Early & Adequate	0	0%	52	60%	100	61%	152	61%
None	0	0%	0	0%	5	3%	5	2%
PARITY								
1st Child	1	100%	82	93%	134	79%	217	84%
2nd Child	0	0%	5	6%	31	18%	36	14%
3rd+ Child	0	0%	1	1%	4	2%	5	2%
BIRTH OUTCOMES								
LBW (<5.5 lbs) ³	0	0%	4	4.5%	10	5.9%	14	5.4%
VLBW (<2.5 lbs)	0	0%	2	2.3%	1	0.6%	3	1.2%
Preterm (< 37 wks)	0	0%	4	4.5%	13	7.7%	17	6.6%
Very Preterm (< 32wks)	0	0%	2	2.3%	2	1.2%	4	1.6%
DELIVERY METHOD								
Primary C	1	100%	9	10%	36	21%	46	18%
Repeat C	0	0%	2	2%	5	3%	7	3%
Vaginal	0	0%	77	88%	128	76%	205	79%
VBAC ⁴	0	0%	0	0%	0	0%	0	0%
PAYMENT OF DELIVERY								
Medi-Cal	1	100%	72	82%	149	88%	222	86%
Private Insurance	0	0%	12	14%	17	10%	29	11%
Other	0	0%	1	1%	0	0%	1	0%
No Insurance	0	0%	3	3%	3	2%	6	2%
TOTAL	1	0%	88	34%	169	66%	258	100%

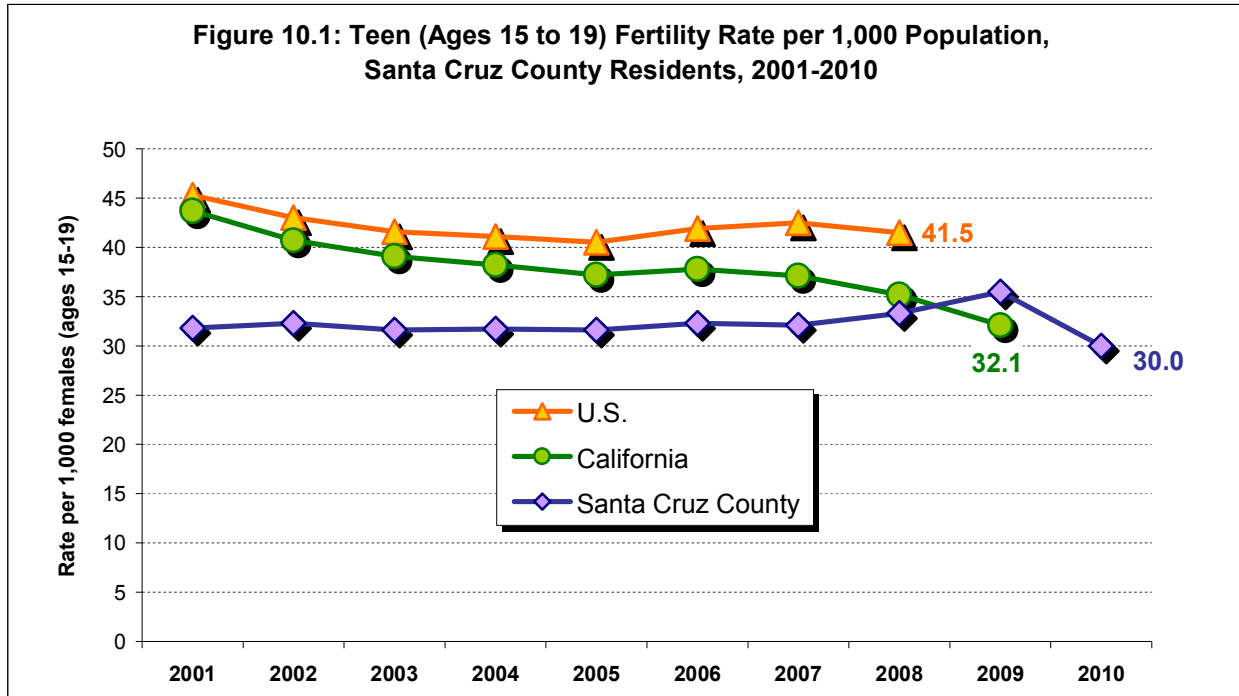
(1) "Other" race/ethnicity includes Native Americans, mixed races and other groups not listed; (2) Where percentages do not add up to 100% for prenatal care utilization (adequate or better versus less than inadequate), the remaining percentage is due to missing data fields. When the missing percentage is higher than 2%, the remaining rates becomes unreliable; (3) LBW: Low birth weight and VLBW: very low birth weight; (4) VBAC: Vaginal birth after C-section.

Note: Also, Percentages within the table are out of the total number within the age group; however, the percentages in the bottom TOTAL row are out of the total of all births and represent the percentage of mothers who are in each age group. Aside from Birth Outcomes and Prenatal Care, percentages that do not add up to 100% are due to rounding.

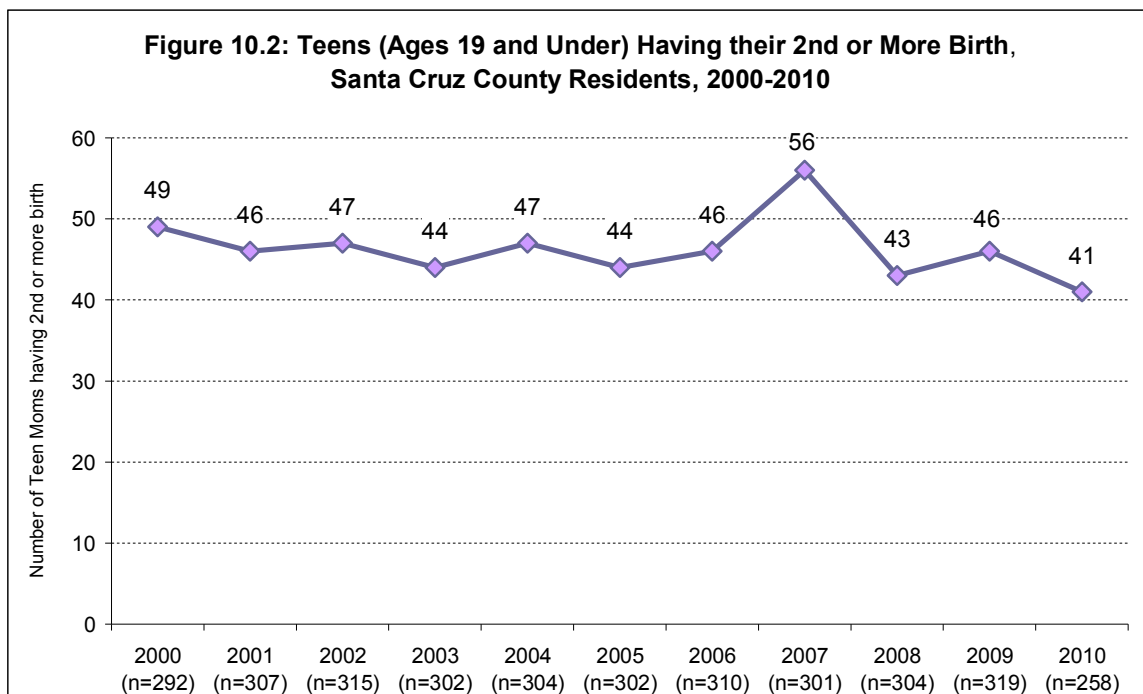
Source: 2010 Santa Cruz County Automated Vital Statistics System, accessed in 2011. Analyzed using Cal Birth Information System (except adequacy of PNC, or Kotelchuck Index, was analyzed with SAS).

10. TEEN BIRTHS (Age 19 and Under), RESIDENTS (CONT.)

The percentage of teen births out of the total number of births decreased from 9.7% in 2009 to 8.1% in 2010. The rate of births per 1,000 teenage (age 15-19) female population continued to decrease statewide and nationally. Santa Cruz County also saw a decrease from 35.5 in 2009 to 30.0 in 2010; however, the decrease was within normal levels of year-to-year variation, and thus not significant.

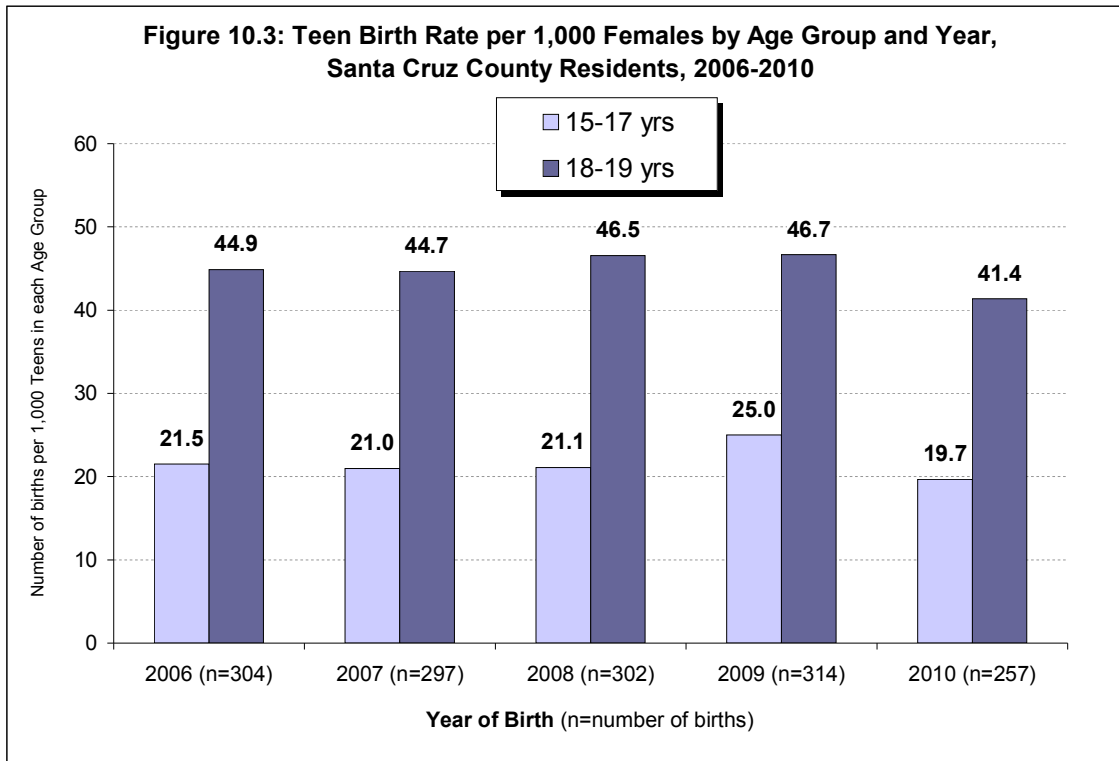


The trend chart below shows the number of teens who were having their second (or more) child. In 2010, five teenage mothers delivered their third child.



10. TEEN BIRTHS (Age 19 and Under), RESIDENTS (CONT.)

In 2010, the teen birth rate decreased in both teen age groups 15-17 and 18-19, but the decrease was not significant.



The distribution of teen births by ZIP code often differs from the distribution of total births by ZIP code. For example, Watsonville residents account for 70% of teen births but only 46% of total births. One notable limitation of this table is that it does not adjust for the differing age demographics within each ZIP code.

Table 10.2: Teen Births by Area of Residence, 2010

Mother's Area of Residence	ZIP Code(s)	Teen Births (19 and Under)		Total Births (All Ages)	
		#	% of all teen births	#	% of all births
Aptos	95003	3	1%	186	6%
Capitola	95010	5	2%	93	3%
Davenport	95017	1	0.4%	3	0.1%
Freedom	95019	14	5%	141	4%
Los Gatos	95033	0	0%	31	1%
San Lorenzo Valley	95005-7, 18, 41	4	2%	214	7%
Santa Cruz	95060-5	43	17%	801	25%
Scotts Valley	95066	2	1%	136	4%
Soquel	95073	5	2%	97	3%
Watsonville	95076	181	70%	1,467	46%
TOTAL		258	100%	3,169	100%

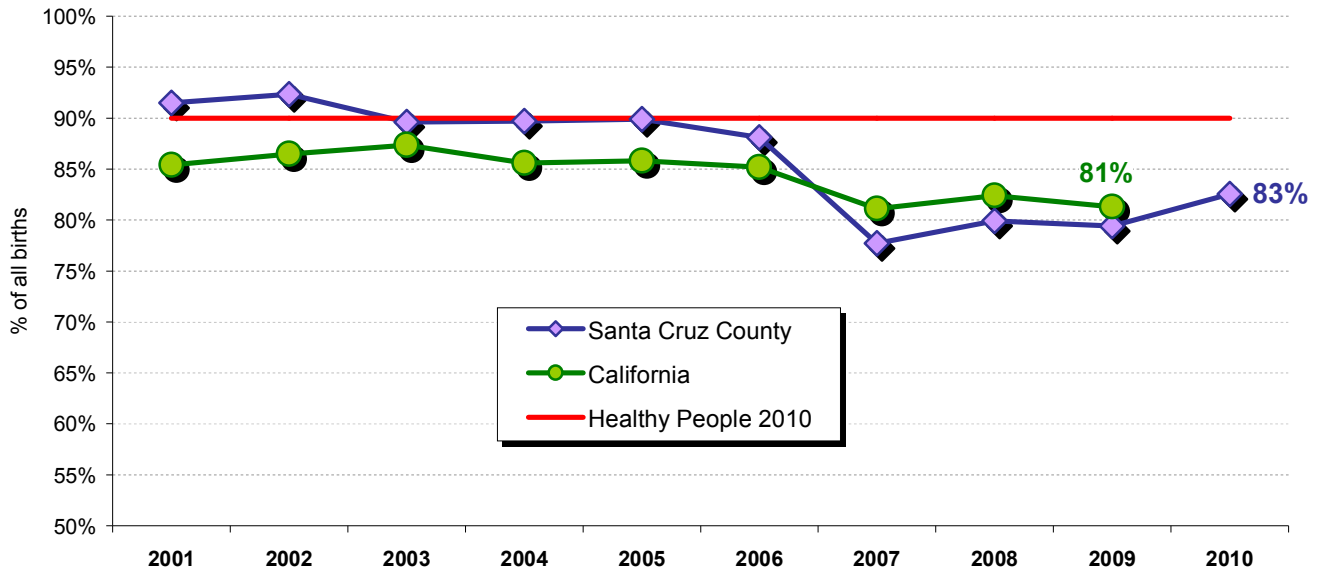
Note: 1 mother's ZIP code is unknown

Source: 2010 Santa Cruz County Automated Vital Statistics System, accessed in 2011. Analyzed using Cal Birth Information System (except adequacy of PNC, or Kotelchuck Index, was analyzed with SAS).

11. TRENDS IN PRENATAL CARE

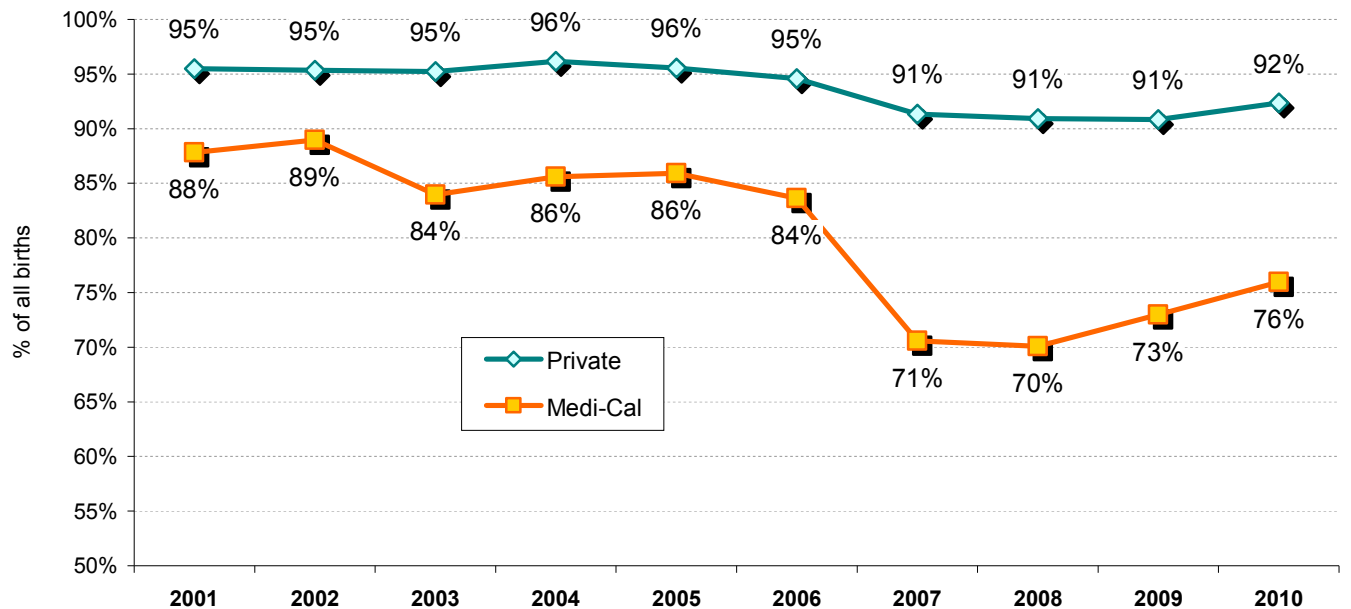
The percentage of mothers receiving early (1st trimester) prenatal care remained well below the Healthy People 2010 objective in 2010. The decline that happened in 2007 has remained fairly stable in the past few years with slight movement in the upward direction. Figure 11.2 shows early prenatal care births by prenatal care payer source—Medi-Cal patients being most negatively impacted by the decline.

Figure 11.1: Percentage of Births Receiving Early* Prenatal Care, Santa Cruz County Residents, 2001-2010



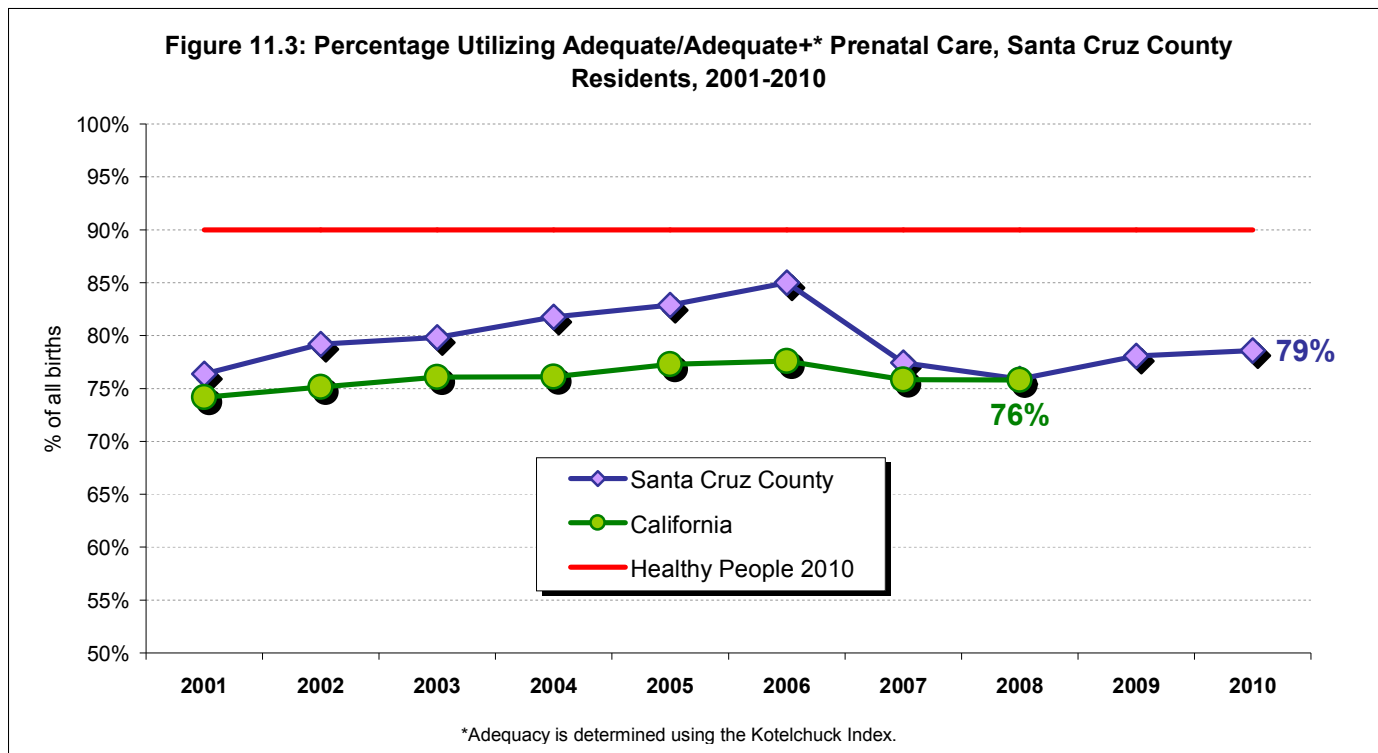
* Early is defined as first trimester

Figure 11.2: Percent of Mothers Receiving Early (1st Trimester) Prenatal Care by Prenatal Care Payment Method, Santa Cruz County Residents, 2001-2010



11. TRENDS IN PRENATAL CARE (CONT.)

Adequacy of utilizing prenatal care (based on the Kotelchuck Index) remained similar in 2010 compared to 2009. California data was not available for 2009 at the time this report was published.



In 2010, 85% of the births at Watsonville Community Hospital were paid for by Medi-Cal, compared to 45% at Dominican Hospital and 31% at Sutter Maternity.

