

***County of Orange
Health Care Agency***

Orange County Birth Outcomes, 2002



October 2005

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October 2005

To our colleagues in public health,

We are pleased to announce the availability of our statistical report, *Orange County Birth Outcomes, 2002*. This information is compiled from birth, death, and fetal death certificates filed with the Birth and Death Registration Office of the County of Orange Health Care Agency, and is presented in a format similar to others previously published in what has become an annual series.

The information presented in this report can be considered to be the official data for 2002. Unless otherwise noted, reference is made to births and deaths to Orange County residents, regardless of where the event occurred. Similarly, births and deaths occurring within the county, but to residents of other jurisdictions, are not included in this report. (The process of removing the records of persons and events outside the county, so that the data pertain only to county residents, is under the auspices of the State Department of Health Services Office of Vital Records, and accounts for the lag in release of official reports.)

The report is available and can be downloaded from the Epidemiology and Assessment website, <http://www.ochealthinfo.com/epi/statistics.htm>.

Thank you for your interest in this special report. We encourage you to make other interested colleagues aware of its publication. If you would like more information, please feel free to contact Epidemiology and Assessment at (714) 834-8180.

Sincerely,

Mark B. Horton, MD, MSPH
Deputy Agency Director/Health Officer
Public Health Services

Juliette A. Poulson, RN, MN
Agency Director

**County of Orange
Health Care Agency**

Birth Outcomes 2002

INTRODUCTION

This document provides tabulations of vital statistics on births in the County of Orange, California, in 2002, as part of a historical series of similar annual reports. These data are compiled from information provided on birth, fetal death and death certificates filed with Birth and Death Registration Office in the County of Orange Health Care Agency.

This document is divided into eight sections. Section 1 presents birth and infant mortality rates. Section 2 presents statistics on complications and procedures performed during pregnancy and labor, in addition to abnormal conditions and clinical procedures relating to the newborn. Section 3 presents the number and rate of cesarean deliveries by Orange County hospital. Section 4 presents statistics related to the birth weight of the infant. Section 5 presents statistics related to when prenatal care was initiated. Section 6 presents statistics on payment source for prenatal care and delivery.

The appendices provide additional information on the number of births by race/ethnicity of the mother, as well as population statistics from the California Department of Finance used to calculate rates. Appendix 3, Technical Notes, contains valuable information on a variety of issues related to the construction of the tables in this report, e.g. categorization of ethnicity, important definitions of terms used in this report, and calculation of rates and ratios. Data on race and ethnicity in this report differ from reports for 1999 and previous years. Beginning with the 2000 report, additional categories for race and ethnicity were used, as per the revised guidelines of the Federal Office of Management and Budget (OMB).

The information presented can be considered official 2002 data. If you have questions or comments regarding the data presented, or for more information on birth statistics, please telephone the County of Orange Health Care Agency, Epidemiology & Assessment at (714) 834-8180.

Users are welcome to reproduce or quote this document in whole or in part provided that acknowledgement is given. Suggested citation: *County of Orange, California, Birth Outcomes, 2002*, County of Orange Health Care Agency, Santa Ana, California, October 2005. The report is available and can be downloaded from the Epidemiology & Assessment website, <http://www.ochealthinfo.com/epi/statistics.htm>.

**County of Orange
Health Care Agency**

Birth Outcomes 2002

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Orange County Birth Outcomes 2002

HIGHLIGHTS

The number of births to Orange County residents in 2002 was 44,760, a decrease of 1.5% from the 45,462 births in 2001.

The fertility rate (number of births per 1,000 females aged 15-44) was 67.6, a decline of 2.3% from the rate of 69.2 in 2001. The fertility rate differed markedly among racial/ethnic groups:

- Hispanic 93.8
- Native Hawaiian or Other Pacific Islander (NHOPI) 62.6
- Asian 60.8
- White 50.5
- African American 43.1
- Two or More Races 38.4
- American Indian or Alaskan Native (AIAN) 19.3

Teenagers (15 – 19 years old) gave birth to 3,148 infants, resulting in a rate of 32.5 per 1,000; this is a decrease of 7.7% from the 2001 rate of 35.2 per 1,000.

- Hispanic 68.7
- NHOPI 26.6
- African American 19.1
- Two or More Races 17.1
- AIAN 12.3
- White 10.5
- Asian 6.0

The infant mortality rate in 2002 was 4.8 per 1,000 live births, an increase of 6.7% from the 2001 infant mortality rate of 4.5. In 2002, Orange County had already met the Healthy People 2000 target rate of 7.0 per 1,000 live births and is very close to meeting the Healthy People 2010 rate of 4.5.

In 2002, 90.8% of Orange County mothers reported beginning prenatal care in the first trimester. This is an increase of 1.7% over 2001, when 89.3% of mothers reported beginning prenatal care in the first trimester. Orange County met the Healthy People 2000 and 2010 goals of 90% of mothers receiving prenatal care in the first trimester.

There were 2,710 infants of low birth weight (less than 2,500 grams), a rate of 60.5 per 1,000 live births, which was an increase from the rate of 58.6 per 1,000 live births in 2001. In 2002, Orange County did not achieve the Healthy People 2000 and 2010 low birth weight goals of no more than 50 per 1,000 live births. The rate of very low birth weight (less than 1,500 grams) in 2002 was 9.6 per 1,000 live births, a decrease from 2001 when the rate was 10.1 per 1,000 live births. Orange County met the Healthy People 2000 goal of 10 per 1,000 very low birth weight babies but exceeded the Healthy People 2010 goal of 9 per 1,000 live births.

Cesarean sections were performed in 27.9% of 2002 births, an increase of 6.1% over the 2001 cesarean percentage of 26.3%. Of the 12,474 cesarean births, 7,246 (58.1%) were first time cesarean births. The remaining 5,228 (41.9%) were repeat cesarean births. Repeat cesarean births (5,228) represented 91.8% of births to mothers who reported a previous cesarean birth. Repeat cesarean births were above the Healthy People 2000 and 2010 goals of 65% and 63%, respectively. There continue to be significant differences among racial/ethnic groups for these indicators.

**County of Orange
Resident Births, 2002**

Birth Outcome Summary

	Total	Male	Female
Total Live Births to Orange County Residents¹:	44,760	22,823	21,937
Estimated Population of Orange County ²	2,959,646		
Crude Birth Rate per 1,000 Population	15.12		
Total Live Births Occurring in Orange County:	47,024		
(Including non-resident births, excluding resident births out of county):			
Mean Age of Mother (Years):	28.92		
Fertility Rate:			
Births to Mothers aged 15-44	44,601		
Estimated Population of Females aged 15-44	659,351		
Fertility Rate per 1,000 Females aged 15-44	67.64		
Teen Birth Rate:			
Births to Mothers aged 15-19	3,148		
Estimated Population of Females aged 15-19	96,839		
Teen Birth Rate per 1,000 Females aged 15-19	32.51		
Births to Mothers aged 10-14	46		
Estimated Population of Females aged 10-14	109,432		
Teen Birth Rate per 1,000 Females aged 10-14	0.42		
Infant Deaths:			
Infant Deaths (< 1 Year)	216		
Infant Mortality Rate per 1,000 Live Births	4.83		
Neonatal Deaths (Less than 28 days)	150		
Neonatal Mortality Rate per 1,000 Live Births	3.35		
Post-Neonatal Deaths (28 days to < 1 Year)	66		
Post-Neonatal Mortality Rate per 1,000 Live Births	1.47		
Healthy People 2000 Infant Mortality Goal per 1,000 Births	7.00		
Healthy People 2010 Infant Mortality Goal per 1,000 Births	4.50		

¹ Unless otherwise specified all numbers and rates are for births to Orange County residents.

² State of California, Department of Finance, *Population Projections by Race/Ethnicity, Gender and Age for California and Its Counties 2000-2050*, Sacramento, California, May 2004.

**County of Orange
Resident Births, 2002**

Birth Outcome Summary

Fetal Deaths (death of fetus ≥20 weeks of gestation):

Number	231
Fetal Death Ratio per 1,000 Live Births	5.16
Healthy People 2000 Fetal Death Goal per 1,000 Live Births	5.00
Healthy People 2010 Fetal Death Goal per 1,000 Live Births	4.10

Maternal Deaths¹:

Maternal Deaths	1
Maternal Death Rate per 100,000 Live Births	--
Healthy People 2000 & 2010 Goal per 100,000 Live Births	3.30

Low Birth Weight Infants:

Very Low Birth Weight (<1,500 g)	431
Rate of Very Low Birth Weight per 1,000 Live Births	9.63
Healthy People 2000 Goal per 1,000 Live Births	10.00
Healthy People 2010 Goal per 1,000 Live Births	9.00
Low Birth Weight (< 2,500 g)	2,710
Rate of Low Birth Weight per 1,000 Live Births	60.55
Healthy People 2000 Goal per 1,000 Live Births	50.00
Healthy People 2010 Goal per 1,000 Live Births	50.00

C-Section Deliveries:

Previous C-Section Births	5,228
First C-Sections	7,246
Total C-Sections	12,474
% of Total Births	27.87%

Births Other than at Orange County Hospitals:

At Home	99
Other (Birthing Centers, in auto, out of county hospital, etc.)	2,365
Total	2,464

Live Births by Plurality²:

Singleton	43,254
Twin	1,371
Triplet	127
Quadruplet	8

¹ Maternal deaths based on 2002 Orange County Death Statistical Master File.

² Excludes fetal deaths, stillbirths, and sibling(s) born in 2001.

-- Rates are not calculated for fewer than five events.

**County of Orange
Resident Births, 2002**

**Section 1. Birth & Infant Mortality Rates
Live Births & Birth Rates for Orange County Cities**

City of Residence	Live Births	Population¹	Rate /1,000 Population
Aliso Viejo	954	42,509	22.44
Anaheim	6,522	334,334	19.51
Brea	402	36,820	10.92
Buena Park	1,155	79,351	14.56
Costa Mesa	1,734	110,612	15.68
Cypress	531	47,511	11.18
Dana Point	289	35,955	8.04
Fountain Valley	566	55,830	10.14
Fullerton	1,820	129,189	14.09
Garden Grove	2,791	168,475	16.57
Huntington Beach	2,283	194,423	11.74
Irvine	1,860	157,246	11.83
Laguna Beach	244	24,274	10.05
Laguna Hills	380	32,575	11.67
Laguna Niguel	780	63,479	12.29
Laguna Woods	1	18,066	--
La Habra	1,100	60,641	18.14
Lake Forest	812	76,519	10.61
La Palma	162	15,830	10.23
Los Alamitos	209	11,707	17.85
Mission Viejo	1,133	96,572	11.73
Newport Beach	540	72,450	7.45
Orange	2,115	132,866	15.92
Placentia	782	48,271	16.20
Rancho Santa Margarita	844	48,429	17.43
San Clemente	864	57,037	15.15
San Juan Capistrano	477	34,674	13.76
Santa Ana	8,113	343,357	23.63
Seal Beach	125	24,652	5.07
Stanton	543	38,047	14.27
Tustin	1,314	69,015	19.04
Villa Park	29	6,110	4.75
Westminster	1,369	89,593	15.28
Yorba Linda	566	60,744	9.32
Balance of County	1,351	116,608	11.59
Total²	44,760	2,933,771	15.26

¹ State of California, Department of Finance, E-5 City/County Population and Housing Estimates, 2004, revised 2001-2003, with 2000 DRU Benchmark, May, 2004.

² Population and rate are different from page two because Revised Historical City, County, and State Population Estimates are derived differently than are Population Projections by Race/Ethnicity, Gender and Age.

-- Rates are not calculated for fewer than five events.

County of Orange
Resident Births, 2002
Section 1. Birth & Infant Mortality Rates

Birth Rates by Race/Ethnicity of the Mother

Crude Birth Rates by Race/Ethnicity of the Mother

Race/Ethnicity of the Mother	Live Births	Rate /1,000 Population¹
Hispanic	22,137	23.50
NHOPI	162	16.46
Asian	6,414	15.37
African American	478	10.35
White	14,816	10.01
Two or More Races	388	7.64
AIAN	64	4.58
Other *	4	N/A
Withheld *	284	N/A
Missing/Unknown *	13	N/A
Total	44,760	15.12

Fertility Rates by Race/Ethnicity of the Mother

Race/Ethnicity of the Mother	Live Births	Rate /1,000 Females 15-44 Years¹
Hispanic	22,073	93.80
NHOPI	162	62.65
Asian	6,400	60.83
White	14,744	50.52
African American	473	43.09
Two or More Races	387	38.41
AIAN	64	19.25
Other *	4	N/A
Withheld *	281	N/A
Missing/Unknown *	13	N/A
Total	44,601	67.64

Teen (Mother's age 15 - 19) Fertility Rates by Race/Ethnicity of the Mother

Race/Ethnicity of the Mother	Live Births	Rate /1,000 Females 15-19 Years¹
Hispanic	2,538	68.72
NHOPI	11	26.57
African American	32	19.12
Two or More Races	38	17.08
AIAN	7	12.32
White	431	10.49
Asian	84	6.03
Other *	1	N/A
Withheld *	6	N/A
Total	3,148	32.51

(continued on next page)

¹ State of California, Department of Finance, *Population Projections by Race/Ethnicity, Gender and Age for California and Its Counties 2000-2050*, Sacramento, California, May 2004.

* Rate not calculated for Other, Withheld, or Missing/Unknown race/ethnicity as appropriate population figures are not available.

County of Orange
Resident Births, 2002
Section 1. Birth & Infant Mortality Rates

Infant Mortality Rates by Race/Ethnicity

Race/Ethnicity	Infant Deaths	Rate /1,000 Live Births
Hispanic	120	5.42
White	68	4.59
Asian	25	3.90
African American	3	--
Total	216	4.83
Healthy People 2000 Infant Mortality Goal per 1,000 Live Births		7.00
Healthy People 2010 Infant Mortality Goal per 1,000 Live Births		4.50

Note: Infant deaths based on 2002 Orange County Death Statistical Master File.

-- Rates are not calculated for fewer than five events.

**County of Orange
Resident Births, 2002**

Section 2. Complications, Procedures & Abnormal Conditions

Complications & Procedures of Pregnancy & Concurrent Illnesses

<u>Complications, Concurrent Illnesses¹ and Risk Factors</u>	<u>Number</u>	<u>Rate /1,000 Live Births</u>
Diabetes	1,333	29.78
Premature labor	1,253	27.99
Pre-Eclampsia (pregnancy-induced hypertension, edema, and/or proteinuria)	634	14.16
Tobacco use during pregnancy	484	10.81
Anemia (hct. < 30 and/or hgb. < 10)	346	7.73
Polyhydramnios / Oligohydramnios	317	7.08
Hepatitis B (acute infection or carrier)	211	4.71
Genital herpes	148	3.31
Any previous live birth or fetal death ≥ 4,000 grams birth weight	136	3.04
Hypertension, chronic	112	2.50
Any previous live birth or fetal death < 37 weeks gestation	105	2.35
Rh sensitization	104	2.32
Sexually transmitted disease, other than genital herpes	92	2.06
Uterine bleeding before labor	77	1.72
Incompetent cervix (with or without cerclage)	58	1.30
Any previous live birth or fetal death < 2,500 grams birth weight	56	1.25
Cardiac disease	40	0.89
Lung disease (acute or chronic)	27	0.60
Renal disease	16	0.36
Pyelonephritis	16	0.36
Hemoglobinopathy	15	0.34
<u>Eclampsia (convulsions or coma)</u>	<u>7</u>	<u>0.16</u>
Total	5,587	124.82
<u>Procedures (Number of mothers reporting at least one of the following)</u>		
Ultrasound	31,206	697.18
Electronic fetal monitoring	3,312	73.99
Amniocentesis	408	9.12
Tocolysis	133	2.97
Cervical cerclage	49	1.09
<u>Chorionic villus sampling</u>	<u>10</u>	<u>0.22</u>
Total Procedures	35,118	784.58
Other Complications and Procedures	1,408	31.46

¹ Rubella was reported as a concurrent illness for 10 mothers; however, historically this has been miscoded to represent the immune status of the mother.

Note: Complications and procedures of pregnancy and concurrent illnesses are selected from a predetermined list of numeric codes that are entered onto the birth certificate.

County of Orange
Resident Births, 2002

Section 2. Complications, Procedures & Abnormal Conditions

Complications & Procedures of Labor & Delivery

<u>Complications</u>	<u>Number</u>	<u>Rate /1,000 Live Births</u>
Presence of meconium, moderate to heavy	2,041	45.60
Breech or other abnormal presentation	1,166	26.05
Febrile (>100° F, or >38° C)	983	21.96
Fetopelvic disproportion	627	14.01
Fetal distress	614	13.72
Premature rupture of membrane (>12 hours)	605	13.52
Pre-eclampsia (pregnancy-induced hypertension, edema, and/or proteinuria)	548	12.24
Other dysfunctional labor	528	11.80
Precipitous labor	335	7.48
Prolonged labor (>20 hours)	328	7.33
Placenta previa	125	2.79
Other excessive bleeding	105	2.35
Shoulder dystocia	101	2.26
Abruptio placenta	101	2.26
Amnionitis / sepsis	57	1.27
Unsuccessful vaginal birth	53	1.18
Genital herpes	38	0.85
Cord prolapse	32	0.71
Anesthetic complications	19	0.42
Eclampsia (convulsions or coma)	6	0.13
Seizures during labor	5	0.11
<u>Maternal death¹ (within 72 hours of delivery)</u>	<u>1</u>	<u>--</u>
Total Complications	8,418	188.07
 <u>Procedures (Number of mothers reporting at least one of the following)</u>		
Electronic fetal monitoring	35,596	795.26
Stimulation of labor	5,710	127.57
Induction of labor	5,126	114.52
Ultrasound	2,257	50.42
Tocolysis	71	1.59
Amniocentesis	66	1.47
Maternal blood transfusion	22	0.49
<u>Transport of mother from another facility prior to labor</u>	<u>22</u>	<u>0.49</u>
Total Procedures	48,870	1,091.82
 Other Complications and Procedures	 4,593	 102.61

¹Maternal deaths based on 2002 Orange County Death Statistical Master File.
-- Rates are not calculated for fewer than five events.

Note: Complications and procedures of labor and delivery are selected from a predetermined list of numeric codes that are entered onto the birth certificate.

County of Orange
Resident Births, 2002

Section 2. Complications, Procedures & Abnormal Conditions

Abnormal Conditions & Clinical Procedures Relating to the Newborn

<u>Abnormal Conditions¹</u>	<u>Number</u>	<u>Rate /1,000 Live Births</u>
Other anomalies of the respiratory system	76	1.70
Other anomalies with fewer than four occurrences	56	1.25
Hyaline membrane disease or RDS	46	1.03
Cleft palate, lip	26	0.58
Down's syndrome	14	0.31
Birth injury, with or without specific site	12	0.27
Other anomalies of the heart	10	0.22
Talipes	10	0.22
Anemia	8	0.18
Drug withdrawal syndrome	8	0.18
Other anomalies of ear, face, and/or neck	8	0.18
Tracheo-esophageal fistula, or esophageal atresia or stenosis	8	0.18
Hydrocephalus	6	0.13
Hypospadias or epispadias	6	0.13
Meconium aspiration syndrome	6	0.13
Gastroschisis, exomphalos, or omphalocele	5	0.11
Other anomalies of the central nervous system	5	0.11
Other and unspecified congenital anomalies	5	0.11
Multiple non-specific anomalies	4	--
Open spina bifida	4	--
Other anomalies of the circulatory system	4	--
Patent ductus arteriosus	4	--
Syndactyl of fingers and/or toes	4	--
<u>Total Abnormal Conditions</u>	<u>335</u>	<u>7.48</u>
<u>Procedures Relating to the Newborn</u>		
Neonatal Intensive Care Unit (NICU)	1,416	31.64
Transfer of newborn to another facility	436	9.74
Assisted ventilation >= 30 minutes	314	7.02
<u>Assisted ventilation < 30 minutes</u>	<u>103</u>	<u>2.30</u>
<u>Total Procedures</u>	<u>2,269</u>	<u>50.69</u>
Other Abnormal Conditions and Procedures	1,238	27.66

¹ The Vital Statistics Section of the California Department of Health Services Center for Health Statistics considers the birth certificate data regarding congenital abnormalities to be unreliable. It is well documented that congenital anomalies, except for the most visible and most severe, are incompletely reported on birth certificates. The completeness of reporting specific anomalies depends on how easily they are recognized in the short time between birth and birth-registration.

-- Rates are not calculated for fewer than five events.

Note: Abnormal conditions and clinical procedures relating to the newborn are selected from a predetermined list of numeric codes that are entered onto the birth certificate.

County of Orange
Resident Births, 2002

Section 3. Number & Rate of Cesarean Deliveries

**Births & Rates of Cesarean Delivery by Orange County Hospital,
Total Births and Births to Residents of Orange County**

Hospital	Total Births	Total C-Section	First C-Section	Repeat C-Section	C-Section Rate (%) of Total Births
Anaheim General Hospital					
Total Births	530	175	87	88	33.02%
Orange County Residents	496	167	84	83	33.67%
Anaheim Memorial M.C.					
Total Births	2,370	570	285	285	24.05%
Orange County Residents	2,171	520	262	258	23.95%
Coastal Communities Hospital					
Total Births	2,422	795	474	321	32.82%
Orange County Residents	2,389	784	468	316	32.82%
Fountain Valley Regional M.C.					
Total Births	3,839	946	571	375	24.64%
Orange County Residents	3,616	905	545	360	25.03%
Garden Grove Hosp. & M.C.					
Total Births	2,662	784	410	374	29.45%
Orange County Residents	2,506	727	377	350	29.01%
Hoag Memorial Hospital					
Total Births	4,693	1,561	983	578	33.26%
Orange County Residents	4,433	1,479	929	550	33.36%
Irvine Medical Center					
Total Births	2,021	579	363	216	28.65%
Orange County Residents	1,905	533	341	192	27.98%
Kaiser Foundation, Anaheim					
Total Births	3,455	865	498	367	25.04%
Orange County Residents	2,864	716	419	297	25.00%
La Palma Intercommunity					
Total Births	678	178	90	88	26.25%
Orange County Residents	476	122	60	62	25.63%
Los Alamitos M.C.					
Total Births	1,187	268	146	122	22.58%
Orange County Residents	429	103	66	37	24.01%
Mission Hosp Regional M.C.					
Total Births	2,803	689	393	296	24.58%
Orange County Residents	2,689	659	376	283	24.51%
Orange Coast Memorial M.C.					
Total Births	1,187	276	163	113	23.25%
Orange County Residents	1,002	223	129	94	22.26%

(continued on next page)

County of Orange
Resident Births, 2002

Section 3. Number & Rate of Cesarean Deliveries

**Births & Rates of Cesarean Delivery by Orange County Hospital,
Total Births and Births to Residents of Orange County (continued)**

Hospital	Total Births	Total C-Section	First C-Section	Repeat C-Section	C-Section Rate (%) of Total Births
Placentia Linda Community					
Total Births	969	224	117	107	23.12%
Orange County Residents	779	173	95	78	22.21%
Saddleback Memorial M.C.					
Total Births	3,180	876	576	300	27.55%
Orange County Residents	2,991	816	544	272	27.28%
Samaritan M.C. - San Clemente					
Total Births	1	0	0	0	0.00%
Orange County Residents	1	0	0	0	0.00%
Santa Ana Medical Center					
Total Births	1,365	407	223	184	29.82%
Orange County Residents	1,349	401	222	179	29.73%
South Coast Medical Center					
Total Births	480	159	82	77	33.13%
Orange County Residents	464	155	80	75	33.41%
St. Joseph Hospital					
Total Births	4,367	1,324	780	544	30.32%
Orange County Residents	3,943	1,202	710	492	30.48%
St. Jude Medical Center - Fullerton					
Total Births	2,232	512	327	185	22.94%
Orange County Residents	1,596	363	232	131	22.74%
UCI Medical Center					
Total Births	1,243	403	237	166	32.42%
Orange County Residents	1,163	371	215	156	31.90%
Western Medical Center-Anaheim					
Total Births	2,232	488	223	265	21.86%
Orange County Residents	2,150	471	212	259	21.91%
Western Medical Center-Santa Ana					
Total Births	2,979	853	440	413	28.63%
Orange County Residents	2,884	825	426	399	28.61%
At Home					
Total Births	104	N/A	N/A	N/A	N/A
Orange County Residents	99	N/A	N/A	N/A	N/A
Other locations/Unknown					
Total Births	2,390	762	456	306	31.88%
Orange County Residents	2,365	759	454	305	32.09%
Total					
Total Births	49,389	13,694	7,924	5,770	27.73%
Orange County Residents	44,760	12,474	7,246	5,228	27.87%

Note: Due to rounding, percentages may not add to 100.

County of Orange
Resident Births, 2002
Section 4. Birth Weight

Birth Weight by Race/Ethnicity of Mother

Birth Weight (g) ¹	Race/ Ethnicity of Mother										Total
	White	African-American	Hispanic	S.E. Asian ²	Other Asian ³	AIAN	NHOPI	Two or More Races	Other	Withheld/Unknown ⁴	
Mean	3,396	3,223	3,353	3,187	3,217	3,532	3,400	3,329	3,299	3,377	3,345
Median	3,432	3,278	3,374	3,210	3,251	3,498	3,452	3,360	3,595	3,430	3,374
Std. Deviation	587	634	553	492	548	584	548	515	1056	593	565
Birth Weight Group (g)¹											
< 1,500	157	7	199	17	46	0	0	2	0	3	431
% of column	1.06	1.46	0.90	0.62	1.25	0.00	0.00	0.52	0.00	1.01	0.96
% of row	36.43	1.62	46.17	3.94	10.67	0.00	0.00	0.46	0.00	0.70	100.00
1,500-2,499	771	45	1013	170	225	4	11	23	1	16	2,279
% of column	5.20	9.41	4.58	6.21	6.12	6.25	6.79	5.93	25.00	5.39	5.09
% of row	33.83	1.97	44.45	7.46	9.87	0.18	0.48	1.01	0.04	0.70	100.00
2,500-3,499	7,211	273	12,240	1,876	2,370	28	77	223	0	146	24,444
% of column	48.67	57.11	55.29	68.52	64.47	43.75	47.53	57.47	0.00	49.16	54.61
% of row	29.50	1.12	50.07	7.67	9.70	0.11	0.32	0.91	0.00	0.60	100.00
3,500-4,499	6,391	147	8,381	668	1002	30	73	135	3	125	16,955
% of column	43.14	30.75	37.86	24.40	27.26	46.88	45.06	34.79	75.00	42.09	37.88
% of row	37.69	0.87	49.43	3.94	5.91	0.18	0.43	0.80	0.02	0.74	100.00
4,500 & over	286	6	304	7	33	2	1	5	0	7	651
% of column	1.93	1.26	1.37	0.26	0.90	3.13	0.62	1.29	0.00	2.36	1.45
% of row	43.93	0.92	46.70	1.08	5.07	0.31	0.15	0.77	0.00	1.08	100.00
Total	14,816	478	22,137	2,738	3,676	64	162	388	4	297	44,760
% of column	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
% of row	33.10	1.07	49.46	6.12	8.21	0.14	0.36	0.87	0.01	0.66	100.00

¹ Birth weight in grams.

² Southeast Asian includes Cambodian, Hmong, Laotian, Thai, and Vietnamese.

³ Other Asian includes Asian Specified and Unspecified, Asian Indian, Chinese, Filipino, Japanese, and Korean.

⁴ Withheld/Unknown includes those who did not specify their race/ethnicity (n=284) and those with unknown race/ethnicity (n=13).

Note: Due to rounding, percentages may not add to 100.

Healthy People 2000 goal for very low birth weight infants (<1,500 g) is 10.0 per 1,000 live births (1.0%).

Healthy People 2010 goal for very low birth weight infants (<1,500 g) is 9.0 per 1,000 live births (0.9%).

Healthy People 2000 & 2010 goal for low birth weight infants is 50.0 per 1,000 live births (5.0%).

County of Orange
Resident Births, 2002
Section 4. Birth Weight

Low Birth Weight Incidence by Race/Ethnicity of Mother

Birth Weight (g) ¹	Race/Ethnicity of Mother										Total
	White	African-American	Hispanic	S.E. Asian ³	Other Asian ⁴	AIAN	NHOPI	Two or More Races	Other	Withheld/Unknown ⁵	
<2,500	928	52	1,212	187	271	4	11	25	1	19	2,710
Rate ²	62.63	108.79	54.75	68.30	73.72	--	67.90	64.43	--	63.97	60.55

Very Low Birth Weight Incidence by Race/Ethnicity of Mother

Birth Weight (g) ¹	Race/Ethnicity of Mother										Total
	White	African-American	Hispanic	S.E. Asian ³	Other Asian ⁴	AIAN	NHOPI	Two or More Races	Other	Withheld/Unknown ⁶	
<1,500	157	7	199	17	46	0	0	2	0	3	431
Rate ²	10.60	14.64	8.99	6.21	12.51	--	--	--	--	--	9.63

¹ Birth weight in grams.

² Rate is calculated per 1,000 live births.

³ Southeast Asian includes Cambodian, Hmong, Laotian, Thai, and Vietnamese.

⁴ Other Asian includes Asian Specified and Unspecified, Asian Indian, Chinese, Filipino, Japanese, and Korean.

⁵ Withheld/Unknown includes those who did not specify their race/ethnicity (n=17) and are those with unknown race/ethnicity (n=2).

⁶ Withheld/Unknown includes those who did not specify their race/ethnicity (n=3).

-- Rates are not calculated for fewer than five events.

Healthy People 2000 goal for very low birth weight infants is 10.0 per 1,000 live births (1.0%).

Healthy People 2010 goal for very low birth weight infants is 9.0 per 1,000 live births (0.9%).

Healthy People 2000 & 2010 goal for low birth weight infants is 50.0 per 1,000 live births (5.0%).

**County of Orange
Resident Births, 2002**

Section 4. Birth Weight

Mother's Age by Child's Birth Weight

Mother's Age ^{1,2}	Child's Birth Weight ³					Total
	< 1,500 g	1,500 - 2,499 g	2,500 - 3,499 g	3,500 - 4,499 g	4,500 + g	
< 15 Years	0	7	33	6	0	46
% of column	0.00	0.31	0.14	0.04	0.00	0.10
% of row	0.00	15.22	71.74	13.04	0.00	100.00
15-17 Years	16	51	654	277	3	1,001
% of column	3.71	2.24	2.68	1.63	0.46	2.24
% of row	1.60	5.09	65.33	27.67	0.30	100.00
18-19 Years	11	100	1,312	713	11	2,147
% of column	2.55	4.39	5.37	4.21	1.69	4.80
% of row	0.51	4.66	61.11	33.21	0.51	100.00
20-24 Years	66	363	4,928	2,937	92	8,386
% of column	15.31	15.94	20.16	17.32	14.13	18.74
% of row	0.79	4.33	58.76	35.02	1.10	100.00
25-29 Years	92	502	6,373	4,551	178	11,696
% of column	21.35	22.04	26.07	26.84	27.34	26.13
% of row	0.79	4.29	54.49	38.91	1.52	100.00
30-34 Years	144	644	6,714	5,045	212	12,759
% of column	33.41	28.27	27.47	29.76	32.57	28.51
% of row	1.13	5.05	52.62	39.54	1.66	100.00
35-39 Years	81	460	3,549	2,843	125	7,058
% of column	18.79	20.19	14.52	16.77	19.20	15.77
% of row	1.15	6.52	50.28	40.28	1.77	100.00
40-44 Years	19	124	816	565	30	1,554
% of column	4.41	5.44	3.34	3.33	4.61	3.47
% of row	1.22	7.98	52.51	36.36	1.93	100.00
45 + Years	2	27	64	18	0	111
% of column	0.46	1.19	0.26	0.11	0.00	0.25
% of row	1.80	24.32	57.66	16.22	0.00	100.00
Total	431	2,278	24,443	16,955	651	44,758
% of column	100.00	100.00	100.00	100.00	100.00	100.00
% of row	0.96	5.09	54.61	37.88	1.45	100.00

¹ Mother's age at time of delivery.

² Age unknown for two mothers.

³ Birth weight in grams.

Note: Due to rounding, percentages may not add to 100.

Healthy People 2000 goal for very low birth weight infants (< 1,500 g) is 10 per 1,000 live births (1%);

Healthy People 2010 goal is 9 per 1,000 live births (0.9%).

Healthy People 2000 and 2010 goal for low birth weight infants (< 2,500 g) is 50 per 1,000 live births (5.0%).

**County of Orange
Resident Births, 2002**

Section 5. Prenatal Care

Trimester Prenatal Care Initiated by Mother's Education Level

Trimester Prenatal Care Initiated	Mother's Education Level ¹						Total
	No High School	Some High School	High School Graduate	Some College	College Graduate	Post-Graduate	
First trimester	4,923	6,280	9,517	7,337	6,974	5,150	40,181
% of column	86.54	84.72	89.49	92.41	96.47	97.46	90.93
% of row	12.25	15.63	23.69	18.26	17.36	12.82	100.00
Second trimester	629	907	886	474	197	96	3,189
% of column	11.06	12.24	8.33	5.97	2.73	1.82	7.22
% of row	19.72	28.44	27.78	14.86	6.18	3.01	100.00
Third trimester	104	161	141	64	43	23	536
% of column	1.83	2.17	1.33	0.81	0.59	0.44	1.21
% of row	19.40	30.04	26.31	11.94	8.02	4.29	100.00
No prenatal care	20	51	67	54	9	9	210
% of column	0.35	0.69	0.63	0.68	0.12	0.17	0.48
% of row	9.52	24.29	31.90	25.71	4.29	4.29	100.00
Unknown	13	14	24	11	6	6	74
% of column	0.23	0.19	0.23	0.14	0.08	0.11	0.17
% of row	17.57	18.92	32.43	14.86	8.11	8.11	100.00
Total	5,689	7,413	10,635	7,940	7,229	5,284	44,190
% of column	100.00	100.00	100.00	100.00	100.00	100.00	100.00
% of row	12.87	16.78	24.07	17.97	16.36	11.96	100.00

¹ Unknowns for mother's education level are excluded from analysis (n=570).

Note: Due to rounding, percentages may not add to 100.

Healthy People 2000 & 2010 prenatal care goal is that 90% of mothers initiate care in first trimester.

**County of Orange
Resident Births, 2002**

Section 5. Prenatal Care

Trimester Prenatal Care Initiated by Race/Ethnicity of Mother

Trimester Prenatal Care Initiated	Race/Ethnicity of Mother										Total
	White	African-American	Hispanic	S.E. Asian ¹	Other Asian ²	AIAN	NHOPI	Two or More Races	Other	Withheld/Unknown ³	
First	14,085	416	19,405	2,519	3,423	55	132	359	3	257	40,654
% of column	95.07	87.03	87.66	92.00	93.12	85.94	81.48	92.53	75.00	86.53	90.83
% of row	34.65	1.02	47.73	6.20	8.42	0.14	0.32	0.88	0.01	0.63	100.00
Second	541	51	2,209	179	186	5	22	20	1	13	3,227
% of column	3.65	10.67	9.98	6.54	5.06	7.81	13.58	5.15	25.00	4.38	7.21
% of row	16.76	1.58	68.45	5.55	5.76	0.15	0.68	0.62	0.03	0.40	100.00
Third	82	6	373	26	39	4	4	6	0	3	543
% of column	0.55	1.26	1.68	0.95	1.06	6.25	2.47	1.55	0.00	1.01	1.21
% of row	15.10	1.10	68.69	4.79	7.18	0.74	0.74	1.10	0.00	0.55	100.00
No care	70	4	111	10	15	0	2	3	0	1	216
% of column	0.47	0.84	0.50	0.37	0.41	0.00	1.23	0.77	0.00	0.34	0.48
% of row	32.41	1.85	51.39	4.63	6.94	0.00	0.93	1.39	0.00	0.46	100.00
Unknown	38	1	39	4	13	0	2	0	0	23	120
% of column	0.26	0.21	0.18	0.15	0.35	0.00	1.23	0.00	0.00	7.74	0.27
% of row	31.67	0.83	32.50	3.33	10.83	0.00	1.67	0.00	0.00	19.17	100.00
Total	14,816	478	22,137	2,738	3,676	64	162	388	4	297	44,760
% of column	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
% of row	33.10	1.07	49.46	6.12	8.21	0.14	0.36	0.87	0.01	0.66	100.00

¹ Southeast Asian includes Cambodian, Hmong, Laotian, Thai, and Vietnamese.

² Other Asian includes Asian Specified and Unspecified, Asian Indian, Chinese, Filipino, Japanese, and Korean.

³ Withheld/Unknown includes those who did not specify their race/ethnicity (n=284) and those with unknown race/ethnicity (n=13).

Note: Due to rounding, percentages may not add to 100.

Healthy People 2000 & 2010 prenatal care goal is that 90% of mothers initiate care in first trimester.

**County of Orange
Resident Births, 2002**

Section 5. Prenatal Care

Trimester Prenatal Care Initiated by Mother's Age

Trimester Prenatal Care Initiated	Mother's Age ^{1,2}									Total
	< 15 Years	15-17 Years	18-19 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40-44 Years	45 + Years	
First trimester	22	725	1783	7292	10,694	11,994	6,601	1,435	106	40,652
% of column	47.83	72.43	83.05	86.95	91.43	94.00	93.53	92.34	95.50	90.83
% of row	0.05	1.78	4.39	17.94	26.31	29.50	16.24	3.53	0.26	100.00
Second trimester	17	217	291	867	801	587	351	93	3	3,227
% of column	36.96	21.68	13.55	10.34	6.85	4.60	4.97	5.98	2.70	7.21
% of row	0.53	6.72	9.02	26.87	24.82	18.19	10.88	2.88	0.09	100.00
Third trimester	4	38	55	151	125	100	59	10	1	543
% of column	8.70	3.80	2.56	1.80	1.07	0.78	0.84	0.64	0.90	1.21
% of row	0.74	7.00	10.13	27.81	23.02	18.42	10.87	1.84	0.18	100.00
No prenatal care	2	14	12	54	55	45	27	7	0	216
% of column	4.35	1.40	0.56	0.64	0.47	0.35	0.38	0.45	0.00	0.48
% of row	0.93	6.48	5.56	25.00	25.46	20.83	12.50	3.24	0.00	100.00
Unknown	1	7	6	22	21	33	20	9	1	120
% of column	2.17	0.70	0.28	0.26	0.18	0.26	0.28	0.58	0.90	0.27
% of row	0.83	5.83	5.00	18.33	17.50	27.50	16.67	7.50	0.83	100.00
Total	46	1,001	2,147	8,386	11,696	12,759	7,058	1,554	111	44,758
% of column	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
% of row	0.10	2.24	4.80	18.74	26.13	28.51	15.77	3.47	0.25	100.00

¹ Mother's age at time of delivery.

² Age unknown for two mothers.

Note: Due to rounding, percentages may not add to 100.

Healthy People 2000 & 2010 prenatal care goal is that 90% of mothers initiate care in first trimester.

County of Orange

Resident Births, 2002

Section 6. Payment Source

Principal Payment Source for Prenatal Care by Race/Ethnicity of Mother

Payment Source	Race/Ethnicity of Mother										Total ⁴
	White	African-American	Hispanic	S.E. Asian ¹	Other Asian ²	AIAN	NHOPI	Two or More Races	Other	Withheld/Unknown ³	
Medi-Cal	1,551	162	13,889	850	457	16	59	65	1	25	17,075
% of column	10.48	33.89	62.79	31.04	12.45	25.00	36.65	16.75	25.00	8.83	38.20
% of row	9.08	0.95	81.34	4.98	2.68	0.09	0.35	0.38	0.01	0.15	100.00
HMO/Private	12,831	296	7,647	1,830	2,998	45	90	307	3	248	26,295
% of column	86.72	61.92	34.57	66.84	81.64	70.31	55.90	79.12	75.00	87.63	58.82
% of row	48.80	1.13	29.08	6.96	11.40	0.17	0.34	1.17	0.01	0.94	100.00
No care	70	4	110	10	15	0	2	3	0	1	215
% of column	0.47	0.84	0.50	0.37	0.41	0.00	1.24	0.77	0.00	0.35	0.48
% of row	32.56	1.86	51.16	4.65	6.98	0.00	0.93	1.40	0.00	0.47	100.00
Other⁵	344	16	474	48	202	3	10	13	0	9	1,119
% of column	2.32	3.35	2.14	1.75	5.50	4.69	6.21	3.35	0.00	3.18	2.50
% of row	30.74	1.43	42.36	4.29	18.05	0.27	0.89	1.16	0.00	0.80	100.00
Total	14,796	478	22,120	2,738	3,672	64	161	388	4	283	44,704
% of column	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
% of row	33.10	1.07	49.48	6.12	8.21	0.14	0.36	0.87	0.01	0.63	100.00

Expected Payment Source for Delivery by Race/Ethnicity of Mother

Payment Source	Race/Ethnicity of Mother										Total ⁴
	White	African-American	Hispanic	S.E. Asian ¹	Other Asian ²	AIAN	NHOPI	Two or More Races	Other	Withheld/Unknown ³	
Medi-Cal	1,556	164	13,984	854	461	16	61	66	1	26	17,189
% of column	10.53	34.38	63.36	31.26	12.58	25.00	38.13	17.10	25.00	9.03	38.52
% of row	9.05	0.95	81.35	4.97	2.68	0.09	0.35	0.38	0.01	0.15	100.00
HMO/Private	12,857	296	7,649	1,830	3,001	45	89	306	3	254	26,330
% of column	87.04	62.05	34.65	66.98	81.91	70.31	55.63	79.27	75.00	88.19	59.01
% of row	48.83	1.12	29.05	6.95	11.40	0.17	0.34	1.16	0.01	0.96	100.00
Unattended	6	0	2	1	0	0	0	0	0	0	9
% of column	0.04	0.00	0.01	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.02
% of row	66.67	0.00	22.22	11.11	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other⁵	353	17	437	47	202	3	10	14	0	8	1,091
% of column	2.39	3.56	1.98	1.72	5.51	4.69	6.25	3.63	0.00	2.78	2.45
% of row	32.36	1.56	40.05	4.31	18.52	0.27	0.92	1.28	0.00	0.73	100.00
Total	14,772	477	22,072	2,732	3,664	64	160	386	4	288	44,619
% of column	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
% of row	33.11	1.07	49.47	6.12	8.21	0.14	0.36	0.87	0.01	0.65	100.00

¹ Southeast Asian includes Cambodian, Hmong, Laotian, Thai, and Vietnamese.

² Other Asian includes Asian Specified and Unspecified, Asian Indian, Chinese, Filipino, Japanese, and Korean.

³ Withheld/Unknown includes those who did not specify their race/ethnicity (n=275 for payment source for prenatal care and n=281 for expected payment source for delivery) and those with unknown race/ethnicity (n=8 for payment source for prenatal care and n=7 for expected payment source for delivery).

⁴ Missing data for payment source for prenatal care (n=56) and expected payment source for delivery (n=141).

⁵ Other source of payment includes Medi-Care, Worker's Compensation, other government funds and other non-government funds.

Note: Due to rounding, percentages may not add to 100.

Appendix 1
County of Orange
Resident Births, 2002

Number of Births by Race/Ethnicity of the Mother

Race/Ethnicity of the Mother	Live Births	Percent
Hispanic	22,137	49.46%
White	14,816	33.10%
Other Asian ¹	3,676	8.21%
Southeast Asian ²	2,738	6.12%
African American	478	1.07%
Two or More Races	388	0.87%
Withheld/Unknown ³	297	0.66%
NHOPI	162	0.36%
AIAN	64	0.14%
Other	4	0.01%
Total	44,760	100.00%

Number of Births to Mothers Aged 15 - 44 Years by Race/Ethnicity of the Mother

Race/Ethnicity of the Mother	Live Births	Percent
Hispanic	22,073	49.49%
White	14,744	33.06%
Other Asian ¹	3,669	8.23%
Southeast Asian ²	2,731	6.12%
African American	473	1.06%
Two or More Races	387	0.87%
Withheld/Unknown ⁴	294	0.66%
NHOPI	162	0.36%
AIAN	64	0.14%
Other	4	0.01%
Total	44,601	100.00%

Number of Births to Teens (Mother's Aged 15 - 19) by Race/Ethnicity of the Mother

Race/Ethnicity of the Mother	Live Births	Percent
Hispanic	2,538	80.62%
White	431	13.69%
Southeast Asian ²	53	1.68%
Two or More Races	38	1.21%
African American	32	1.02%
Other Asian ¹	31	0.98%
NHOPI	11	0.35%
AIAN	7	0.22%
Withheld/Unknown ⁵	6	0.19%
Other	1	0.03%
Total	3,148	100.00%

¹ Other Asian includes Asian Specified and Unspecified, Asian Indian, Chinese, Filipino, Japanese, and Korean.

² Southeast Asian includes Cambodian, Hmong, Laotian, Thai, and Vietnamese.

³ Withheld/Unknown includes those who did not specify their race/ethnicity (n=284) and those with unknown race/ethnicity (n=13).

⁴ Withheld/Unknown includes those who did not specify their race/ethnicity (n=281) and those with unknown race/ethnicity (n=13).

⁵ Withheld/Unknown includes those who did not specify their race/ethnicity (n=6).

Note: Due to rounding, percentages may not add to 100.

Appendix 1

County of Orange Resident Births, 2002

Number of Infant Deaths by Race/Ethnicity of Mother

Race/Ethnicity of the Mother	Infant Deaths	Percent
Hispanic	120	55.56%
White	68	31.48%
Other Asian ¹	16	7.41%
Southeast Asian ²	9	4.17%
African American	3	1.39%
Total	216	100.00%

¹ Southeast Asian includes Cambodian, Hmong, Laotian, Thai, and Vietnamese.

² Other Asian includes Asian Specified and Unspecified, Asian Indian, Chinese, Filipino, Japanese, and Korean.

Note: Infant deaths based on 2002 Orange County Death Statistical Master File.

Note: Due to rounding, percentages may not add to 100.

Appendix 1

Live Births by Age and Race/Ethnicity of Mother, Orange County, 2002

Mother's Race/Ethnicity	Mother's Age ^{1,2}									Total
	< 15 Years	15-17 Years	18-19 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40-44 Years	45 + Years	
Hispanic	41	871	1,667	5,973	6,174	4,569	2,311	508	22	22,136
% of column	89.13	87.01	77.64	71.23	52.79	35.81	32.74	32.69	19.82	49.46
% of row	0.19	3.93	7.53	26.98	27.89	20.64	10.44	2.29	0.10	100.00
White	1	90	341	1,679	3,448	5,295	3,169	722	70	14,815
% of column	2.17	8.99	15.88	20.02	29.48	41.50	44.90	46.46	63.06	33.10
% of row	0.01	0.61	2.30	11.33	23.27	35.74	21.39	4.87	0.47	100.00
African American	2	9	23	87	123	123	80	28	3	478
% of column	4.35	0.90	1.07	1.04	1.05	0.96	1.13	1.80	2.70	1.07
% of row	0.42	1.88	4.81	18.20	25.73	25.73	16.74	5.86	0.63	100.00
AIAN	0	3	4	12	13	18	13	1	0	64
% of column	0.00	0.30	0.19	0.14	0.11	0.14	0.18	0.06	0.00	0.14
% of row	0.00	4.69	6.25	18.75	20.31	28.13	20.31	1.56	0.00	100.00
Other Asian³	2	4	27	221	967	1,486	797	167	5	3,676
% of column	4.35	0.40	1.26	2.64	8.27	11.65	11.29	10.75	4.50	8.21
% of row	0.05	0.11	0.73	6.01	26.31	40.42	21.68	4.54	0.14	100.00
S.E. Asian⁴	0	12	41	251	758	1,048	528	93	7	2,738
% of column	0.00	1.20	1.91	2.99	6.48	8.21	7.48	5.98	6.31	6.12
% of row	0.00	0.44	1.50	9.17	27.68	38.28	19.28	3.40	0.26	100.00
NHOPI	0	2	9	50	36	36	25	4	0	162
% of column	0.00	0.20	0.42	0.60	0.31	0.28	0.35	0.26	0.00	0.36
% of row	0.00	1.23	5.56	30.86	22.22	22.22	15.43	2.47	0.00	100.00
Other	0	0	1	0	1	1	1	0	0	4
% of column	0.00	0.00	0.05	0.00	0.01	0.01	0.01	0.00	0.00	0.01
% of row	0.00	0.00	25.00	0.00	25.00	25.00	25.00	0.00	0.00	100.00
Two or More Races	0	8	30	73	104	94	66	12	1	388
% of column	0.00	0.80	1.40	0.87	0.89	0.74	0.94	0.77	0.90	0.87
% of row	0.00	2.06	7.73	18.81	26.80	24.23	17.01	3.09	0.26	100.00
Withheld/Unknown⁵	0	2	4	40	72	89	68	19	3	297
% of column	0.00	0.20	0.19	0.48	0.62	0.70	0.96	1.22	2.70	0.66
% of row	0.00	0.67	1.35	13.47	24.24	29.97	22.90	6.40	1.01	100.00
Total	46	1,001	2,147	8,386	11,696	12,759	7,058	1,554	111	44,758
% of column	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
% of row	0.10	2.24	4.80	18.74	26.13	28.51	15.77	3.47	0.25	100.00

¹ Mother's age at time of delivery.

² Age unknown for one Hispanic mother and one White mother.

³ Other Asian includes Asian Specified and Unspecified, Asian Indian, Chinese, Filipino, Japanese, and Korean.

⁴ Southeast Asian includes Cambodian, Hmong, Laotian, Thai, and Vietnamese.

⁵ Withheld/Unknown includes those who did not specify their race/ethnicity (n=284) and those with unknown race/ethnicity (n=13).

Note: Due to rounding, percentages may not add to 100.

Appendix 2

County of Orange July 1, 2002 Population Estimates¹

Male (Years)	Total	Hispanic	White	African American	AIAN²	Asian	NHOPI³	Two or More Races
<15	341,092	151,306	131,053	5,241	1,482	39,750	1,084	11,176
15-17	61,837	23,601	26,429	1,169	345	8,576	293	1,424
18-19	41,978	16,340	17,158	758	226	6,461	191	844
20-24	103,775	46,688	36,843	1,547	491	16,014	418	1,774
25-29	108,245	49,293	38,591	1,518	477	16,478	445	1,443
30-34	127,347	51,802	52,478	2,279	534	18,225	474	1,555
35-39	127,175	43,792	60,753	2,531	607	17,556	465	1,471
40-44	123,090	32,702	68,420	2,645	577	16,904	434	1,408
45-49	104,414	22,362	62,822	2,097	549	15,190	293	1,101
50-54	87,018	15,167	55,465	1,540	455	13,286	272	833
55 & Over	247,074	30,697	175,666	2,789	1,104	33,994	605	2,219
Sub Total	1,473,045	483,750	725,678	24,114	6,847	202,434	4,974	25,248

Female (Years)	Total	Hispanic	White	African American	AIAN²	Asian	NHOPI³	Two or More Races
<15	325,498	145,160	124,733	4,775	1,401	37,540	1,063	10,826
15-17	58,341	22,363	24,919	1,069	342	8,022	251	1,375
18-19	38,498	14,570	16,179	605	226	5,905	163	850
20-24	95,364	39,107	35,835	1,372	502	16,271	409	1,868
25-29	103,335	43,803	38,440	1,257	447	17,490	405	1,493
30-34	121,099	45,252	51,410	1,934	536	19,904	487	1,576
35-39	122,483	39,408	59,278	2,381	596	18,883	445	1,492
40-44	120,231	30,821	65,792	2,360	676	18,734	426	1,422
45-49	106,032	22,249	61,981	1,845	605	17,854	338	1,160
50-54	92,063	16,133	57,509	1,493	520	15,242	248	918
55 & over	303,657	39,445	217,757	2,998	1,269	39,010	631	2,547
Sub-Total	1,486,601	458,311	753,833	22,089	7,120	214,855	4,866	25,527
Grand Total	2,959,646	942,061	1,479,511	46,203	13,967	417,289	9,840	50,775
Percent	100.00%	31.83%	49.99%	1.56%	0.47%	14.10%	0.33%	1.72%

¹ State of California, Department of Finance, *Population Projections by Race/Ethnicity, Gender and Age for California and Its Counties 2000-2050*, Sacramento, California, May 2004.

² AIAN is American Indian and Natives of Alaska.

³ NHOPI is Native of Hawaii and Other Pacific Islanders.

Appendix 3

Technical Notes

Abnormal Conditions and Clinical Procedures Relating to the Newborn:

All complications and procedures listed are entered by the physician onto the birth certificate from a list of pre-selected two-digit numeric codes; therefore, no additional information pertaining to these complications or procedures is available from the birth certificate.

Notes

Race/Ethnicity

In reports for years prior to 2000, five reporting categories were used, which were based on the first race listed on the birth certificate. In this document, race/ethnicity are separated into two different coding schemes utilizing eight and ten categories respectively. A category for Two or More Races is included in both coding schemes. To be consistent with changes in the minimum required race categories as promulgated from the Federal government, the racial/ethnic categories used when calculating rates are as follows:

- Hispanic
- Non-Hispanic
 - White Only
 - African American Only
 - American Indian and Natives of Alaska Only (AIAN)
 - Asian Only
 - Native of Hawaii and Pacific Islander Only (NHOP)
 - Other Only
 - Two or More Races

The category for Asian includes the more specific categories of Asian, specified or unspecified, Asian Indian, Cambodian, Chinese, Filipino, Hmong, Japanese, Korean, Laotian, Thai and Vietnamese. Other race/ethnicity are those who described themselves as "Other" race/ethnicity.

However, in other tables where population based rates are not calculated, a second coding scheme was used which is felt to better reflect the diverse population of Orange County. The following categories are used in the second scheme:

- Hispanic
- Non-Hispanic
 - White Only
 - African American Only
 - American Indian and Natives of Alaska Only (AIAN)
 - Southeast Asian Only
 - Other Asian Only
 - Native of Hawaii and Pacific Islander Only (NHOP)
 - Other Only
 - Two or More Races
 - Withheld/Unknown

In this scheme, Asian is separated into two groups, Southeast Asian which contains Cambodian, Hmong, Laotian, Thai and Vietnamese; and Other Asian, which contains Asian Indian, Chinese, Filipino,

Japanese, and Korean. Withheld/Unknown includes those who did not specify their race/ethnicity and those with unknown race/ethnicity.

Birth Weight and Gestational age:

Starting with 1995, to be consistent with the definitions used by the Centers for Disease Control and Prevention, the classification categories of birth weight of the infant have been modified. Due to the large amount of inaccurate data on gestational age of the child, these tables have been removed from the 2002 birth document.

Populations

The 2002 population projections used to calculate rates in this report were provided by the State of California, Department of Finance, *Population Projections by Race/Ethnicity, Gender and Age for California and Its Counties 2000-2050*, Sacramento, California, May 2004.

Definitions

- Place of occurrence The place where the event occurred (regardless of place of residence).
- Place of residence The place where a person lives or maintains legal residency. For live births and fetal deaths, the mother's residence is used.

Births

- Childbearing age Women 15 through 44 years of age.
- Live birth The complete expulsion or extraction from its mother of a product of conception (irrespective of the duration of pregnancy) which, after such separation, breathes or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. This definition was promulgated by the World Health Organization in 1950, and is set forth in the California Administrative Code, Title 17, Chapter 1, Article 3. If the fetus is 20 weeks or more gestational age, the death must be registered with the local registrar.
- Low birth weight A live birth or fetal death weighing less than 2,500 grams (5 pounds 8 ounces).
- Very low birth weight A live birth or fetal death weighing less than 1,500 grams (3 pounds 5 ounces).

Deaths

- Fetal death A death prior to the complete expulsion or extraction from its mother of a product of conception (irrespective of the duration of pregnancy); the death is indicated by the fact that after such separation, the fetus does not breathe or show any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. This definition was promulgated by the World Health Organization in 1950, and is set forth in the California Administrative Code, Title 17, Chapter 1, Article 3. If the fetus is 20 weeks or more gestational age, the death must be registered with the local registrar.
- Infant death A death occurring in the first year of life.
- Maternal death A death resulting from the complications of pregnancy, childbirth and the puerperium (Tenth Revision of International Classification of Disease codes O00-O99).
- Neonatal death A death occurring during the first 27 days of life.
- Postneonatal death A death occurring between the 28th day and the end of the first year of life.

Rates and Ratios

Note: All refer to a specified time period. Rates for fewer than 25 cases are considered statistically unreliable.

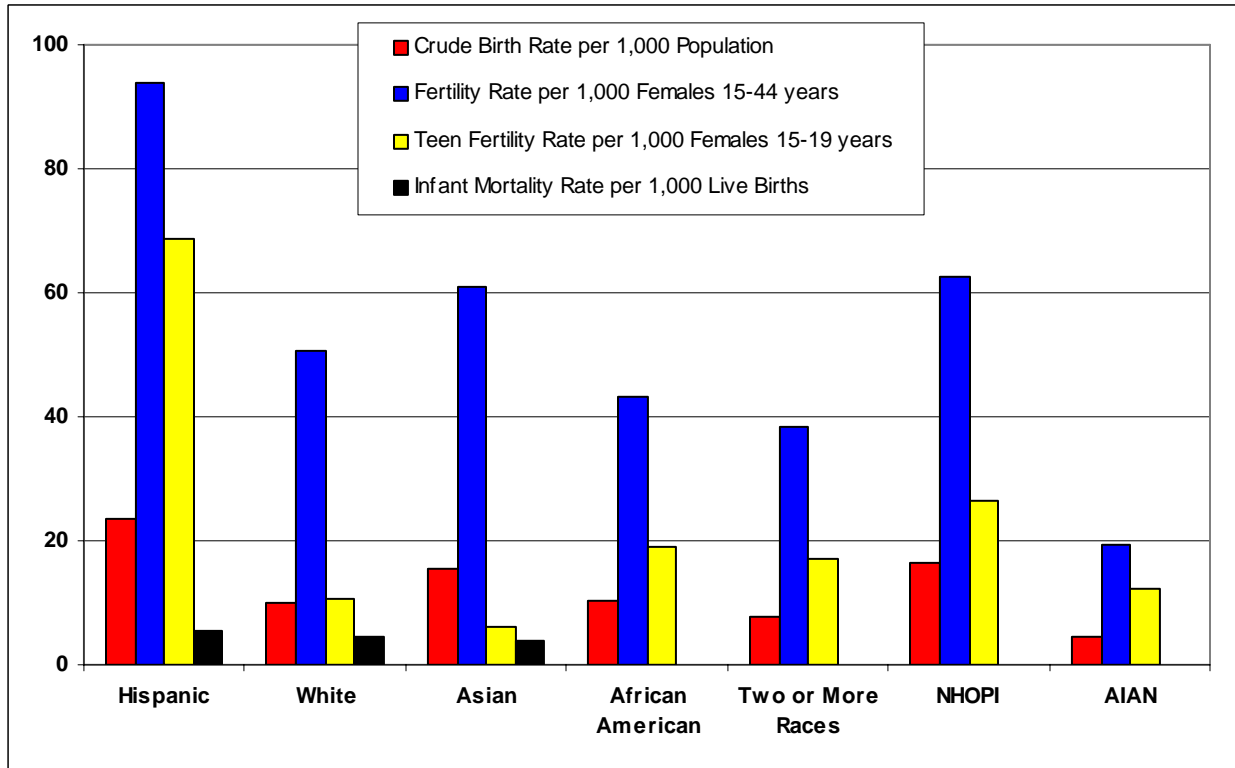
$$\text{Crude (Live) birth rate} = \frac{\text{Number of live births in a given period}}{\text{Estimated mid year population in that period}} \times 1,000$$

$$\text{General fertility rate} = \frac{\text{Number of live births in a given period}}{\text{Estimated female population 15-44 years old in that period}} \times 1,000$$

Teen fertility rate	=	$\frac{\text{Number of live births to mothers 15-19 years old in a specific time period}}{\text{Estimated female population 15-19 years old in that time period}} \times 1,000$
Low birth weight rate	=	$\frac{\text{Number of infants weighing less than 2,500 g at time of birth in a specific time period}}{\text{Total number of live births in that time period}} \times 1,000$
Very low birth weight rate	=	$\frac{\text{Number of infants weighing less than 1,500 g at time of birth in a specific time period}}{\text{Total number of live births in that time period}} \times 1,000$
Fetal death ratio	=	$\frac{\text{Number of reported fetal deaths in a specific time period}}{\text{Total number of live births in that time period}} \times 1,000$
Infant mortality rate	=	$\frac{\text{Number of deaths under 1 year of age in a specific time period}}{\text{Total number of live births in that time period}} \times 1,000$
Neonatal mortality rate	=	$\frac{\text{Number of deaths under 28 days of age in a specific time period}}{\text{Total number of live births in that time period}} \times 1,000$
Postneonatal mortality rate	=	$\frac{\text{Number of deaths 28 days of age to less than 1 year of age in a specific time period}}{\text{Total number of live births in that time period}} \times 1,000$
Maternal death rate	=	$\frac{\text{Number of deaths due to complications of pregnancy and childbirth in a specific time period}}{\text{Total number of live births in that time period}} \times 10,000$

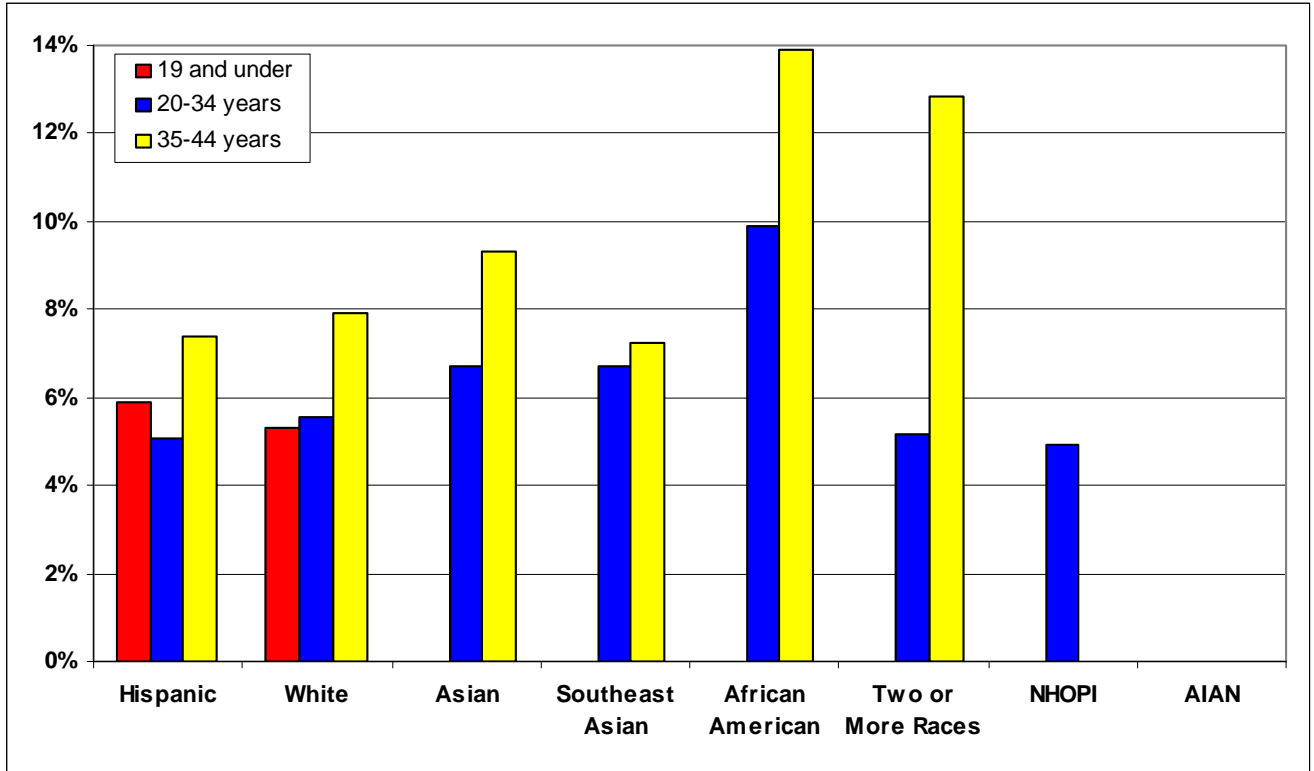
Appendix 4 Selected Charts

County of Orange, Resident Births, 2002 Birth, Fertility, and Infant Mortality Rates by Race/Ethnicity*



* Rates not presented when less than 5 events per category
 Note: Infant deaths based on 2002 Orange County death certificate data.
 Note: Two or More race/ethnicity category is not available in the death file.

**County of Orange, Resident Births, 2002
Percent Low Birth Weight by Age Category and Race/Ethnicity of Mother***



* Percentages not presented when less than 5 low birth weight infants per category