SECTION 2: NATALITY

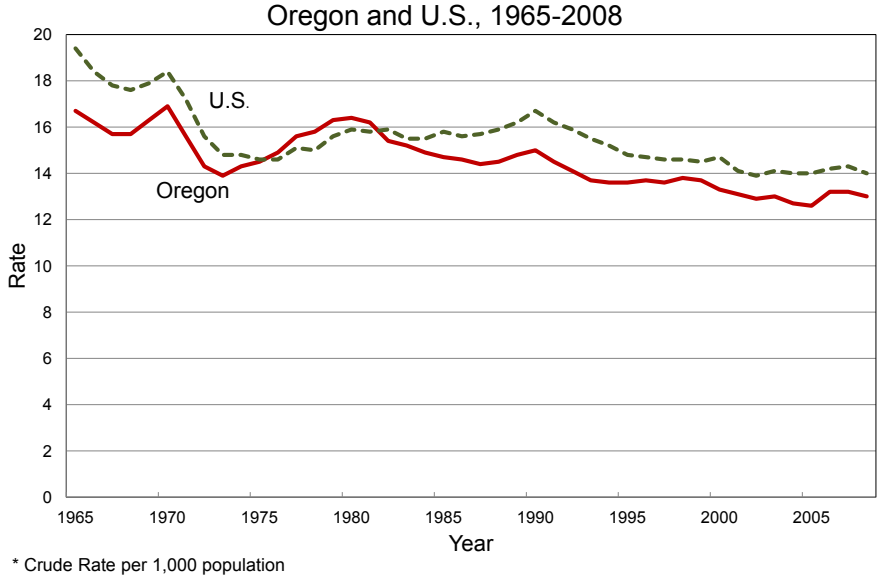
Natality

In 2008, Oregon recorded **49,117 resident births**, 256 fewer than in 2007. The **crude birth rate** (the number of babies born divided by the total state population) was 13.0 per 1,000 population. (See Table 1-2.) Oregon's crude birth rate peaked in 1947 at 25.4 per 1,000 population. Since 1980, Oregon's rates have held in the mid-teens, ranging from a high of 16.4 in 1980 to a low of 12.6 in 2005. Except for the period between 1976 and 1981, Oregon's crude birth rate has remained lower than the national rate for the past 50 years. In 2008, Oregon's rate was seven percent lower than the national rate (13.0 vs. 14.0). (See Figure 2-1.)

Oregon's crude birth rate and fertility rate both remain below the national rates.

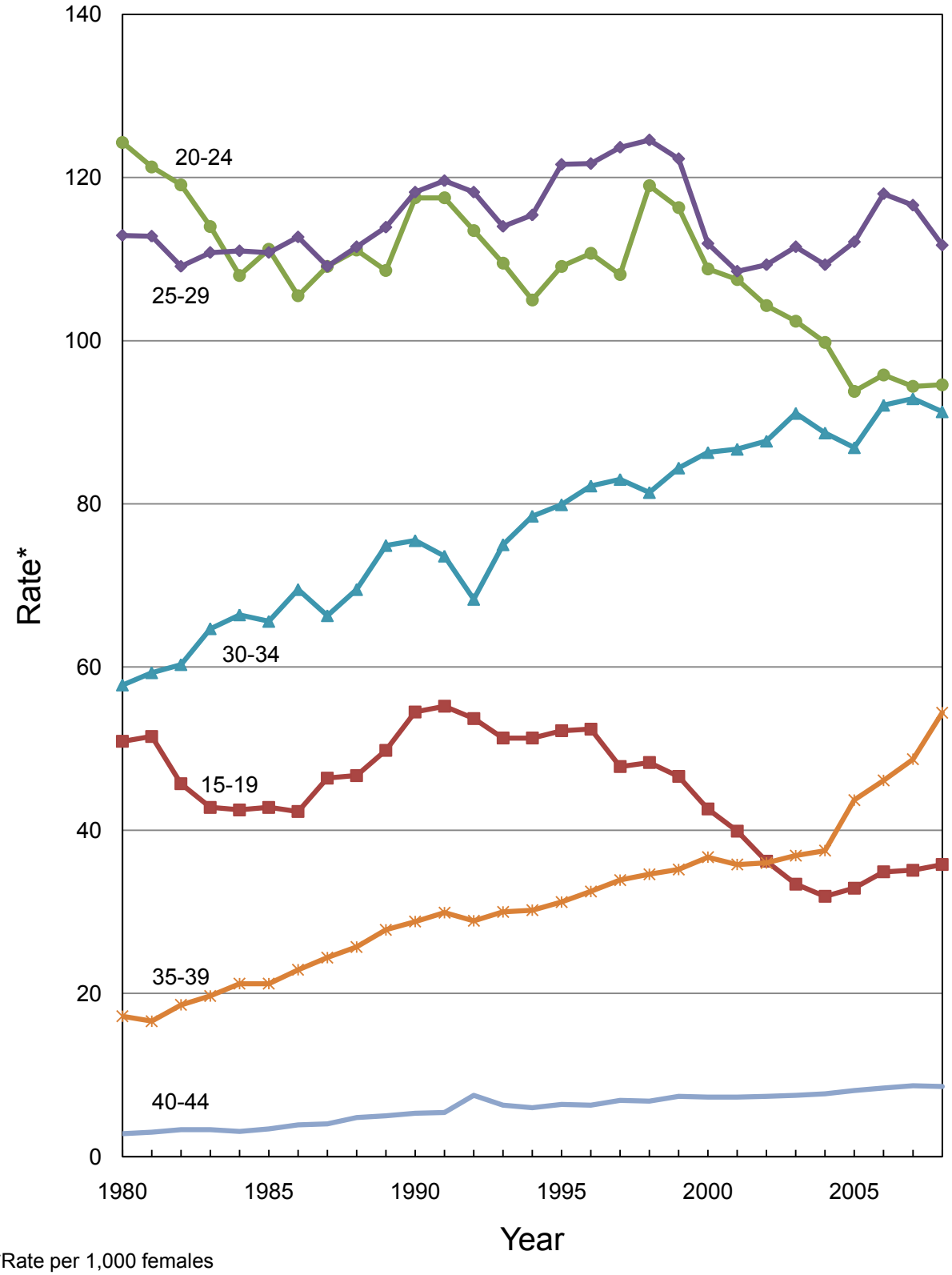
Oregon's **fertility rate** decreased from 66.0 in 2007 to 64.6 per 1,000 women aged 15–44 in 2008. (See sidebar 2-A, page 2-3; Table 2-2.) The fertility rate is based on the number of births per 1,000 women aged 15–44. The fertility rate is a more precise measurement of changes in behavioral patterns than crude birth rate. Fertility rates consist only of women of childbearing age, while the crude rate is based on the entire population. Age-specific **birth rates** decreased for women in most age groups; birth rates increased slightly for women in the 15–19 and 20–24 age groups. The largest percentage decrease was among women aged 25–29 (4.2 %). (See Table 2-2, Figure 2-2, page 2-2.)

Figure 2-1.
Live Birth Rates*
Oregon and U.S., 1965-2008



* Crude Rate per 1,000 population

Figure 2-2.
Age-specific Birth Rates,
Oregon Residents, 1980-2008



*Rate per 1,000 females

The youngest female to give birth in 2008 was 10 years old and the oldest was 51. Mother's median age for all births was 27 and the mean age was 27.6. The median age at first birth was 25 and the mean age was 25.3. The **rate of first birth** decreased slightly from the previous year to 26.8 first births per 1,000 women aged 15–44, slightly lower than the 2008 national rate of 27.7. The proportion of first births among total births has been stable for the past decade. In 1998, 40.4 percent of births were first births while in 2008, 41.4 percent were first births.

In 2008, a 41 year-old mother delivered her 18th child.

Father's mean age for births was 30.3 years and the median age was 30. The **birth rate per 1,000 men** ages 15–54 was 55.7 in 2008 for Oregon resident births. Information on the father was missing from nine percent of birth certificates. Unknown father age was distributed in the same manner as national data. (See Technical Notes - Definitions, Appendix B.) The national birth rate for men in 2008 was 49.4 per 1,000 men.

Demographics

Maternal race and ethnicity

Birth rates for racial and ethnic groups are not calculated in this report because precise population data by racial and ethnic groups are available only for census years. Instead, this report focuses on the race and ethnicity of women who gave birth as a proportion of total births.

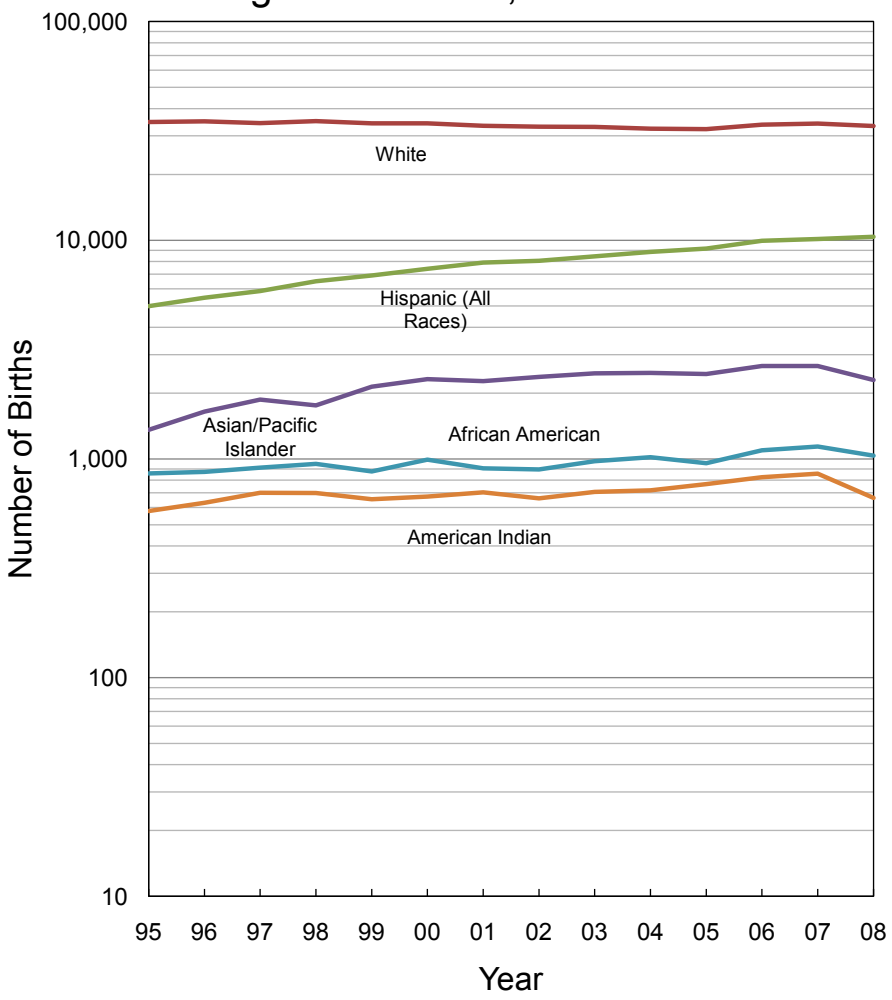
Since 1989, the number of births to women of Hispanic ethnicity has more than quadrupled to 20 percent of total births. (See Table 2-7, Figure 2-3.) The method for reporting the Hispanic category has changed in Oregon over the years. From 1981 to 1988, "Hispanic" was a race category on the birth certificate. From 1989 to 2007, information regarding Hispanic ethnicity was reported separately from race. Starting in 2008, an individual could choose multiple race/ethnicity responses. (See Technical Notes - Methodology, Appendix B.) Persons of Hispanic ethnicity may belong to any race category (or categories). This change addressed the complexity of race and ethnicity and increased self-reporting accuracy for Oregon.

Differences by race and ethnicity of mother persist. The group with the highest percentage of inadequate care is Hawaiian and Pacific Islander. White non-Hispanic and

Table 2-A. Fertility Rates Per 1,000 Females 15-44, Oregon & U.S.

Year	Oregon	U.S.
1980	69.3	68.4
1981	68.1	67.3
1982	65.2	67.3
1983	64.1	65.7
1984	62.8	65.5
1985	62.2	66.3
1986	61.8	65.4
1987	60.9	65.8
1988	61.8	67.3
1989	63.3	69.2
1990	65.1	70.9
1991	63.7	69.3
1992	62.5	68.4
1993	61.1	67.0
1994	61.0	65.9
1995	62.3	64.6
1996	63.2	64.1
1997	63.0	63.6
1998	64.2	64.3
1999	64.2	64.4
2000	62.9	65.9
2001	61.6	65.3
2002	60.9	64.8
2003	61.2	66.1
2004	60.0	66.3
2005	62.2	66.7
2006	65.5	68.5
2007	66.0	69.2
2008	64.6	68.6

Figure 2-3.
Number of Births by Race and Ethnicity of Mother,
Oregon Residents, 1995-2008

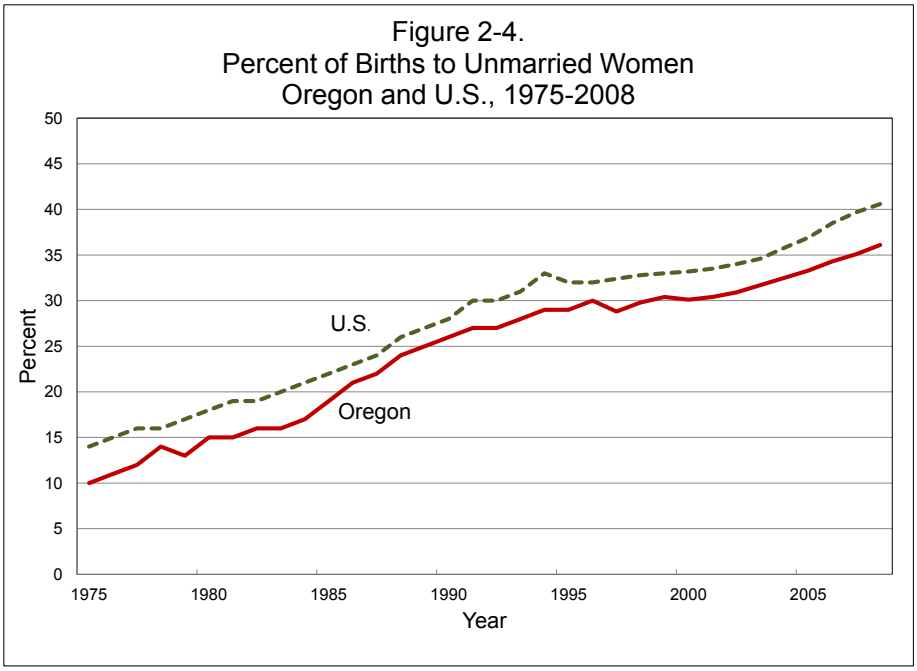


Note: A logarithmic scale is used for the vertical axis.
Specified races are non-Hispanic.

Asian non-Hispanic women had the lowest percentages of inadequate care (5.7 and 5.2 % respectively.) (See Table 2-18.)

Marital status of mother

Unmarried women as a group have historically poorer birth outcomes than married women. They generally have a greater proportion of babies with lower birthweight and lower Apgar scores than do their married counterparts. Infants born to unmarried mothers are more likely to require neonatal intensive care, have congenital anomalies or die before age one. In Oregon, the ratio of births to unmarried mothers in 2008 was 3.6 times higher than in 1975, and 5.7 times higher than in 1965. (See Table 1-2 and Figure 2-4.) While there has not been a matching increase



in low birthweight rates and other indicators of poor health, the disparity in prenatal care, tobacco use and race/ethnicity between married and unmarried women continues.

In 2008, 36.1 percent of all Oregon births were to unmarried women, a slight increase from the previous year. (See Table 1-2.) Oregon has consistently had a lower percentage of births to unmarried women than the U.S. Oregon's rate in 2008 was 11 percent lower than the U.S. rate. (See Figure 2-4.)

Among women giving birth in 2008, the percentage of women who were unmarried varied widely by ethnic and racial group (see sidebar 2-B). Non-Hispanic American Indian women had the highest percentage of non-marital births (62.5 %), closely followed by non-Hispanic African American women (62.1 %), and non-Hispanic women reporting multiple races (54.2 %). Non-Hispanic Asian women had the lowest percentage of unmarried mothers (12.4 %). (See Table 2-13.)

Mothers under age 17 are likely to be unmarried, since persons younger than age 17 cannot legally marry in Oregon. More than four-fifths of teens aged 15–19 who gave birth in 2008 were unmarried (83.4 %), compared to 54.4 percent for women aged 20–24 and 29.3 percent for women aged 25–29. The percentage of unmarried women was lowest for mothers aged 30–34 (18.0 %) and 35–39 (16.2 %), while 20.8 percent of mothers aged 40–44 were unmarried. (See Table 2-3.) Twelve of Oregon's 36 counties had proportions

Table 2-B. Unmarried Mothers by Race/Ethnicity, Oregon Residents, 2008

Race/Ethnicity	Unmarried (%)
Total	**36.1**
Non-Hispanic	
African American	62.1
American Indian	62.5
White	31.5
Asian	12.4
Multiple Races	54.2
Hispanic	55.3

of non-marital births significantly higher than the state average. (See Table 2-9.) Among counties with statistically significant differences, Lincoln had the highest percentage (52.1 %) followed by Curry (51.9 %) and Jefferson (50.1 %). (See Technical Notes - Formulas, Appendix B for information on statistical significance.) Five Oregon counties had percentages of non-marital births significantly lower than the state average. Benton County had the lowest percentage of non-marital births (23.3 %). A county's non-marital birth proportion should be viewed, in part, as a function of its own specific population mix, especially age and race. Variations in population composition among counties will likely result in significant differences in non-marital births.

Educational attainment

A mother's level of education was closely related to prenatal care patterns. Women with less than a high school education had the lowest percentages of first trimester prenatal care. As educational attainment increases, so does the percentage of women obtaining first trimester care. Women who had a doctorate or professional degree had the highest percentage of first trimester care. (See sidebar 2-C and Table 2-19.)

More than three-fourths of women who gave birth in 2008 had at least a high school diploma or GED (78.8 %) and 24.8 percent had a bachelor's degree or higher. The race/ethnic groups with the highest percentages of high school completion are non-Hispanic Asian (91.3 %) and non-Hispanic White (88.4 %) mothers. Hispanic mothers had the lowest percentage of completion of at least 12 years of education (44.3 %). (See Table 2-13.)

Table 2-C. Mothers' Education and No First Trimester Care, Oregon Residents, 2008

Years of Education	No First Trimester Care (%)
8th Grade or Less	47.4
9th to 12th Grade, No Diploma	47.4
High School Graduate or GED	35.3
Some College, No Degree	27.6
Associates Degree	19.8
Bachelors Degree	14.4
Masters Degree	12.1
Doctorate or Professional Degree	11.8

Maternal lifestyle and health characteristics

Tobacco

Oregon Benchmark for the Year 2010

Percentage of infants whose mothers did not use tobacco during pregnancy (self-reported).

Year 2010 target:	*98 %*
2008:	*88.7 %*

Women who smoke when pregnant have a far higher incidence of low birthweight babies than nonsmokers. Low birthweight infants are more likely to experience serious health problems, including increased rates of infant mortality. In 2008, the Oregon infant mortality rate during the first 27 days of life (neonatal) was 51.8 per 1,000 live births for low birthweight (less than 2,500 grams) infants compared to 0.7 per 1,000 for infants with birthweights of 2,500 grams or more. Women who smoked had a low birthweight rate of 84.7 per 1,000 live births, compared to 57.1 per 1,000 among women who did not smoke. One of nine mothers (11.8 %) reported using tobacco during pregnancy, a proportion that is among the lowest observed in the last 20 years. (See sidebar 2-D, page 2-7.) The percentage of tobacco use among unmarried women was nearly four times that of married women (22.9 %

Women who smoked had a low birthweight rate of 84.7 per 1,000.

Figure 2-5.
Percentage of Mothers Who Smoked During Pregnancy
by Age and Marital Status, Oregon Residents, 2008

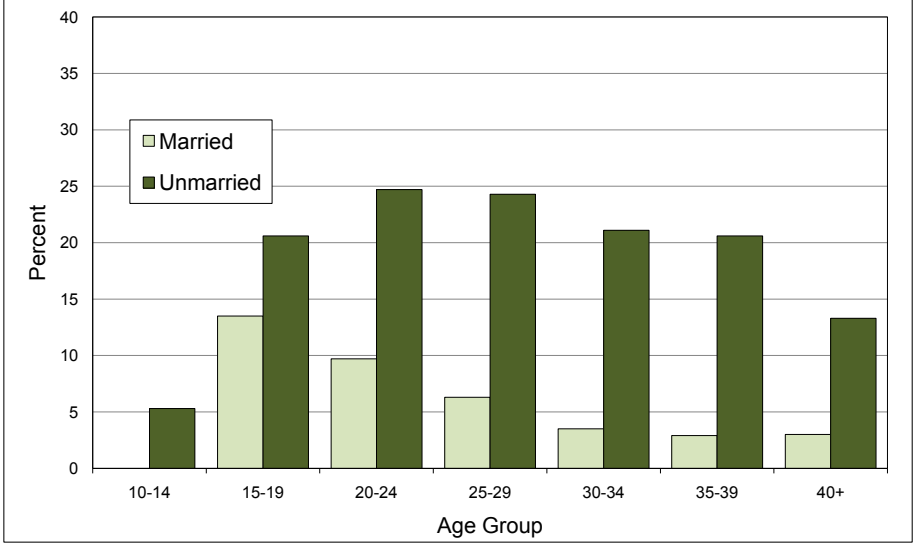


Table 2-D. Percent Tobacco Use, Oregon Residents	
Year	Percentage
1990	22.4
1991	21.4
1992	20.5
1993	18.9
1994	18.2
1995	17.9
1996	17.8
1997	16.2
1998	15.2
1999	14.5
2000	13.5
2001	12.8
2002	12.6
2003	12.0
2004	12.6
2005	12.4
2006	12.3
2007	11.7
2008	11.8

vs. 5.6 %). The highest percentage of tobacco use during pregnancy in 2008 was among unmarried mothers aged 20–24 and unmarried mothers aged 25–29 (24.7% and 24.3% respectively). Generally, the percentage of mothers who reported smoking during pregnancy decreased with age regardless of marital status. The lowest percentage of smokers was reported for married mothers aged 35-39 (2.9 %). (See Figure 2-5.)

Smoking prevalence as reported on birth certificates also varied among racial and ethnic groups. In 2008, non-Hispanic American Indian women (21.5 %) and non-Hispanic women reporting multiple races (20.1 %) had the highest reported proportions for smoking during pregnancy, while non-Hispanic Asian women (2.4 %) and Hispanic women (3.4 %) reported the lowest. (See Table 2-25.)

Maternal weight and weight gain

Appropriate maternal weight gain has been shown to be positively correlated with infant birthweight. Low maternal weight gain is associated with poor fetal growth, lower birth weight and the chance of a baby being born prematurely. High maternal weight gain is associated with higher infant birthweight and cesarean delivery. Excessive weight during pregnancy is often accompanied by chronic disease and is a health risk factor for both the mother and child.

Oregon began collecting data on mothers' pre-pregnancy weight, weight at delivery and height on birth certificates in 2008. The availability of this new data allows Body-Mass-Index (BMI) to be calculated and provides a better picture of pre-pregnancy BMI and gestational weight gain of Oregon mothers. In Oregon, 47.3 percent of women enter pregnancy overweight or obese. (See Table 2-24.) The standard recommendation for weight gain during pregnancy is 25 to 30 pounds above pre-pregnancy weight. Many Oregon mothers exceeded this recommendation in 2008. The median weight gain during pregnancy was 30 pounds in 2008 and 47.5 percent gained more than 30 pounds. The amount of weight mothers gained varied by period of gestation, race and ethnicity. For all births, Hispanic (37.8%) and non-Hispanic Asian women (41.2%) were least likely to gain 30 pounds or more during pregnancy. (See Table 2-33.) Non-Hispanic women with multiple races (53.1%) were the highest percentage to gain more than 30 pounds during pregnancy.

Non-Hispanic African American women mothers delivered the highest percentage of low birthweight infants in 2008 (10.8%) and were most likely to gain less than 10 pounds (11.2%). Asian women and Hawaiian and Pacific Island women had the lowest percentage of low birthweight infants (4.5 %). (See Table 2-31.) Asian women had the lowest percentage of weight gain less than 10 pounds (4.1%) while Hawaiian and Pacific Island women had the second highest (10.5%).

Medical risk factors

Maternal medical risk factors influence pregnancy complications and infant health and vary greatly based on the mother's age, race and ethnicity. In 2008, the most frequently reported medical risk factors were previous cesarean delivery (10.8 %), gestational diabetes (4.9 %), and pregnancy-associated hypertension (4.7 %). (See Table 2-23 and Table 2-26.)

Medical services utilization

Prenatal care

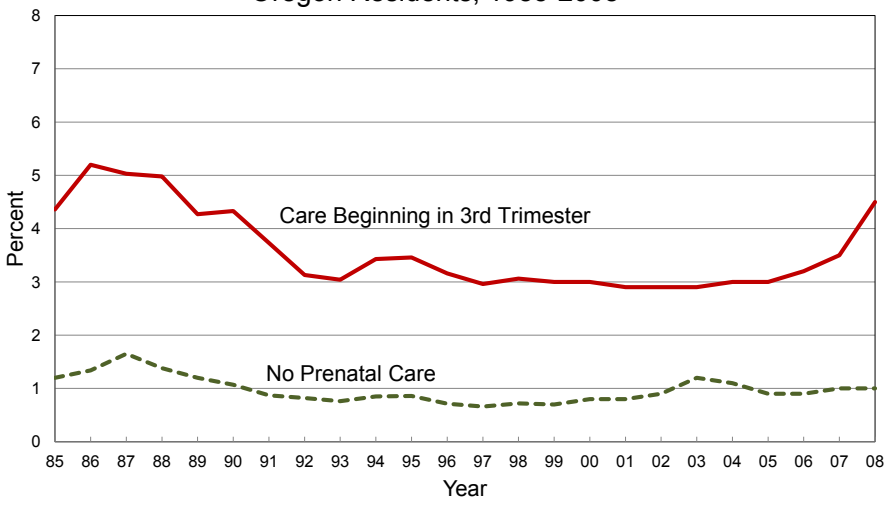
Oregon Benchmark for the Year 2010

Percentage of infants whose mothers received prenatal care beginning in the first trimester.

Year 2010 target:	*90 %*
2008:	*70 %*

Public health services and private care providers seek to minimize the risk of death and disability to infants. Additionally, they seek reductions in costs associated with low birthweight infants by providing comprehensive prenatal care. The two ways Oregon measures prenatal care are: 1) "inadequate prenatal care," defined as no care until the third trimester or fewer than five total prenatal visits; or 2) "first trimester care," defined as care beginning in the first three months of pregnancy, regardless of the number of total prenatal visits. First trimester care has been adopted as an Oregon Benchmark with a goal to ensure that at least 90 percent of women begin prenatal care within the first three months of their pregnancies by 2010. Overall, 70.2 percent of women who gave birth during 2008 received early prenatal care, which is lower than the 2008 national number

Figure 2-6.
Percent of Mothers with Late Prenatal Care and No Prenatal Care,
Oregon Residents, 1985-2008



of 71.0 percent. (See Table 2-17; Table 1-5.) Moreover, this is 10.5 percent lower than the 2007 rate of 78.4 percent.

In 2008, 7.0 percent of women giving birth received inadequate prenatal care and more than 28 percent received no first trimester care. The percentage of low birthweight infants was much higher for women who received inadequate prenatal care, 11.6 percent, compared to 6.0 percent of children born to mothers who received adequate prenatal care. The percentage of mothers that received no prenatal care was about the same as previous years (1 %). Mothers who initiated care in the third trimester increased one percentage point in 2008 from 3.5 percent in 2007 to 4.5 percent. (See Figure 2-6.) Age, marital status, education and race/ethnicity continue to show important differences in accessing prenatal care. (See Tables 2-17, 2-18, 2-19 and 2-21.)

Seven of Oregon's 36 counties had first trimester care rates significantly higher than the statewide rate: Benton, Clackamas, Deschutes, Klamath, Wasco, Washington and Yamhill. Five counties had rates significantly lower than the

Table 2-E. Adequacy of Prenatal Care Utilization Index Oregon 2003-2008

Year	Intensive	Adequate	Intermediate	Inadequate
2003	26.9	45.8	15.1	11.1
2004	25.8	44.1	17.4	11.6
2005	24.2	44.3	19.4	11.3
2006	24.7	43.6	18.3	12.4
2007	24.1	43.4	18.7	12.8
2008	30.0	39.5	14.4	15.0

statewide rate: Josephine, Malheur, Marion, Multnomah and Umatilla. (See Table 2-20.)

The **Adequacy of Prenatal Care Utilization Index** is an alternative measure of prenatal care based on the month prenatal care began and the number of prenatal visits, adjusting for gestational age. Care is determined to be intensive (exceeding recommended care by a ratio of expected visits to actual visits by at least 110 %), adequate, intermediate or inadequate. (See 2-E, above.) As with other measures of prenatal care, more women under the age of 20 received inadequate prenatal care, while more women aged 40 and over received intensive prenatal care. Women with medical risk factors such as diabetes and hypertension also were more likely to receive intensive prenatal care.

Birth attendant and place of delivery

Hospital births. Hospitals are the most frequent place of birth with 97.1 percent of Oregon occurrence births. Most in-hospital births (79.8 %) were delivered by M.D.s, Certified Nurse Midwives delivered 16.3 percent of hospital births, 3.6 percent were by D.O.s, and 0.3 percent by other licensed medical professionals. (See Table 2-27.)

Out-of-hospital births. In 2008, 2.9 percent of Oregon births occurred out-of-hospital. Oregon generally has a higher proportion of out-of-hospital births than the U.S. as a whole. In 2008, Oregon's proportion of out-of-hospital births was nearly triple the 2008 U.S. percentage (1%). As in past years, the majority of out-of-hospital births occurred in the mother's home (65.1 %). Of those home births, 95.5 percent were planned homebirths, while the remaining 4.5 percent were not intended to occur at home. Freestanding birthing centers accounted for 461 births, nearly one-third of out-of-hospital births. Outcomes generally have been positive for out-of-hospital births. In 2008, 23 infants born out-of-hospital in Oregon had low birthweights (1.6 %). For births that occurred in a birthing facility or were planned homebirths, only 1.0 percent of out-of-hospital births were low birthweight. Three infants (0.5 %) were reported to have a congenital anomaly, which is lower than the percentage for in-hospital births (0.6 %).

Birth attendant. There are three different types of midwives in Oregon: Certified Nurse Midwives (CNM), Licensed Direct Entry Midwives (LDM), and Direct Entry Midwives (DEM). CNMs have completed an accredited,

Table 2-F. Out-of-Hospital Births Oregon Occurrence

Year	Deliveries	Rate[1]
1982	2,069	49.2
1983	2,060	50.2
1984	1,786	43.7
1985	1,772	43.5
1986	1,520	37.9
1987	1,361	34.0
1988	1,217	29.4
1989	1,117	26.2
1990	1,077	24.2
1991	979	22.2
1992	996	22.8
1993	936	21.6
1994	979	22.5
1995	967	21.7
1996	979	21.4
1997	970	21.5
1998	914	19.8
1999	948	20.6
2000	1,047	22.4
2001	1,007	21.7
2002	947	20.6
2003	1,000	21.3
2004	1,003	21.6
2005	1,058	22.6
2006	1,134	23.1
2007	1,267	25.4
2008	1,431	29.0

[1] Rate per 1,000 births

Table 2-G. Certified Nurse Midwife Deliveries, Oregon Occurrence

Year	Deliveries		
	Total	In-Hospital	Out-of-Hospital
1984	1,912	1,567	374
1985	2,022	1,661	390
1986	1,984	1,607	400
1987	1,843	1,483	385
1988	2,345	2,133	259
1989	2,886	2,706	244
1990	3,660	3,539	226
1991	4,262	4,096	166
1992	4,498	4,319	179
1993	4,784	4,618	173
1994	4,931	4,772	159
1995	5,601	5,441	160
1996	6,019	5,871	148
1997	5,853	5,734	119
1998	6,152	6,004	148
1999	6,357	6,193	164
2000	6,740	6,591	149
2001	6,848	6,721	127
2002	6,837	6,747	90
2003	6,838	6,721	117
2004	6,586	6,472	114
2005	6,487	6,386	101
2006	7,102	6,996	106
2007	7,631	7,507	124
2008	8,004	7,820	184

university-affiliated nurse-midwifery program, and have an active Nurse Practitioner (NP) license. LDMs are direct entry midwives who have volunteered for state licensure through the Oregon Health Licensing Agency (OHLA). They must meet qualifications and adhere to regulations set by the State of Oregon. DEMs are direct entry midwives that are not licensed in Oregon.

A major shift during the past few decades has been the increasing prevalence of births attended by Certified Nurse Midwives (CNMs). In 2008, 16.3 percent of hospital deliveries were CNM-attended, a slight increase from 2007 (15.4 %) and more than three times the proportion in 1988 (5.3 %). This is more than twice the national proportion of births attended by CNMs (8.0 %). In addition, CNMs delivered approximately one in eight out-of-hospital births (12.9 %). Licensed Direct Entry Midwives (LDM) were predominant in out-of-hospital births, delivering over one half (53.5 %) of those births in 2008. Direct Entry Midwives (DEMs) delivered an additional 13.3 percent of the out-of-hospital births. Naturopathic Physicians delivered approximately one in 10 out-of-hospital births (11.9 %). Non-medical attendants delivered 99 babies, 6.9 percent of the out-of-hospital births. (See Table 2-27.)

Method of delivery

In 2008, the rate of cesarean delivery was 28.9 per 100 births, well below the 2008 U.S. rate of 32.3 per 100 births. The rate for vaginal delivery after a previous cesarean was only 1.4, while repeat cesarean was 9.4 per 100 births. The majority of births (69.7 per 100) continue to be vaginal deliveries without prior cesarean. (See Table 2-28.) However, the number of vaginal deliveries (without prior cesarean) has declined 0.6 percent from 2007 and increased 1.8 percent from 2003. Cesarean rates were relatively unchanged from 2007 (28.9 per 100 births) and 14.2 percent higher than 2003 (25.3 per 100 births).

Infant health characteristics

Period of gestation

Preterm births (born prior to completion of 37 weeks gestation) comprised 7.9 percent of total births in 2008, much lower than the U.S. rate in 2008 (12.3 %). (See Table 2-25.) Similar to national trends, proportions of preterm births are higher for non-Hispanic African Americans (11.7

%). Asian women had the lowest proportion of preterm births (7.5 %). (See Table 2-25.)

Low birthweight

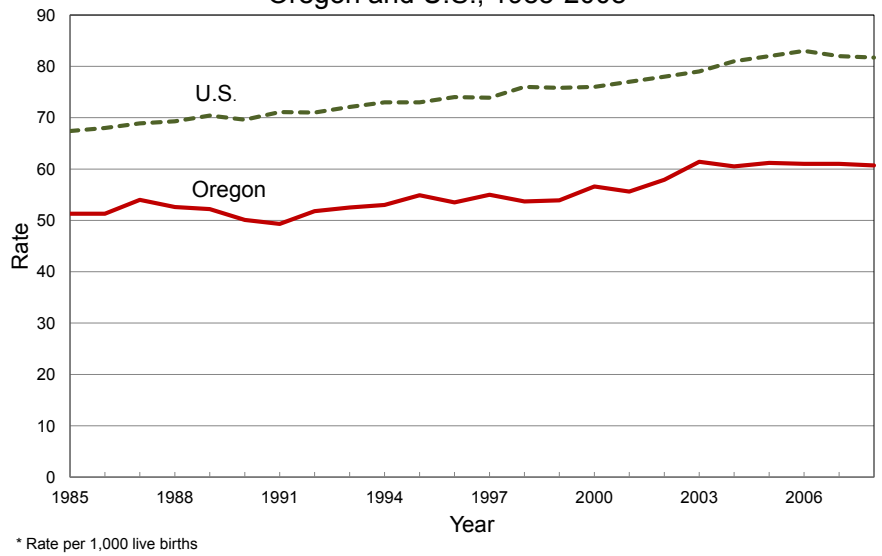
National Healthy People 2010 Objective

Percentage of live births resulting in low birthweight infants.

Year 2010 target:	*5.0 %*
2008:	*6.1 %*

Of the thousands of infants born each year, not all thrive and become healthy adults. Low birthweight is the major predictor of infant death, which is a fundamental measure of the health of a population. Infants with low birthweight are more likely to need extensive medical treatment and to have lifelong disabling conditions. (For more information, see the Oregon Vital Statistics Annual Report 2008, Volume 2: Mortality Fetal and Infant Mortality.) The low birthweight rate is the proportion of infants who weigh less than 2,500 grams (5 pounds, 8 ounces) at birth. In 2008, there were 2,980 low birthweight babies born to Oregon mothers. (See Table 2-29.) One of the National Healthy People 2010 Objectives is to reduce the percentage of low birthweight infants nationwide to 5.0 percent. In 2008, the percentage of low birthweight births in Oregon remained above this objective at 6.1 percent, or 60.7 per 1,000 live births. This rate is slightly lower than

Figure 2-7.
Low Birthweight Rates*,
Oregon and U.S., 1985-2008



Among Oregon resident births in 2008, the biggest baby born was 16 lbs 15 oz.

the 2007 rate (61.1 per 1,000 live births). While annual changes have been slight in the last 20 years, there has been an upward trend in low birthweight infants. (See Table 1-5; Figure 2-7.) Nevertheless, Oregon's low birthweight rates are typically 25 percent lower than national rates and in 2008, Oregon's rate was 25.9 percent lower than the 2008 national rate (60.7 vs. 82.0 per 1,000 births).

Major factors contributing to the risk of having a low birthweight baby are multiple births, tobacco use and chronic hypertension. Other factors include: non-White race of mother, mother's age (younger than 18 or older than 34), lack of prenatal care, low income, single marital status, a previous fetal or infant death, low education, and short spacing between births. As an example of risk factors, women ages 35–39 have a higher than average percentage of first trimester care (77.9 %) compared to the state average of 70.2 percent. (See Table 2-17.) Nevertheless, women ages 35–39 continue to have a higher percentage of low birthweight babies, 6.9 percent compared to 6.1 percent for all births. (See Table 2-24.)

High birthweight

Birthweight is an important factor in the health of a newborn. Excessive birth weight, or fetal macrosomia, is a health risk factor for both the mother and child and is commonly defined as birthweight greater than 4,000 grams (8 pounds, 13 ounces). Among Oregon residents in 2008, the prevalence of fetal macrosomia at 4,000 grams was 10.7 percent. (See Tables 2-24 and 2-25). As maternal age increases, the risk of fetal macrosomia increases (see Table 2-24). The percentage of infants born weighing more than 4,000 grams is 14 percent greater in women 35 and older than the state average and 73 percent higher than among women younger than 20 (12.2% to 7.0% respectively).

In 2008, the prevalence of macrosomia was highest among White non-Hispanic women (Table 2-25). The lowest rates of macrosomia were found in African American women and Asian women, though the low percentage of macrosomia among African American women is likely related to the higher proportion of preterm births in that group.

Table 2-H. Percentage of infants born weighing more than 4,000 grams, Oregon Residents

Year	Percent	Largest infant born (in grams)
1990	14.2	6040
1991	13.9	6265
1992	13.8	5990
1993	13.8	6010
1994	13.8	5810
1995	13.5	6265
1996	13.1	6156
1997	12.8	6060
1998	13.0	6139
1999	12.8	6293
2000	12.8	6151
2001	12.4	5981
2002	11.8	5896
2003	11.5	6180
2004	10.9	5925
2005	10.9	6497
2006	10.7	5982
2007	10.5	7000
2008	10.7	7711

Apgar scores

The Apgar score is composed of measurements of five infant characteristics: heart rate, respiratory effort, muscle tone, reflex irritability and color. Each characteristic is rated

0–2 and the score totaled. Scores below 7, five minutes after birth, indicate poor to intermediate health at birth. In Oregon during 2008, 3.0 percent of infants had Apgar scores below 7, nearly twice the 2008 national figure of 1.8. (See Table 2-24 and Table 2-25.)

Abnormal conditions and congenital anomalies

The most frequently reported conditions on birth certificates were assisted ventilation of less than 30 minutes and assisted ventilation of more than six hours. (See Table 2-35 and Table 2-36.) Congenital anomalies reported on birth certificates are shown in Table 2-37. Although Oregon occurrences are somewhat higher than national rates for some anomalies, congenital anomalies are believed to be underreported nationally due to factors such as recognizability and severity. Even at the national level, data users are advised to use caution in comparing annual occurrences for relatively small numbers.

Multiple births

Although 3.1 percent of births in Oregon during 2008 were multiple births, the proportion varied widely by age, race and ethnicity. During 2008 mothers aged 45 and older had the highest percentage of multiple births. The percentage of multiple births for each age group ranged from 1.3 percent for mothers aged 15–19 to 25.3 percent of births to mothers aged 45 and older. The percentage of multiple births generally increased with each five-year age group. (See Table 2-24.) Non-Hispanic African Americans had the highest percentage of multiple births (4.4%). The next highest percentage of multiple births was among American Indian, and Native Hawaiian and Pacific Islanders (3.6%). (See Table 2-25.)

Source of payment

Primary source of payment for delivery is noted on Oregon birth certificates under five categories: 1) public insurance (Medicaid/Oregon Health Plan), 2) private insurance, 3) self-pay (no insurance), 4) Indian Health Services, and, 5) other and unknown payment source. Private insurance companies paid for the majority of deliveries in Oregon (53.6 %), down from 55.9 percent in 2007 (see sidebar 2-I). Medicaid programs (e.g., the Oregon Health Plan) paid for two-fifths of Oregon resident births (40.9 %). Delivery costs were more likely to be paid for by public insurance if the woman was under age 18. (See Table 2-14.)

Table 2-I. Primary Source of Payment for Delivery, Oregon Residents

Year	Private Insurance	Self Pay	Medicaid/ OHP
	%	%	%
1989	60.7	9.5	27.5
1990	60.4	8.7	28.7
1991	58.2	6.5	33.2
1992	57.2	5.8	35.2
1993	56.2	5.9	36.2
1994	57.5	5.6	34.9
1995	57.9	4.9	35.5
1996	58.3	5.7	35.0
1997	60.8	6.3	31.9
1998	62.2	6.3	30.7
1999	61.1	5.9	32.4
2000	61.6	5.4	32.8
2001	61.2	4.3	34.3
2002	58.7	3.5	37.8
2003	58.9	3.5	37.6
2004	56.5	3.2	40.3
2005	55.6	3.0	41.4
2006	55.1	3.2	41.3
2007	56.1	3.5	40.4
2008	53.6	3.2	40.9

Note: Denominator excludes births with unknown payor source, multiple payor source, and other payor source.