

# Natality

## INDICATORS OF BIRTHING TRENDS

In 1997, Oregon recorded 43,765 resident births. Though there were 120 more resident births than in 1996, the crude birth rate decreased slightly, from 13.7 to 13.6 per 1,000 population. [Table 1-2]. The fertility rate decreased from 63.2 to 63.0 per 1,000 women 15-44. [Table 2-2]. Oregon's crude birth rate (the number of babies born divided by the total state population) peaked in 1947 at 25.4 per 1,000 population. For the past 30 years, however, Oregon's rates have held in the mid-teens, ranging from the 1994-1995 low of 13.6 to a high of 16.4 in 1980. Except for the period between 1976 and 1981, Oregon's crude birth rate has remained lower than the national rate. In 1997, Oregon's rate was 6.2 percent lower than the nation's (13.6 vs. 14.5).<sup>1</sup> [Figure 1-1].

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

## AGE-SPECIFIC BIRTH AND FERTILITY RATES

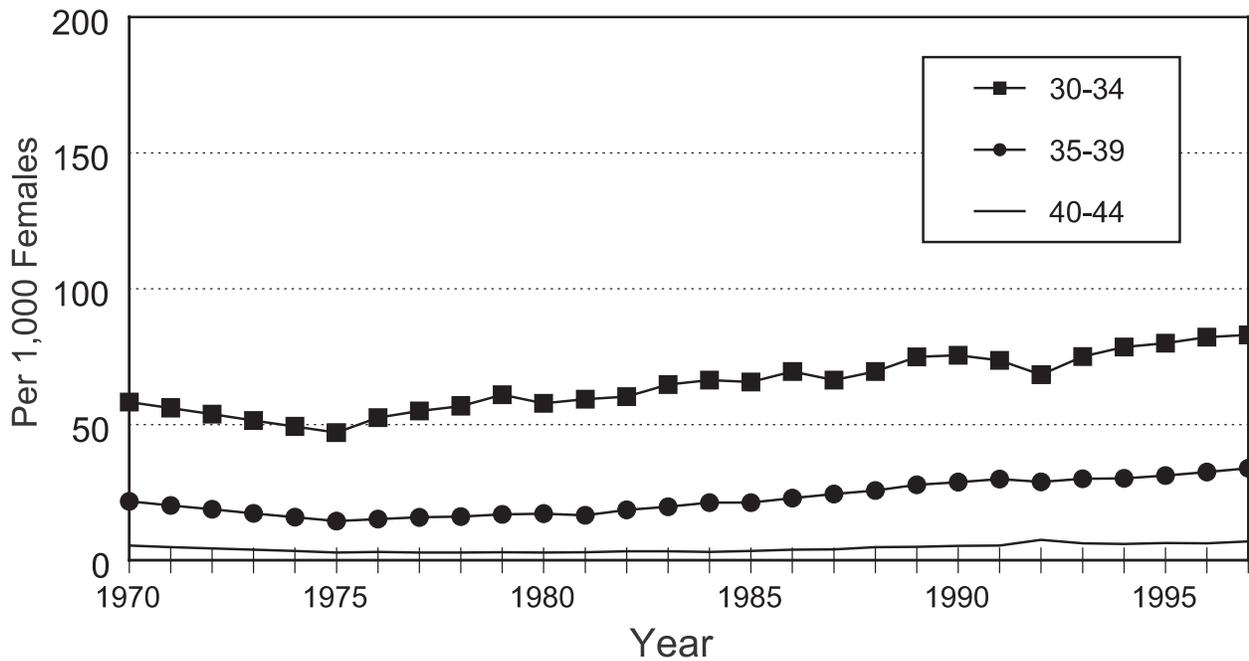
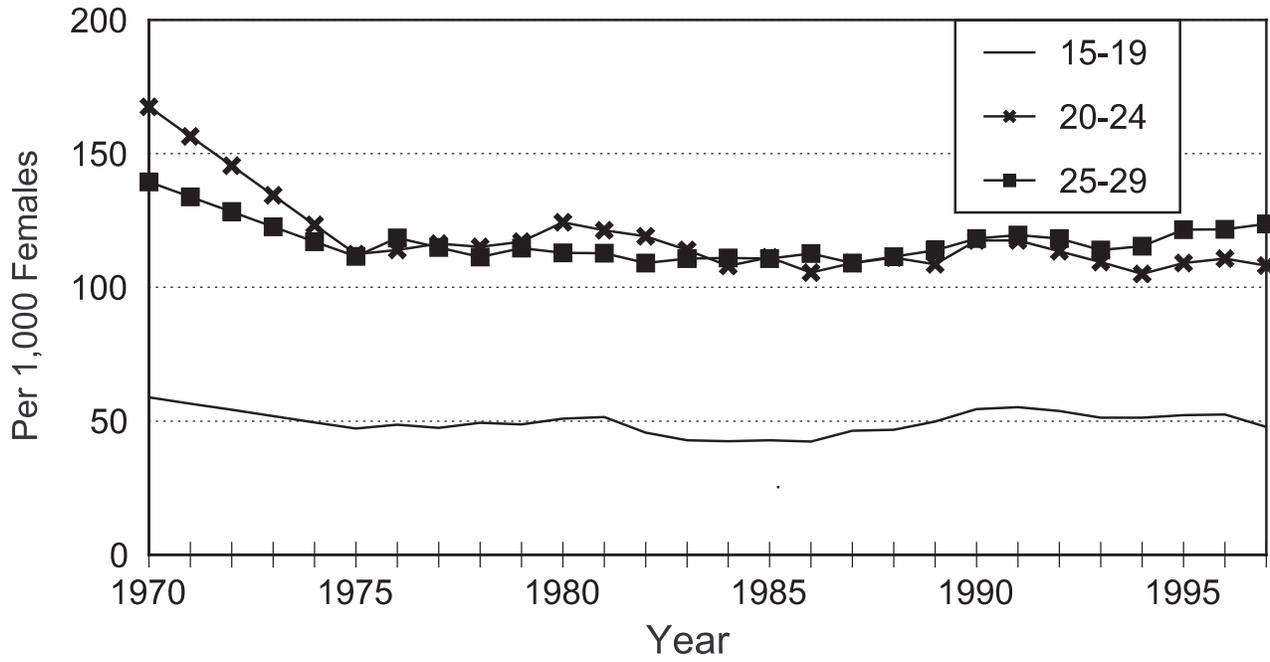
The fertility rate is based on the number of births per 1,000 women 15-44. Unlike the crude rate, it consists only of women who are of childbearing age making it a more precise measurement of changes in behavioral patterns. Oregon's 1997 fertility rate decreased slightly (0.6%) from the 1996 rate (see sidebar). Despite the overall decline, birth rates increased for women 25 or older. The largest increase in age-specific birth rates was among women 40-44 (9.5%), followed by women 35-39 (4.3%). [Table 2-2]. The largest decreases in birth rates were among teens 15-19 (8.8%) and young women 20-24 (2.3%). [Table 2-2; Figure 2-1]. The youngest mother in 1997 was 12 years old; the oldest was 52. (For more detailed information, see the Teen Pregnancy section of this report.)

Fertility Rates Per 1,000 Females 15-44, Oregon vs. U.S.		
Year	Oregon	U.S.
1980	69.3	68.4
1981	68.1	67.4
1982	65.2	67.3
1983	64.1	65.8
1984	62.8	65.4
1985	62.2	66.2
1986	61.8	65.4
1987	60.9	65.7
1988	61.8	67.2
1989	63.3	68.2
1990	65.1	71.1
1991	63.7	69.6
1992	62.5	69.3
1993	61.1	67.6
1994	61.0	65.8
1995	62.3	65.6
1996	63.2	65.3
1997	63.0	65.0

## MARITAL STATUS OF MOTHER

Unmarried women as a group have poorer birth outcomes than married women. They generally have a greater proportion of babies with low birthweight and low Apgar scores than do their married counterparts. Their infants are also more likely to require neonatal intensive care, to have congenital anomalies, or to die before age one. Over the last 20 years, the percentage of births to unmarried women has more than doubled nationally and in Oregon. [Figure 2-2]. In 1997, 28.8 percent of all Oregon births were to unmarried women, a decrease of 3.0 percent and the first decline since 1979. [Table 1-2]. Oregon has consistently had lower nonmarital birth rates than the nation; Oregon's rate in 1997 was 11 percent lower. [Figure 2-2].

Figure 2-1.  
Age-Specific Birth Rates,  
Oregon Residents, 1970-1997

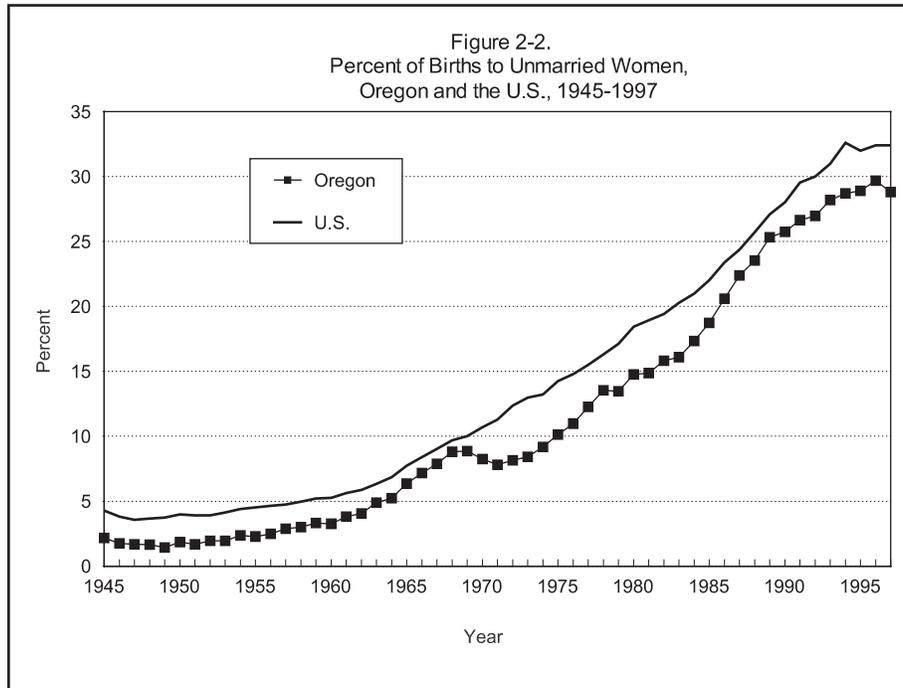


Among women giving birth in 1997, the percentage who were unmarried varied widely by ethnic and racial group (see sidebar). African American women had the highest rate of nonmarital births (67%), followed by American Indian women (58%), and Hispanic women of all races (37%). Japanese women (5.1%) and Chinese women (6.0%) were least likely to be unmarried. Younger mothers were most likely to be unmarried, since Oregon law prohibits marriage before age 17. Although 74 percent of births to teens 15-19 were nonmarital, this percentage dropped to 38 percent for women 20-24 and to 18 percent for women 25-29. Mothers 30-34 were least likely to be unmarried (13%), while 14 percent of mothers 35 or older were unmarried. [Table 2-3]. Eleven of Oregon's 36 counties had significantly higher rates of nonmarital births compared to the state average. [Table 2-7]. Among counties with statistically significant differences, Lincoln had the highest rate (412.0 per 1,000) followed by Clatsop (391.8 per 1,000). Five Oregon counties had nonmarital birth rates significantly lower than the state average. The lowest rate was in Hood River County (176.7). A county's nonmarital birth rate should be viewed in part as a function of its own specific population mix, especially age and race (see sidebar). Variations in population composition will likely result in significant differences among counties.

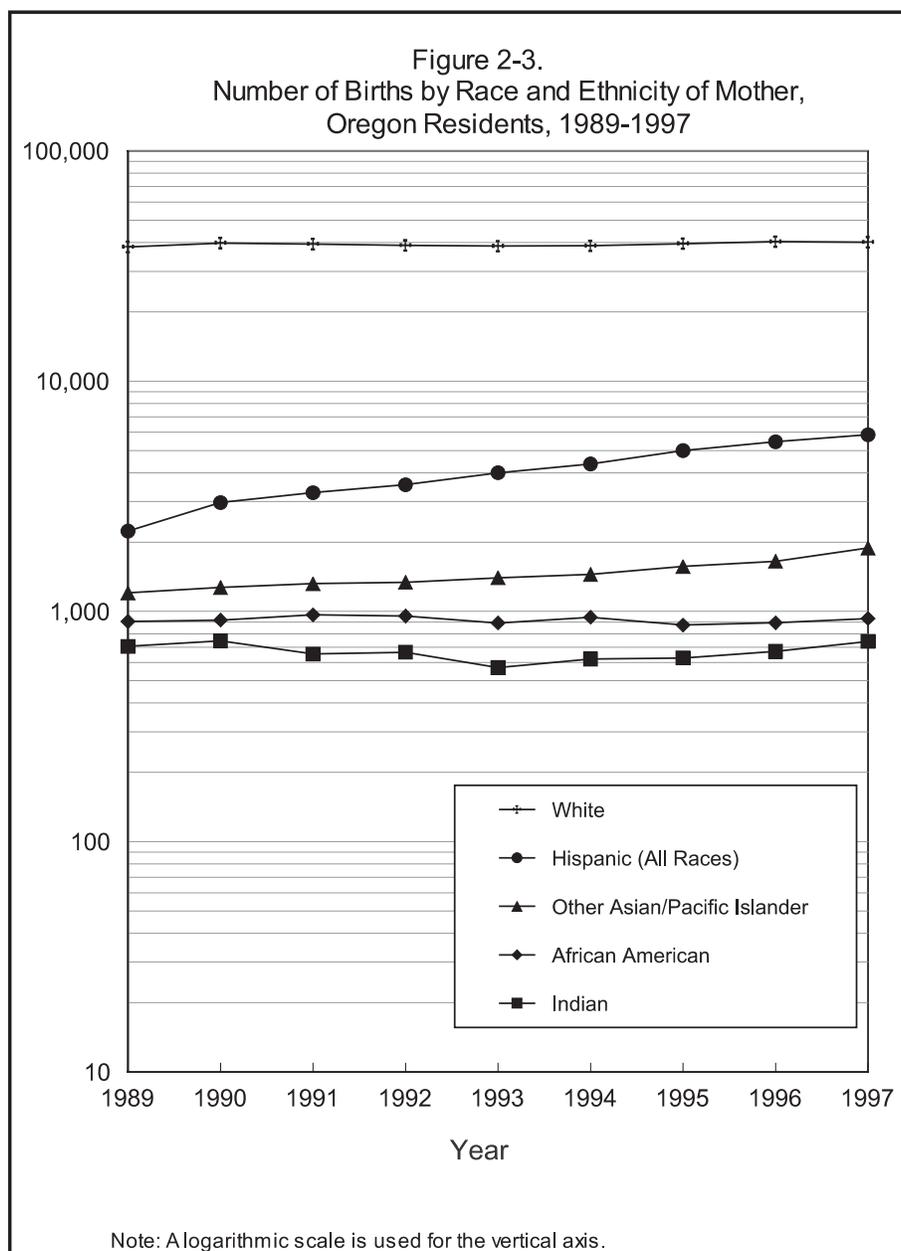
Unmarried Mothers by Race/Ethnicity, 1997	
Race/Ethnicity	Unmarried (%)
<b>Total</b>	28.8
African American	67.0
American Indian	58.4
Hispanic (All Races)	37.4
White	27.9
Other Asian & Pacific Islander	19.6
Filipino	21.1
Chinese	6.0
Japanese	5.1

### MATERNAL RACE/ETHNICITY

Because precise population data are available only for census years, it is not possible to calculate birth rates by racial and ethnic group, only the number of births. Begin-



ning in 1981 and continuing through 1988, Hispanic ethnicity was a race category on the birth certificate. Since 1989, there has been a separate question about Hispanic ethnicity. This change is associated with some of the increase in reporting of births to Hispanic women. An increased willingness to self-report minority affiliation may also be occurring among all groups. The number of resident births to white women has increased 4.7 percent since 1989, while the number of births to American Indian women increased 5.1 percent, and to African American women increased 2.9 percent. [Figure 2-3]. The number of births to women of Hispanic ethnicity has increased 87 percent since 1989, to 14 percent of total births. The number of births to non-Hispanic white women declined 5.0 percent. [Table 2-4]. In three Oregon counties, 40 percent or more of resi-



dents giving birth in 1997 identified themselves as Hispanic: Morrow (46%), Hood River (41%), and Malheur (40%). [Table 2-6].

## LOW BIRTHWEIGHT

### *National Healthy People 2000 Objective*

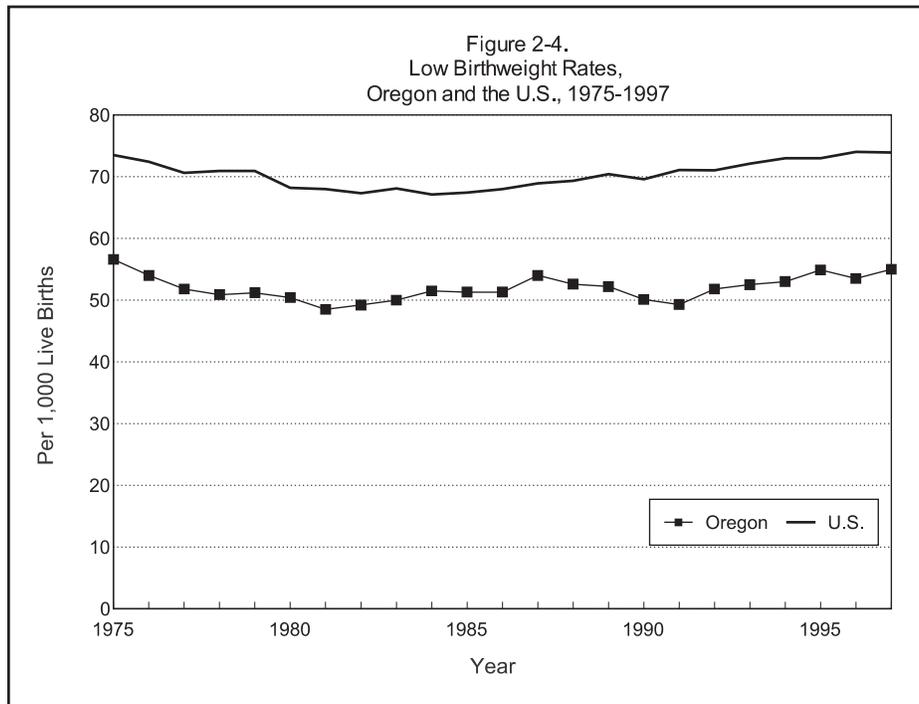
*Reduce low birthweight to an incidence of no more than 5.0 percent of live births.*

*Percentage of Oregon low birthweight births, 1997: 5.5%*

**There were 2,407 low birthweight babies born to Oregon mothers in 1997.**

Of the thousands of infants born every year, not all thrive and become healthy adults. The low birthweight rate is the proportion of infants who weigh less than 2,500 grams (5.5 pounds) at birth. These infants are more likely to need extensive medical treatment, and some may have lifelong disabling conditions.

In 1997, there were 2,407 low birthweight babies born to Oregon mothers. The National Public Health Service has set a Year 2000 Objective to reduce the percentage of low birthweight infants to 5.0 percent.<sup>2</sup> In 1997, the percentage of low birthweight births in Oregon was slightly above the objective at 5.5 percent, or 55.0 per 1,000 live births. This rate is slightly higher than the 1996 figure of 53.5, but the rate has fluctuated relatively little over the last 15 years. [Table 1-6; Figure 2-4]. The lowest rate was recorded in



1981 (48.5) and the highest in 1975 (56.6). Since 1992, the state and U.S. low birthweight rates have been increasing. Oregon's low birthweight rates are typically 25 percent lower than those of the U.S. In 1997, Oregon's rate was 26 percent lower than the national rate. 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, mother's age (younger than 18 or older than 35), lack of prenatal care, low income, single marital status, a previous fetal or infant death, low maternal education, and short spacing between births.

Low birthweight is the major predictor of infant death, which in turn is a fundamental measure of the health of a population. (For more information, see the Fetal and Infant Mortality section to be published in Volume 2 of the Oregon Vital Statistics Annual Report.)

### TOBACCO USE

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***Oregon Benchmark for the Year 2000***

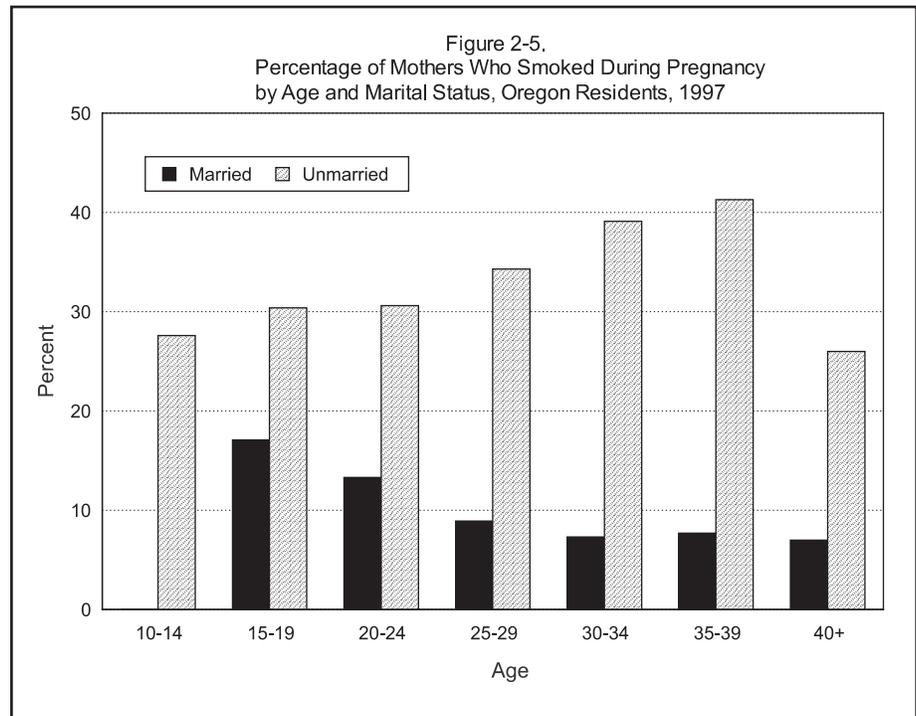
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*Percentage of infants whose mothers (self-reported) used tobacco during pregnancy.*

<i>Year 2000 Goal:</i>	<i>15.0 percent</i>
<i>1997:</i>	<i>16.2 percent</i>

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Women who smoke when pregnant have a far higher incidence of low birthweight babies than nonsmokers.<sup>3</sup>



In 1997, women who smoked had a low birthweight rate of 83.2 per 1,000 live births, compared to 49.0 per 1,000 among women who did not smoke. One out of six mothers (16%) reported using tobacco during pregnancy, a rate that has declined since 1996 by 8.5 percent. Unmarried women were over three times more likely to smoke than married women (32.2% vs. 9.6%). Smoking trends by age differed according to marital status. For unmarried women, the smoking rate was highest among those 35-39 (41%). [Figure 2-5]. The rates for married mothers declined with age. The lowest smoking prevalence rates were among married women 40-44 (6.7%). Smoking prevalence as reported on birth certificates also varied among racial and ethnic groups. In 1997, American Indian women (30%) and African American women (22%) had the highest reported smoking rates during pregnancy, while Chinese women reported the lowest (1.4%). [Table 2-20].

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***Women who smoked had a low birthweight rate of 83.2 per 1,000.***

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**ALCOHOL USE**

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***Oregon Benchmark for the Year 2000***

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*Percentage of infants whose mothers used alcohol (self-reported) during pregnancy.*

<i>Year 2000 Goal:</i>	<i>2.0 percent</i>
<i>1997:</i>	<i>1.6 percent</i>

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Used during pregnancy, alcohol can cause deformity, mental retardation, and other severe developmental problems.<sup>4</sup>

Low birthweight rates were 35 percent higher for mothers who consumed alcohol than those who did not (73.0 per 1,000 vs. 54.1). Based on birth certificate data, 1.6 percent of Oregon mothers (685 women) drank alcohol during pregnancy in 1997. This represents a 69 percent decline from 1990, when 5.2 percent of mothers reported alcohol use. American Indian women (2.9%) and African American women (2.0%) were most likely to have reported using alcohol during pregnancy. Chinese women and Filipino women reported no alcohol use during pregnancy. [Table 2-20].

**PRENATAL CARE**

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***Oregon Benchmark for the Year 2000***

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*Percentage of infants whose mothers received early prenatal care (first trimester).*

<i>Year 2000 Goal:</i>	<i>90.0 percent</i>
<i>1997:</i>	<i>81.1 percent</i>

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Public health services and private care providers seek to minimize the risk of death and disability, and to reduce costs associated with low birthweight infants by providing comprehensive prenatal care services. There are two preferred ways to measure prenatal care: 1) “inadequate prenatal care,” defined as no care until the third trimester or fewer than five prenatal visits; and 2) “early care,” defined as care beginning during the first three months of pregnancy, regardless of the number of total prenatal visits. Early or first trimester care has been adopted as an Oregon Benchmark with a goal to ensure that 90 percent of pregnant women begin prenatal care in the first three months.

Five percent of women giving birth during 1997 received inadequate care. They were 2.3 times more likely to give birth to a low birthweight child. In 1997, 18.9 percent of mothers did not receive first trimester care. Both the number (35,377) and percentage (81.1) of women who received early care increased compared to 1996. [Figure 2-6]. The proportion who received no prenatal care was less than one percent (0.7%); and the proportion who received third trimester care remained about the same (3.0%). [Figure 2-7]. Women under 15 were least likely to have obtained first trimester care and those 30-34 were most likely (42% vs. 87%). [Table 2-15].

Mother’s level of education was closely related to patterns of prenatal care. [Table 2-11]. Women with less than a high school education were least likely to obtain first

No First Trimester Care by Mothers' Education, 1997	
Years of Education	No First Trimester Care (%)
< 12	35.1
12	20.2
> 12	10.4

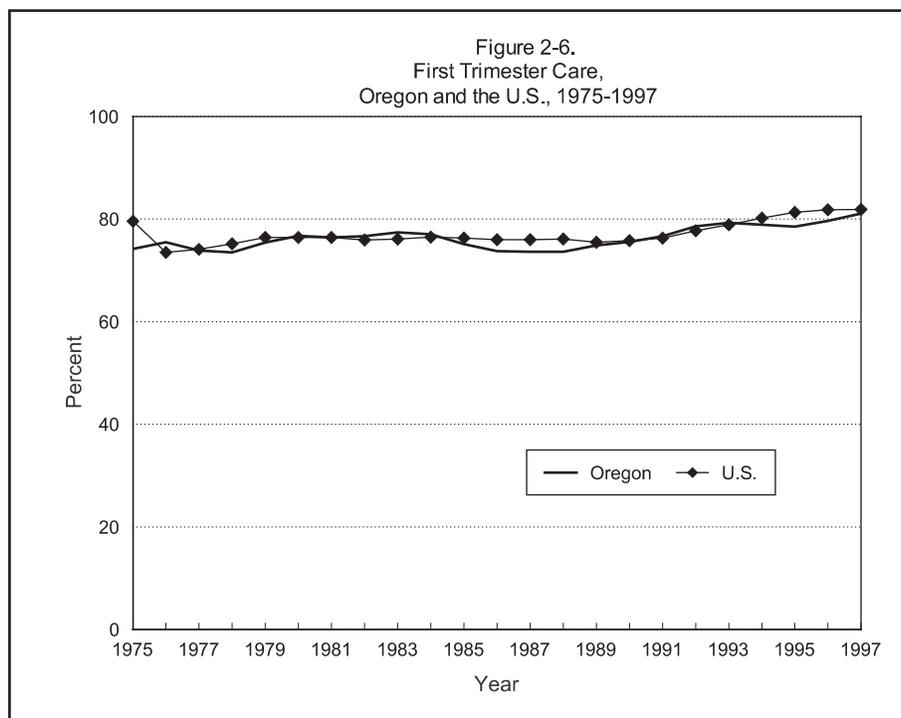
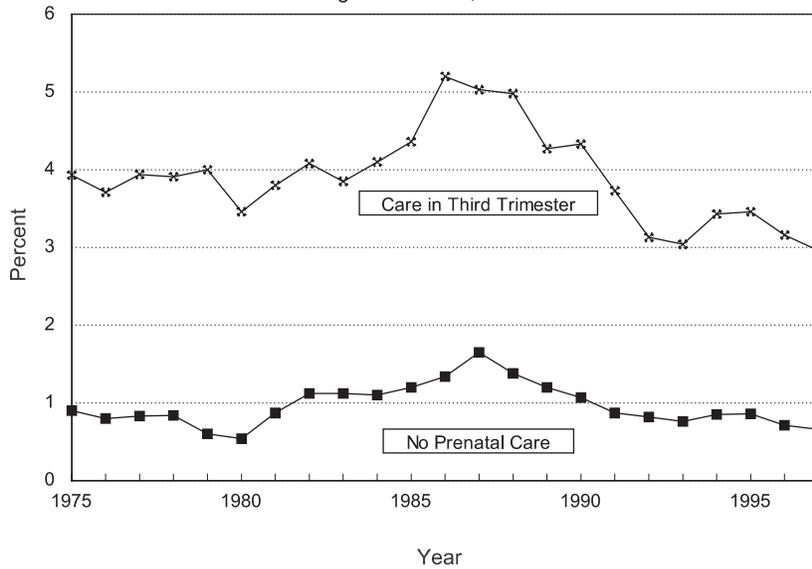


Figure 2-7.  
Percentage of Mothers With No Care and Late Care,  
Oregon Residents, 1975-1997



trimester prenatal care, while; those who had college degrees or higher were most likely to have first trimester care. (See sidebar and Table 2-11).

Twelve of Oregon's 36 counties had first trimester care rates significantly lower than the statewide rate: Coos, Jackson, Jefferson, Josephine, Klamath, Lane, Lincoln, Linn, Malheur, Marion, Morrow, and Umatilla. Six counties had rates significantly higher than the statewide rate: Clackamas, Deschutes, Douglas, Polk, Tillamook, and Washington. [Table 2-13].

**BIRTH ATTENDANT**

A major shift over the past few years has been the increasing prevalence of births attended by Certified Nurse Midwives (CNM). In 1997, 13.0 percent of hospital deliveries were CNM-attended, a slight decrease from 1996, but over twice the proportion in 1988 (5.8%). Most in-hospital births (83.6%) were delivered by MDs, a slightly higher proportion than in 1996. [Table 2-23].

**OUT-OF-HOSPITAL BIRTHS**

In 1997, Oregon had a higher proportion of out-of-hospital births (2.1%) than the U.S. as a whole (0.9%). Outcomes have generally been positive for out-of-hospital births, which may reflect the screening process used by out-of-hospital birth providers. The mothers who delivered out of hospital were generally not high-risk patients. In 1997, only 20 infants born out of hospital in Oregon had low

Certified Nurse Midwife Deliveries			
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

Out-of-Hospital Births (Oregon Occurrence)		
Year	Deliveries	Rate
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

Rates per 1,000 births.

Primary Source of Payment for Delivery			
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

NOTE: Births with other public assistance or multiple sources of payment are not shown. Denominator includes only births where source of payment is known.

birthweights (2.1%). However, nine (0.9%) were reported to have a congenital anomaly, which is still a third lower than the percentage for in-hospital births (1.6%). The type of attendant varies by birth setting. Licensed Direct Entry Midwives (LDEM) were predominant in out-of-hospital births, delivering over one-third (42%) of these births in 1997. LDEMs are lay midwives who have volunteered for state licensure to provide natality care for Oregon women. Non-licensed lay midwives delivered 22.0 percent of out-of-hospital births. In addition, Certified Nurse Midwives delivered one in eight babies (12%), and naturopathic physicians delivered one in nine babies (11%). [Table 2-23].

## SOURCE OF PAYMENT

Primary source of payment for delivery is noted on Oregon birth certificates under four categories: 1) private insurance; 2) self-pay [no insurance]; 3) public insurance [Medicaid/Oregon Health Plan]; and 4) other public insurance. The specific type of private insurance coverage is not defined. Multiple payment sources can be indicated. The majority of deliveries in Oregon were paid for by private insurance companies (61%), up from 58 percent in 1996 (see sidebar). [Table 2-17 ]. Slightly under one-third of Oregon resident births (32%) were paid for by Medicaid (e.g., the Oregon Health Plan). Delivery costs were more likely to be paid for by public insurance if the mother was not married or under 18. [Table 2-17].

## REFERENCES

- 1 Ventura SJ, Martin JA, Curtin SC, Mathews TJ. Births: Final Data for 1997. National Vital Statistics Report; vol. 47, no. 18. Hyattsville, Maryland: National Center for Health Statistics. 1998.
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