

OREGON PERINATAL DATA BOOK



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INTRODUCTION

It is my pleasure to share with you the first Oregon Perinatal Data Book. The purpose of this book is to increase understanding of the status of perinatal health in our state. Many of these data are available on the Internet to the intrepid researcher. This book presents them in a single volume, organized by topics, using several data sources. Easily accessible data is a powerful tool to guide local and state public health, program analysts, researchers, policy makers and legislators in targeting resources, and developing programs and policy.

We have analyzed and compiled data around key maternal and child health indicators for pregnant women and infants. Topics for the data book were selected based on their importance for perinatal health, as well as their usefulness in planning public health interventions. It is not enough to have data; we want to maximize the chances that these data will result in improvements in the health of Oregon mothers and infants.

I want to acknowledge the passion and dedication of the Office of Family Health team that put this book together: Nurit Fischler, Laurin Kasehagen, Ken Rosenberg, Helen Wiens, and Suzanne Yusem. This is our first data book. We want your feedback. Please share with us how you have used the data in this book. We also welcome feedback on the usefulness of this format. Please email questions, suggestions and comments to perinataldatabook@state.or.us.

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PREFACE

The world of maternal and child health has seen dramatic changes in the past ten years. Data have become a far more important part of deciding what types of work need to be done, getting resources to develop programs, and evaluating the impact of programs. The Office of Family Health has produced this book as a reference to support that work.

Overview

The Oregon Perinatal Data Book is comprised of leading health indicators that describe the overall picture of perinatal health in Oregon. Data for these indicators were obtained from the Oregon Vital Statistics Birth File, the Oregon Pregnancy Risk Assessment Monitoring System (PRAMS) and the National Center for Health Statistics' National Immunization Survey. The data book includes information through 2004, which was the most recent data available at the time of publication.

Organization

The data book is divided into four chapters. Chapter one is a general overview of the demographics of Oregon's childbearing population including: number and geographic distribution of births; age, race/ethnicity, education level, and marital status of mothers. Chapter two describes Oregon's birth outcomes including: preterm and low birth weight births and infant, neonatal and postneonatal mortality. Chapter three addresses issues related to perinatal health: vitamin use, weight before pregnancy, early prenatal care, source of payment for prenatal care, tobacco and alcohol use, and pregnancy intendedness. Chapter four addresses maternal and infant health indicators including postpartum depression, breastfeeding, and infant sleep position.

Each of the selected indicators is accompanied by graphic displays and descriptive statistics. Summaries by race/ethnicity and additional subgroup analyses, such as age or education, are included when relevant. Whenever possible, indicators are compared to the national Healthy People 2010 Objectives and to national data. These

PREFACE (CONTINUED)

comparisons not only bring perspective to the data presented but also indicate how close Oregon is to achieving the national goals.

Where available, 10-year trend analyses (1995-2004) are included to indicate if there was a significant change over time. Indicators that are based on a small number of events, such as infant mortality, are presented using three-year moving averages.

Race and Ethnicity

Race/ethnicity was determined using maternal race/ethnicity from the Oregon birth certificate. Unless otherwise noted, race/ethnicity groups for this publication are as follows: Hispanic (all races); and white, black/African American, American Indian/Alaska Native, Asian/Pacific Islander (all non-Hispanic). Please refer to the Methodology section in Appendix C for more information on how race/ethnicity was determined.

Statistical Significance

All data presented in this book can be found in table format in the Appendices. Trends are presented with single-year rates and associated p-values. PRAMS data for 2004 are presented with associated standard errors and 95 percent confidence intervals. Whenever a significant difference is noted in the text the difference is statistically significant. Please refer to the Methodology section, Appendix C, for more information on statistical methods.

References

References can be found at the back of the book, beginning on page 89.

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CHAPTER 1: DEMOGRAPHICS

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BIRTH TRENDS & GEOGRAPHIC DISTRIBUTION

- From 1995-2004, the population of Oregon increased from 3,184,369 to 3,594,586 – an increase of 12.9 percent.
- From 1995-2004, the number of live births in Oregon increased by 6.9 percent. However, during this same period the crude birth rate* decreased 6.6 percent – from 13.4 per 1,000 population in 1995 to 12.7 per 1,000 population in 2004.
- In 2004, 63.8 percent of all live births were to women residing in 5 of Oregon's 36 counties – Multnomah, Washington, Marion, Clackamas and Lane.
- In 2004, over three-fourths of all live births occurred in counties that were along the I-5 corridor.

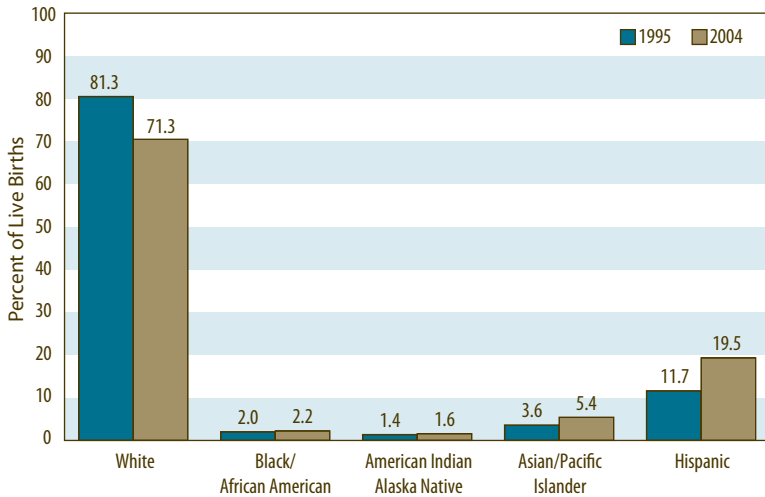
*Crude birth rate is the number of births that occur per 1,000 population.

RACE/ETHNICITY

- Nearly three-fourths (71.3 percent) of Oregon live births in 2004 were to white women, and nearly one-fifth (19.5 percent) were born to Hispanic women. Infants born to Asian/Pacific Islander, American Indian/Alaska Native, and black/African American mothers combined made up less than 10 percent of live births.
- Over the last ten years, the percent distribution of live births by race/ethnicity has changed. Since 1995, the percentage of infants born to Hispanic women increased by 67 percent.
- Although making up over two-thirds of the live birth population, the percentage of infants born to white mothers significantly decreased – from 81.3 percent in 1995 to 71.3 percent in 2004.
- Oregon’s distribution of live births for Asian/Pacific Islander and American Indian/Alaska Native race/ethnic groups was similar to the U.S. in 2004. However, the percentage of infants born to white mothers was 25 percent higher in Oregon.
- In 2004, 2.2 percent of Oregon live births were to black/African American women – compared to 14.2 percent for the U.S.

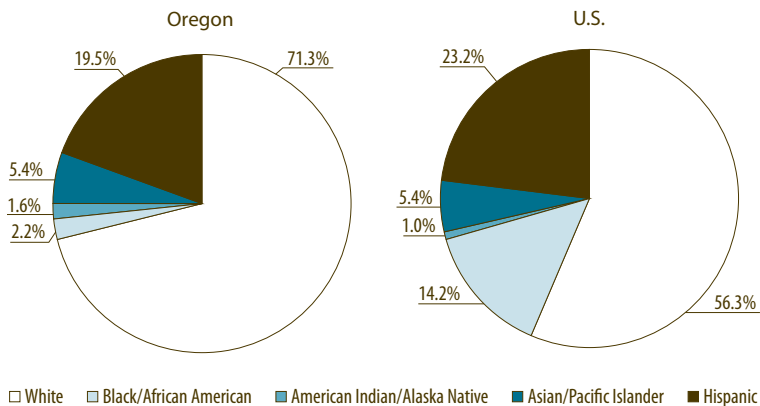
CHAPTER 1: DEMOGRAPHICS

Distribution of Live Births by Race/Ethnicity, Oregon, 1995 & 2004



Data Source: Oregon Vital Statistics

Distribution of Live Births by Race/Ethnicity, Oregon & U.S., 2004



Data Source: Oregon Vital Statistics; Centers for Disease Control and Prevention. National Center for Health Statistics. VitalStats. Available at <http://www.cdc.gov/nchs/vitalstats.htm>. [cited 2007 July]

AGE, EDUCATION & MARITAL STATUS

During 2004, there were 45,660 live births in Oregon. Of these:

- over half were to women age 25–34 years and one-fourth were to women age 20–24 years;
- approximately half were to women who had more than a high school education, 30.3 percent had a high school education, and 20.1 percent had not completed high school;
- nearly 70 percent occurred among married women.

Compared to the U.S., Oregon women who had a live birth in 2004 were:

- less likely to have been under 18 years of age – 2.7 percent of Oregon mothers were under 18 years of age compared to 3.4 percent of U.S. mothers;
- more likely to have been married – 67.5 percent of Oregon mothers were married compared to 64.2 percent of U.S. mothers.

CHAPTER 1: DEMOGRAPHICS

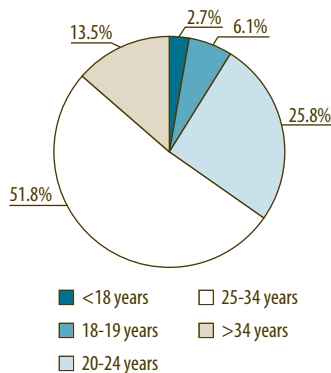
Demographics of Women With Live Births, Oregon & U.S., 2004

	Oregon Birth Rate*	Oregon Percent	U.S. Percent
Maternal Race/Ethnicity			
White	10.8	71.3	56.3
Black/African American	14.5	2.2	14.2
American Indian/Alaska Native	14.8	1.6	1.0
Asian/Pacific Islander	17.7	5.4	5.4
Hispanic	25.8	19.5	23.2
Maternal Age			
<18 years	2.9	2.7	3.4
18-19 years	58.8	6.1	6.8
20-24 years	95.2	25.8	25.2
25-34 years	97.0	51.8	50.3
>34 years	15.9	13.5	14.2
Maternal Education			
<12 years		20.1	22.2
12 years		30.3	29.9
>12 years		49.6	47.9
Marital Status			
Married		67.5	64.2
Unmarried		32.5	35.8

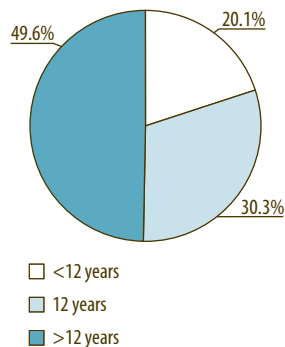
*Crude birth rate per 1,000 population for race/ethnicity; Age-specific birth rate per 1,000 women in specified age range for maternal age.

Data Source: Oregon Vital Statistics; Centers for Disease Control and Prevention. National Center for Health Statistics. VitalStats. Available at <http://www.cdc.gov/nchs/vitalstats.htm>. [cited 2007 July]

Live Births by Maternal Age, Oregon, 2004



Live Births by Maternal Education, Oregon, 2004



Data Source: Oregon Vital Statistics

CHAPTER 2: BIRTH OUTCOMES



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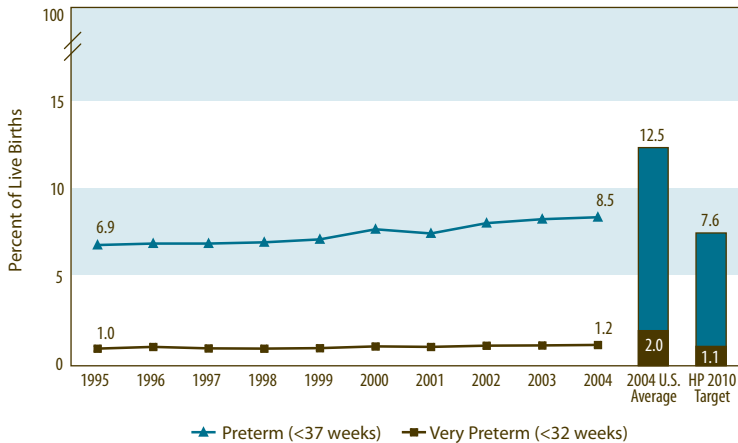
PRETERM & VERY PRETERM BIRTHS

In the U.S., preterm birth is the leading cause of neonatal deaths not associated with birth defects. Nationally, the preterm rate among singletons rose 11 percent between 1990 and 2004 (9.7 to 10.8 percent); nearly all of the increase was among infants delivered at 34-36 weeks gestation.¹ The majority of low and very low birth weight infants are born preterm. Risk factors associated with preterm birth include: multiple birth, previous preterm delivery, stress, infection, vaginal bleeding, smoking, illicit drug use, low pre-pregnancy weight and maternal age extremes.^{2,3}

- In 2004, Oregon's preterm and very preterm birth rates were significantly lower than the U.S.¹ (8.5 versus 12.5 percent and 1.2 versus 2.0 percent, respectively).
- In 2004, both of these measures for Oregon were higher than the Healthy People 2010 goals of 7.6 percent and 1.1 percent for preterm and very preterm births, respectively.
- From 1995-2004, rates of preterm and very preterm births in Oregon increased significantly. Preterm births increased from 6.9 percent in 1995 to 8.5 percent in 2004. Very preterm births increased from 1.0 percent in 1995 to 1.2 percent in 2004.
- From 1995-2004, very preterm birth rates among infants born to white mothers significantly increased. Increases among other race/ethnic groups were not statistically significant. (Data in Appendix D)
- During 2002-2004, infants born to black/African American and American Indian/Alaska Native mothers had the highest rates of preterm (11.0 and 10.8 percent, respectively) and very preterm birth (2.0 and 1.6 percent, respectively). These rates were significantly higher than those of all other race/ethnic groups.

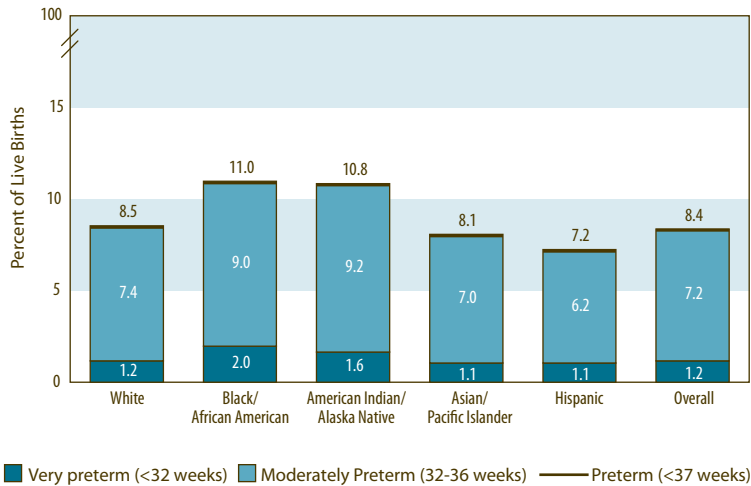
CHAPTER 2: BIRTH OUTCOMES

Preterm & Very Preterm Births by Year, Oregon, 1995-2004



Data Source: Oregon Vital Statistics

Preterm, Moderately Preterm & Very Preterm by Race/Ethnicity, Three-Year Average, Oregon, 2002-2004



Preterm = Very Preterm + Moderately Preterm

Data Source: Oregon Vital Statistics

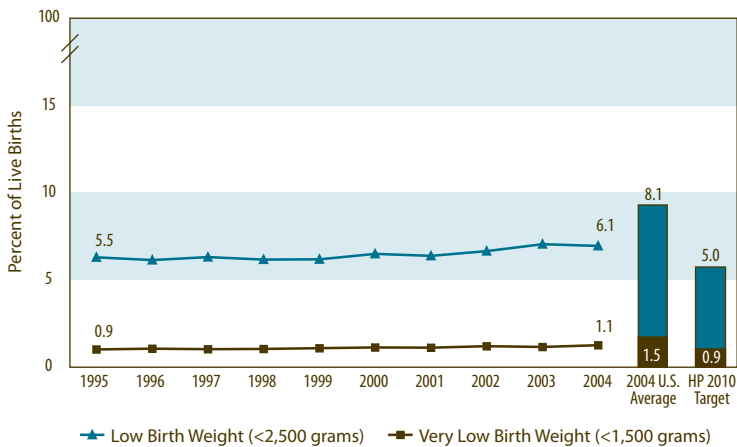
LOW & VERY LOW BIRTH WEIGHT BIRTHS

Compared to infants of normal weight, low birth weight (LBW) and very low birth weight (VLBW) infants are at increased risk for impaired development and infant death.^{4,5} VLBW infants' risk of dying in the first year of life is 100 times that of normal birth weight infants.⁶ LBW infants who survive are more likely to suffer from long-term disabilities such as cerebral palsy, blindness or other chronic conditions.⁴ Risk factors associated with LBW include: cigarette smoking; multiple birth; poor nutrition; maternal age extremes; and short inter-pregnancy interval.⁷

- In 2004, 6.1 percent of Oregon infants were LBW and 1.1 percent were VLBW compared to 8.1 percent and 1.5 percent for the U.S.⁸ Although Oregon is consistently below the U.S. average for these measures, both rates are above the Healthy People 2010 targets of 5 percent for LBW and 0.9 percent for VLBW.
- From 1995-2004, Oregon's rates of LBW and VLBW births have significantly increased.
- From 1995-2004, rates of LBW significantly increased for infants born to white, American Indian/Alaska Native, and Asian/Pacific Islander mothers, while the LBW rate among Hispanic infants significantly decreased. (Data in Appendix D)
- There was no significant change in the LBW rate for black/African American infants from 1995-2004. (Data in Appendix D)
- During 2002-2004, infants born to black/African American mothers were almost twice as likely to be LBW as those born to white or Hispanic mothers (10.7 versus 5.9 and 5.3 percent, respectively).

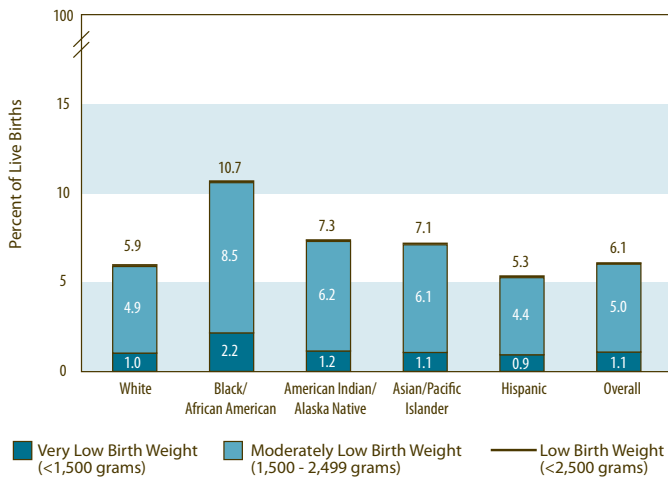
CHAPTER 2: BIRTH OUTCOMES

Low & Very Low Birth Weight Births by Year, Oregon, 1995-2004



Data Source: Oregon Vital Statistics

Low, Moderately Low & Very Low Birth Weight by Race/Ethnicity, Oregon, 2002-2004



Low Birth Weight = Very Low Birth Weight + Moderately Low Birth Weight

Data Source: Oregon Vital Statistics

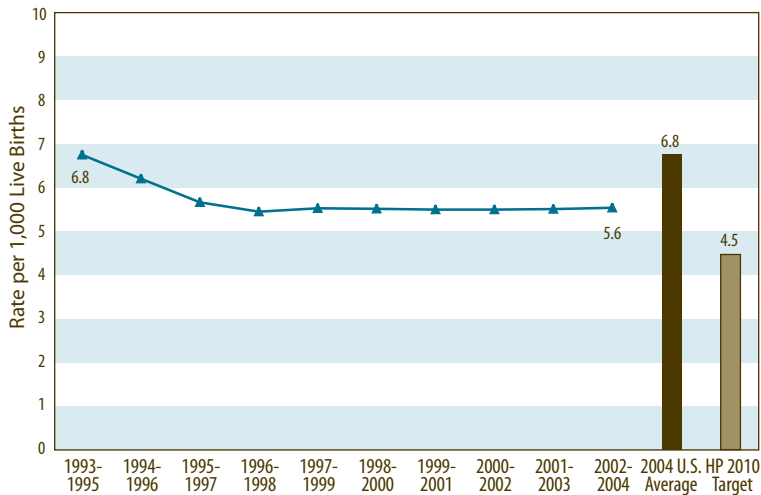
INFANT MORTALITY

Infant mortality (the death of an infant during its first year) has dramatically declined over the past 40 years in the U.S. This decline is largely due to medical advances and hospital care of premature infants. Nationally, the leading causes of infant death are birth defects, prematurity/low birth weight, and sudden infant death syndrome (SIDS).⁹ During 2002-2004, an average of 254 Oregon infants died per year. Approximately 1 in 4 infant deaths (24.9 percent) was due to birth defects and 1 in 5 (21 percent) was due to prematurity.¹⁰

- In 2002-2004, Oregon's infant mortality rate was nearly 20 percent lower than the 2004 U.S.¹¹ average (5.6 versus 6.8 infant deaths per 1,000 live births, respectively). However, Oregon did not achieve the Healthy People 2010 target of 4.5 infant deaths per 1,000 live births.
- Although infant mortality in Oregon declined significantly in the early 1990s, there has been no improvement since the mid 1990s.
- From 1993-2004, infant mortality rates of white and Hispanic mothers have significantly declined. However, only the Hispanic rate has continued to decline since the late 1990s. (Data in Appendix D)
- Although the rate of infant mortality for black/African Americans declined by one-third from 1993-2004, the improvement was not statistically significant.
- Infants born to black/African American mothers during 2002-2004 were approximately twice as likely to die within their first year as those born to white or Hispanic mothers (10.4 versus 5.6 and 4.7 infant deaths per 1,000 live births).
- American Indian/Alaska Natives were the only race/ethnic group to show a significant increase in infant mortality from 1993-1995 to 2002-2004.

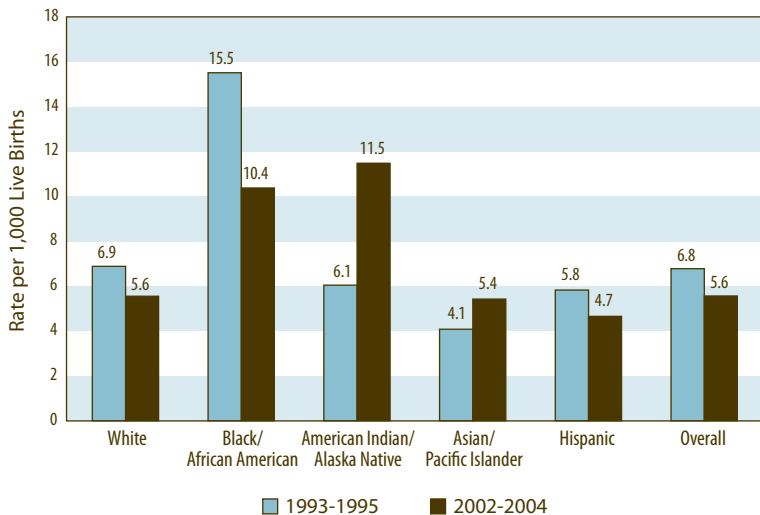
CHAPTER 2: BIRTH OUTCOMES

Infant Mortality Rate, Three-Year Moving Averages, Oregon, 1993-2004



Data Source: Oregon Vital Statistics (Vista PHw)

Infant Mortality Rate by Race/Ethnicity, Three-Year Average, Oregon, 1993-1995 & 2002-2004



Data Source: Oregon Vital Statistics (Vista PHw)

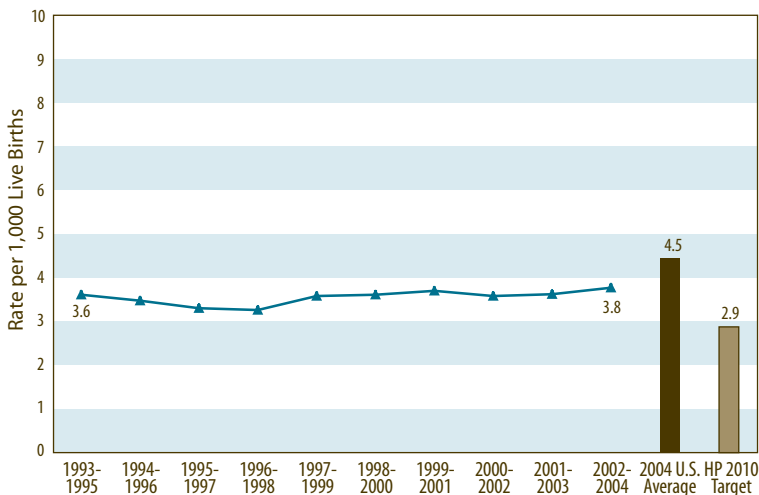
NEONATAL MORTALITY

Neonatal mortality is the subset of infant mortality that includes deaths from birth up to 28 days. In Oregon during 2002-2004, an average of 173 infants per year died within the first month of life. Of these deaths, nearly 90 percent were due to birth defects (29.3 percent), labor and delivery complications (29.3 percent), and prematurity (28.5 percent).¹²

- In 2002-2004, Oregon's neonatal mortality rate was nearly 20 percent lower than the 2004 U.S.¹³ average (3.8 versus 4.5 neonatal deaths per 1,000 live births, respectively). Although Oregon's rate has remained consistently below the U.S. average over the last ten years, Oregon has not achieved the Healthy People 2010 target of 2.9 neonatal deaths per 1,000 live births.
- From 1993-2004, Oregon's neonatal mortality rate has remained relatively unchanged. During 1993-1995, the neonatal mortality rate was 3.6 per 1,000 live births compared to 3.8 per 1,000 live births during 2002-2004.
- During 2002-2004, American Indian/Alaska Native and black/African American mothers had the highest rates of neonatal mortality – approximately 1.5 times that of all other race/ethnic groups.
- There were no significant improvements in the neonatal mortality rate for any race/ethnic group from 1993-2004.
- There was an increase in the rate of neonatal mortality among American Indian/Alaska Natives and Asian/Pacific Islanders from 1993-2004; however, neither increase was statistically significant.

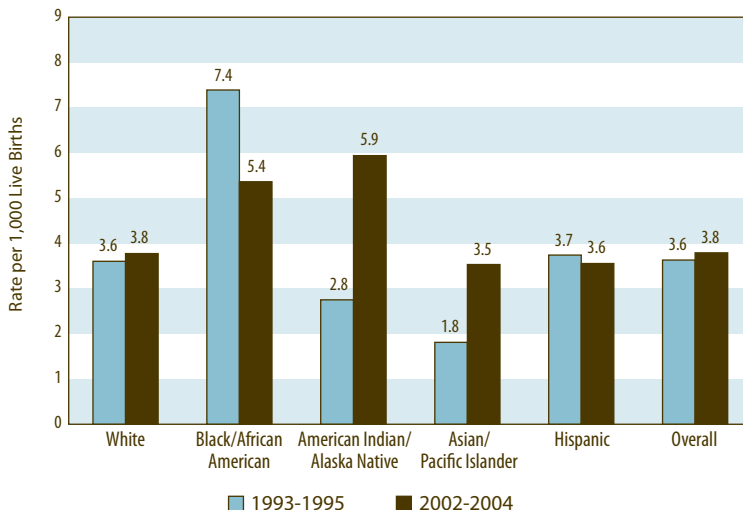
CHAPTER 2: BIRTH OUTCOMES

Neonatal Mortality Rate, Three-Year Moving Averages, Oregon, 1993-2004



Data Source: Oregon Vital Statistics (Vista PHw)

Neonatal Mortality Rate by Race/Ethnicity, Three-Year Average, Oregon, 1993-1995 & 2002-2004



Data Source: Oregon Vital Statistics (Vista PHw)

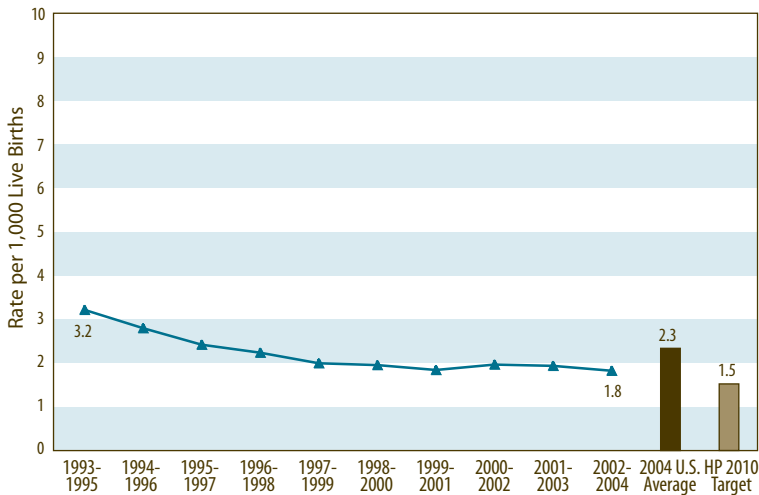
POSTNEONATAL MORTALITY

Postneonatal mortality is the subset of infant mortality that includes deaths from 28 days up to 1 year. During the postneonatal period, the leading causes of death nationally are sudden infant death syndrome (SIDS), birth defects, and unintentional injuries.¹⁴ During 2002-2004, an average of 81 postneonates per year died in Oregon. During this time period, the number one cause of death among postneonates was sudden infant death syndrome (SIDS), accounting for nearly 30 percent of all deaths in this age group.¹⁵

- Oregon's postneonatal mortality rate for 2002-2004 was nearly 20 percent lower than the 2004 U.S.¹⁶ average – 1.8 versus 2.3 postneonatal deaths per 1,000 live births, respectively. However, Oregon has not achieved the Healthy People 2010 target of 1.5 postneonatal deaths per 1,000 live births.
- From 1993-2004, postneonatal mortality in Oregon declined significantly – from 3.2 to 1.8 postneonatal deaths per 1,000 live births.
- From 1993-2004, postneonatal mortality rates among white and Hispanic mothers significantly declined. Although not statistically significant, postneonatal mortality rates among black/African American mothers showed a downward trend.
- There was an increase in postneonatal mortality among American Indian/Alaska Natives from 1993-2004; however, the change was not statistically significant. (Data in Appendix D)
- Significant racial disparities persist between black/African American and both white and Hispanic postneonatal mortality rates. During 2002-2004, infants born to black/African American mothers were 2.8 and 4.5 times more likely to die during the postneonatal period than those born to white or Hispanic mothers, respectively.

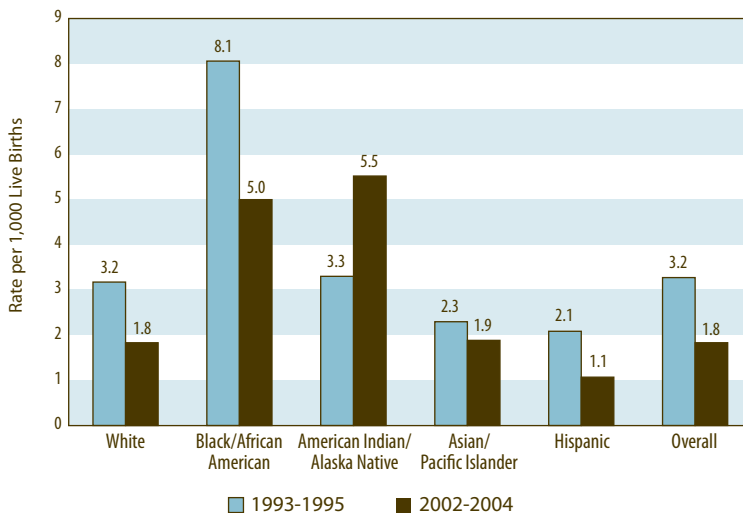
CHAPTER 2: BIRTH OUTCOMES

Postneonatal Mortality Rate, Three-Year Moving Averages, Oregon, 1993-2004



Data Source: Oregon Vital Statistics (Vista PHw)

Postneonatal Mortality Rate by Race/Ethnicity, Three-Year Average, Oregon, 1993-1995 & 2002-2004



Data Source: Oregon Vital Statistics (Vista PHw)

CHAPTER 3: PERINATAL HEALTH

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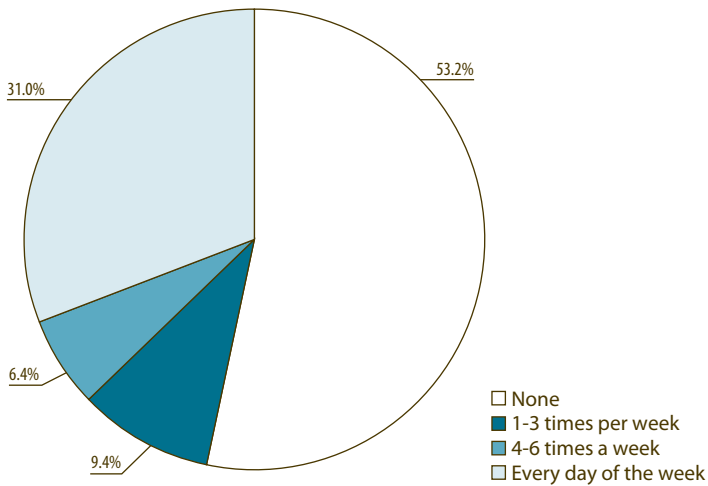
PRE-PREGNANCY VITAMIN USE

Neural tube defects affect about 3,000 pregnancies in the U.S. each year. Neural tube defects include spina bifida (open spine) and anencephaly (open skull) and are among the most common birth defects that contribute to perinatal mortality, infant mortality, and disability.¹⁷ The consumption of vitamin supplements containing folic acid before conception and during the first trimester of pregnancy can reduce the occurrence of neural tube defects by 50–70 percent.¹⁸ Since half of U.S. pregnancies are unplanned and these birth defects occur very early in pregnancy, the national Centers for Disease Control and Prevention (CDC) recommend that all women of childbearing age consume 400 micrograms of folic acid per day¹⁸ (which is contained in most multivitamins).

- More than half (53.2 percent) of Oregon women who had a baby in 2004 had not taken multivitamins during the month before they became pregnant. Just over one-third (37.4 percent) reported they had taken either multivitamins or prenatal vitamins four or more times per week.
- Asian/Pacific Islander women were most likely to report regular multivitamin use (4 or more times per week) during the month before they became pregnant (45.0 percent).
- American Indian/Alaska Native women were least likely to report regular multivitamin use during the month before they became pregnant (24.6 percent).
- As maternal age increased, the prevalence of taking a multivitamin significantly increased. Women under 20 years of age were significantly less likely than all other age groups to take a multivitamin at least 4 times per week.

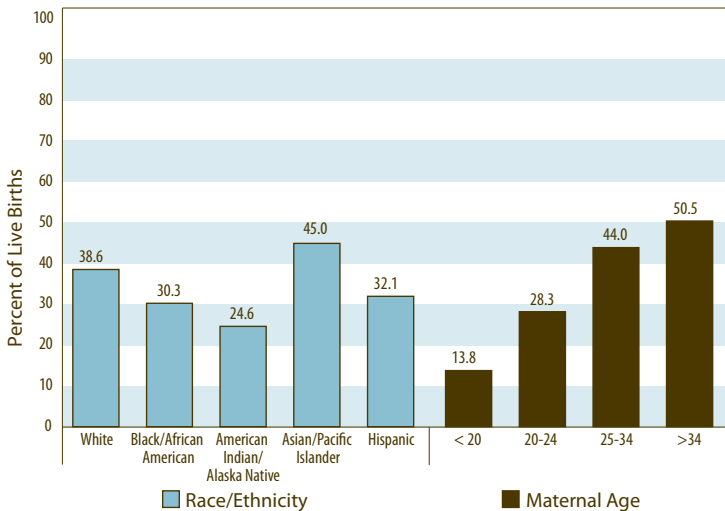
CHAPTER 3: PERINATAL HEALTH

Pre-pregnancy Vitamin Use, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

Pre-pregnancy Vitamin Use (≥ 4 times/week) by Race/Ethnicity & Age, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

PRE-PREGNANCY OBESITY

Obesity is linked to chronic conditions such as high blood pressure, heart disease, diabetes, and stroke.¹⁹ Women who are obese prior to pregnancy are at increased risk of developing gestational diabetes, pregnancy-related hypertension, preeclampsia, and labor complications; and their infants are at increased risk for neonatal death.^{19,20,21}

- More than one-third (36.3 percent) of Oregon births in 2004 were to women who were overweight or obese prior to pregnancy.
- Almost half (47.1 percent) of American Indian/Alaska Native women were overweight/obese prior to pregnancy. This percentage was significantly higher than that of white (36.0 percent) or Asian/Pacific Islander (20.1 percent) women.
- Asian/Pacific Islander women were significantly less likely than any other race/ethnic group to be overweight/obese before pregnancy (20.1 percent).

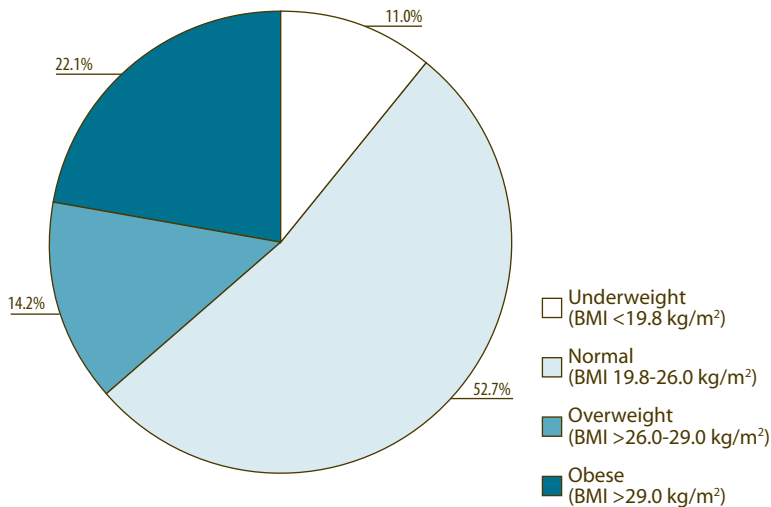
Pre-pregnancy Body Mass Index (BMI), the ratio of a person's height to weight before the woman became pregnant, is calculated as weight in kilograms divided by height in meters squared. PRAMS calculates BMI from self-reported height and weight just before pregnancy.

The BMI cut-off values specified by the Institute of Medicine (IOM) in 1990 for women prior to pregnancy are as follows²²:

Underweight.....	BMI < 19.8 kg/m ²
Normal Weight	19.8 ≤ BMI ≤ 26.0 kg/m ²
Overweight.....	26.0 < BMI ≤ 29.0 kg/m ²
Obese	BMI > 29.0 kg/m ²

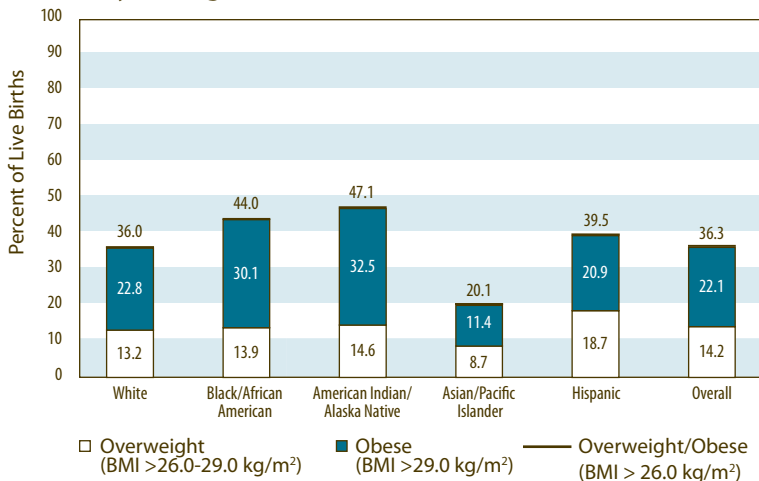
CHAPTER 3: PERINATAL HEALTH

Pre-pregnancy Body Weight, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

Pre-pregnancy Overweight/Obesity by Race/Ethnicity, Oregon, 2004



Overweight/Obese = Overweight + Obese

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

PRENATAL CARE

Inadequate prenatal care, including late initiation of care, infrequent prenatal visits, or no care at all, is associated with poor infant outcomes. Mothers with late or no prenatal care are more likely to have low birth weight or preterm infants, and are at increased risk for pregnancy-related mortality and complications of childbirth. Two measures are used to describe prenatal care. First trimester initiation looks only at when women begin prenatal care. Adequate prenatal care incorporates both when prenatal care began and total number of visits (APNCU Index; see Appendix A: Glossary, adequate prenatal care).

First Trimester Initiation

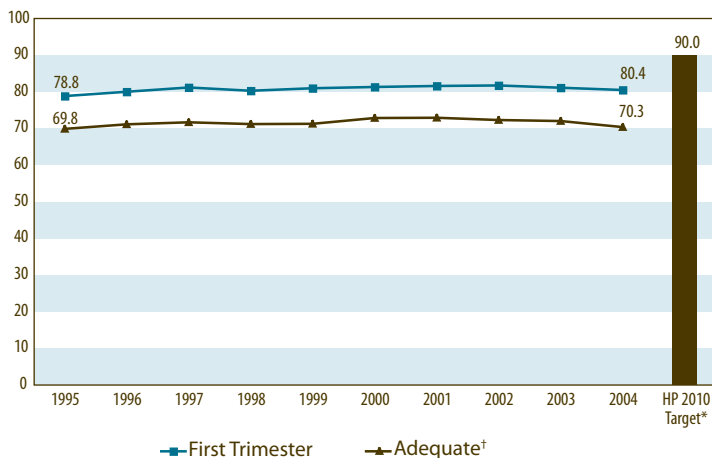
- In 2004, first trimester prenatal care initiation was 80.4 percent for Oregon, compared to 83.9 percent for the U.S.²³
- Oregon's rate of first trimester prenatal care initiation was significantly lower than the Healthy People 2010 target of 90 percent.
- Oregon's rate of first trimester prenatal care initiation had a small but significant increase between 1995 and 2002. Since that time, however, there was a small but significant decline.

Adequate Prenatal Care

- In 2004, adequate prenatal care was 70.3 percent for Oregon, compared to 75.2 percent for the U.S.²³
- Oregon's rate of adequate prenatal care was significantly lower than the Healthy People 2010 target of 90 percent.
- The percent of women in Oregon with adequate prenatal care increased significantly between 1995 and 2001, but has declined significantly since that time.
- In 2004, nearly one-third (29.7 percent) of Oregon women who had a baby received less than adequate prenatal care.

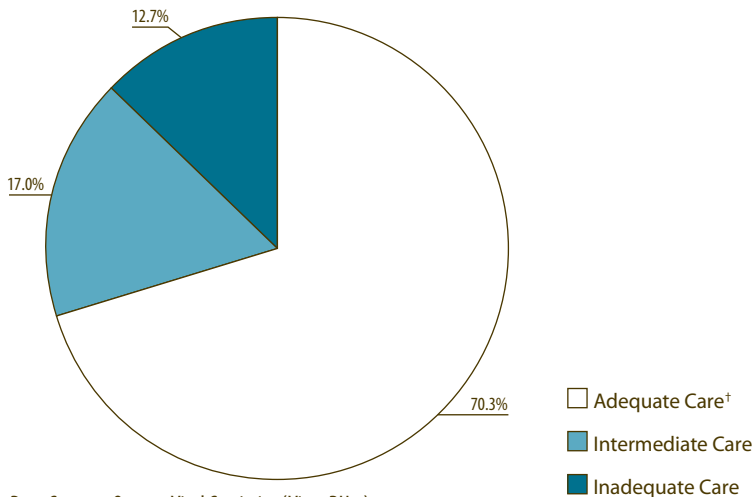
CHAPTER 3: PERINATAL HEALTH

First Trimester Initiation & Adequate Prenatal Care by Year, Oregon, 1995-2004



*The HP 2010 Target of 90% applies to both First Trimester and Adequate Prenatal Care.
Data Source: Oregon Vital Statistics (Vista PHw)

Adequacy of Prenatal Care, Oregon, 2004



Data Source: Oregon Vital Statistics (Vista PHw)

† Adequate prenatal care is a combination of Adequate and Intensive as defined by the Adequacy of Prenatal Care Utilization (APNCU) Index, also referred to as the Kotelchuck Index.

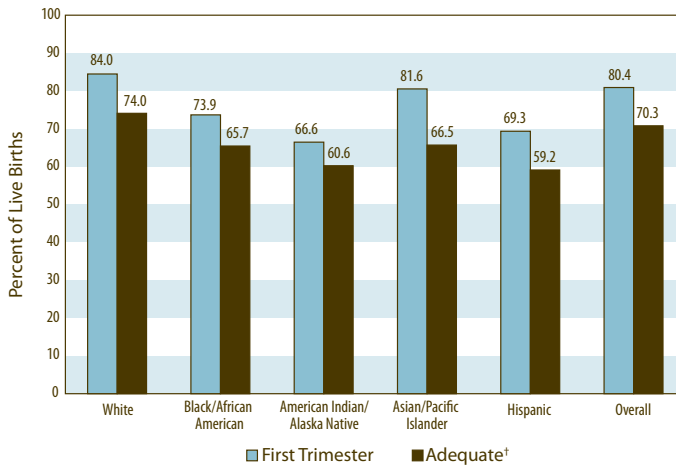
PRENATAL CARE (CONTINUED)

Women who are more likely to obtain late and/or inadequate prenatal care include: women with low socio-economic status, lower education, young maternal age, and minority women. These disparities are of particular concern given the increased prevalence of maternal complications and poor birth outcomes within these groups.²⁴

- In 2004, white mothers had the highest prevalence of both first trimester prenatal care initiation (84.0 percent) and adequate prenatal care (74.0 percent) of any race/ethnic group.
- In 2004, Hispanic and American Indian/Alaska Native mothers were less likely to receive either first trimester or adequate prenatal care compared to mothers of other race/ethnic groups.
- In 2004, approximately 40% of both Hispanic and American Indian/Alaska Native women did not receive adequate prenatal care.
- The percent of women receiving both first trimester and adequate prenatal care significantly increased with age. In 2004, first trimester prenatal care initiation was 44.9 percent higher among women 25 years or older compared to women less than 18 years of age and adequate prenatal care was 33.9 percent higher.

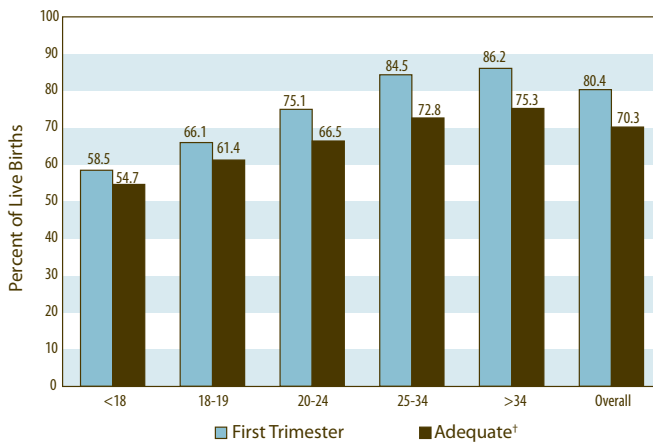
CHAPTER 3: PERINATAL HEALTH

First Trimester Initiation & Adequate Prenatal Care by Race/Ethnicity, Oregon, 2004



Data Source: Oregon Vital Statistics (Vista PHw)

First Trimester Initiation & Adequate Prenatal Care by Age, Oregon, 2004



Data Source: Oregon Vital Statistics (Vista PHw)

† Adequate prenatal care is a combination of Adequate and Intensive as defined by the Adequacy of Prenatal Care Utilization (APNCU) Index, also referred to as the Kotelchuck Index.

PAYMENT FOR PRENATAL CARE

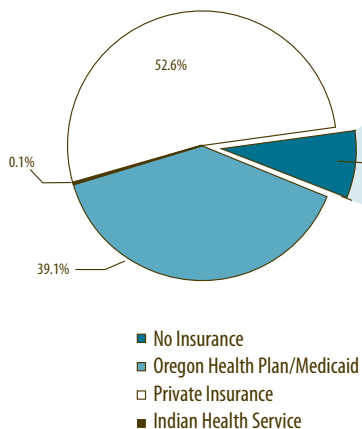
Women's access to prenatal services is affected by their insurance coverage for prenatal care. Women who have no insurance coverage when they become pregnant often have limited provider choice and experience delays in accessing prenatal care. In an attempt to improve access to early prenatal care, Oregon offers expanded Oregon Health Plan/Medicaid eligibility and expedited application processing for pregnant women. Women who remain uninsured throughout their pregnancies rely heavily on Oregon's network of safety net providers for their prenatal services.

- In 2004, 8.2 percent of women who gave birth in Oregon reported having no insurance for their prenatal care services; 39.1 percent used the Oregon Health Plan/Medicaid.
- More than one-fourth (28.7 percent) of Hispanic women had no insurance for prenatal care – 3.5 times higher than the state average.
- In 2004, Asian/Pacific Islander women were significantly more likely than any other race/ethnic group to pay for their prenatal care using private insurance.
- American Indian/Alaska Native and black/African American women were significantly more likely to use the Oregon Health Plan/Medicaid to pay for their prenatal care services than other race/ethnic groups – 66.6 and 64.9 percent, respectively.

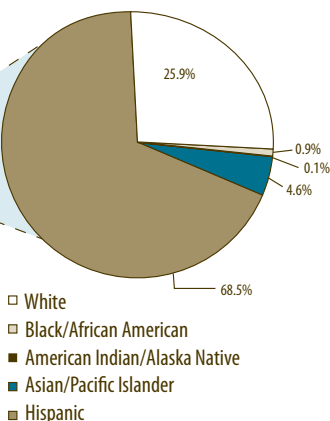
This analysis includes respondents who had a single source of payment for prenatal care – either Private Insurance, Oregon Health Plan/Medicaid, Indian Health Service (only available to American Indians/Alaska Natives), or no insurance. The “no insurance” category includes women who reported paying for their prenatal care from personal income. All respondents with multiple payment sources were excluded from analysis (24.6 percent).

CHAPTER 3: PERINATAL HEALTH

Method of Payment for Prenatal Care, Oregon, 2004

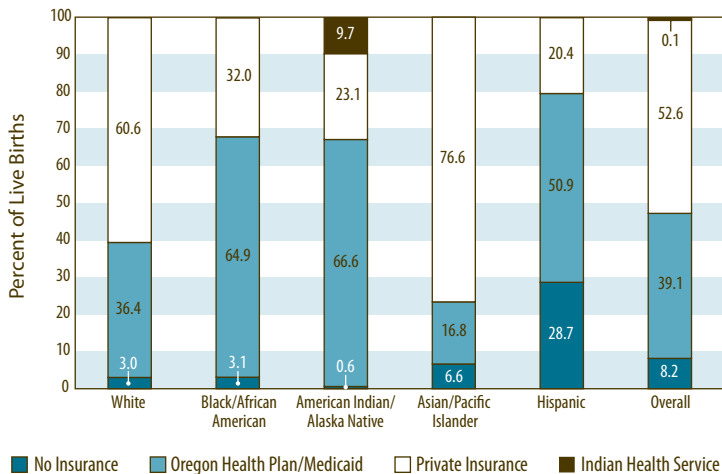


No Insurance for Prenatal Care by Race/Ethnicity, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

Method of Payment for Prenatal Care by Race/Ethnicity, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

TOBACCO USE: BEFORE & DURING PREGNANCY

Prenatal cigarette smoking is the greatest known risk factor for low birth weight births,^{25, 26} accounting for 20-30 percent of all low birth weight births in the United States. Smoking during pregnancy is associated with infant mortality, preterm delivery, miscarriages, sudden infant death syndrome (SIDS), and newborn respiratory problems.²⁶ According to the 2004 Surgeon General's Report, eliminating maternal smoking may lead to a 10 percent reduction in all sudden infant deaths and a 12 percent reduction in deaths from perinatal conditions.²⁶

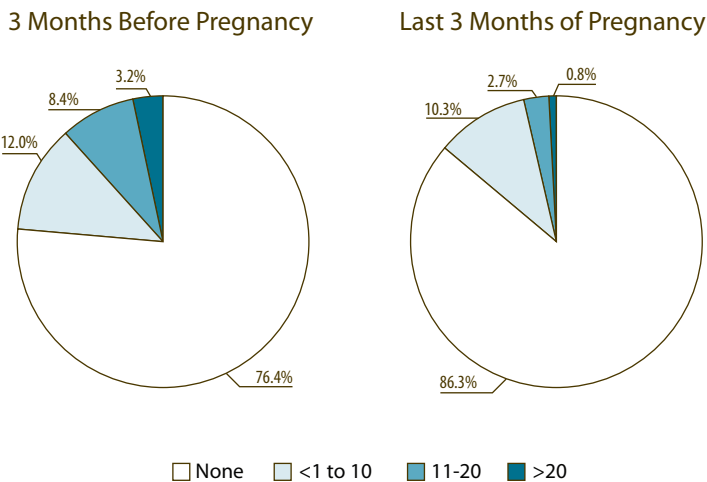
- In 2004, approximately one-fourth (23.6 percent) of Oregon births were to women who reported smoking prior to pregnancy. Only 13.7 percent reported smoking during the last three months of pregnancy.
- The prevalence of smoking before and during pregnancy among Oregon women (23.6 and 13.7 percent, respectively) was similar to U.S. women²⁷ (23.2 and 13.1 percent, respectively).
- American Indian/Alaska Native women had the highest prevalence of pre-pregnancy smoking (46.4 percent) – significantly higher than any other race/ethnic group.
- American Indian/Alaska Native women were also significantly more likely to smoke during pregnancy than any other race/ethnic group – more than one-fourth (28.4 percent) reported that they smoked during the last three months of pregnancy.

Healthy People 2010 Target

Prenatal cigarette smoking..... < 1%

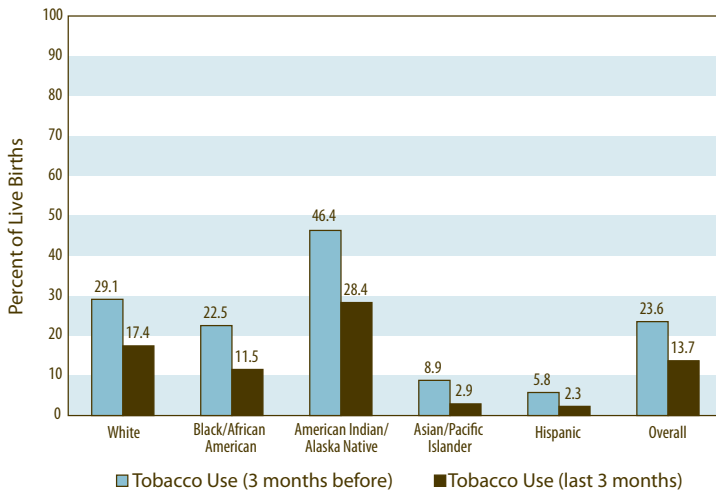
CHAPTER 3: PERINATAL HEALTH

Cigarettes Smoked per Day, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

Cigarette Smoking Before & During Pregnancy by Race/Ethnicity, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

TOBACCO USE: QUITTING & STAYING QUIT

Cigarette smoking kills an estimated 178,000 women per year in the U.S. Lung cancer, heart disease, and chronic lung disease are the leading smoking-related causes of death in women.²⁸

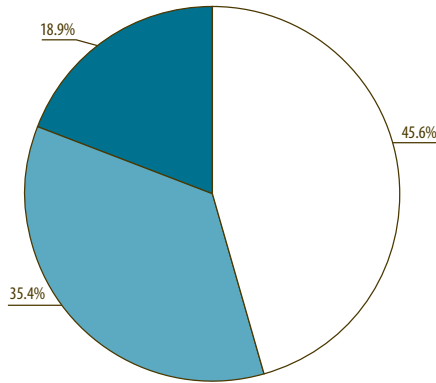
Women who quit smoking before or during pregnancy can substantially reduce risks to themselves and their infants. Infants who are exposed to secondhand smoke are more likely to die from sudden infant death syndrome (SIDS) than infants who are not exposed to cigarette smoke. These infants are also at increased risk of adverse health conditions such as bronchitis, pneumonia and ear infections.²⁹

- During 2002-2004, 45.6 percent of Oregon women who smoked prior to becoming pregnant quit smoking by the last three months of pregnancy; 35.4 percent reduced the number of cigarettes they smoked per day.
- Among the 45.6 percent of women who quit smoking during pregnancy, 60.7 percent reported staying quit when surveyed an average of 3-4 months after delivery.
- Older women who quit smoking during pregnancy were significantly more likely to stay quit after pregnancy than younger women. Although women 34 years or older were least likely to quit smoking during pregnancy (25.8 percent), those who did quit were most likely to stay quit after delivery (83.9 percent).
- Women with more than a high school education were significantly more likely to quit smoking during pregnancy (61.8 percent) and more likely to stay quit postpartum (76.9 percent) than women with less education.

Due to the small number of respondents who report smoking during pregnancy in Oregon, three years of data (2002-2004) were combined.

CHAPTER 3: PERINATAL HEALTH

Change in Smoking Behavior During Pregnancy Among Smokers, Oregon, 2002-2004

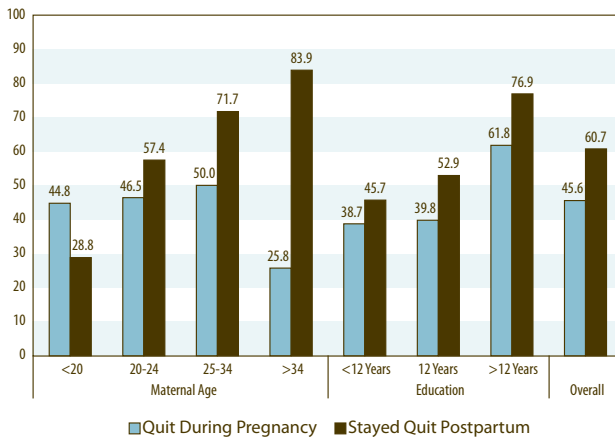


The reported change among women who smoked 3 months prior to pregnancy :

Quit
 Decreased
 No Change

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

Cigarette Smoking (quitting during & staying quit after pregnancy) by Age & Education, Oregon, 2002-2004



The denominator for "Quit During Pregnancy" is all respondents who smoked 3 months prior to pregnancy. The denominator for "Stayed Quit Postpartum" includes only those who quit smoking during pregnancy.

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

ALCOHOL USE BEFORE PREGNANCY

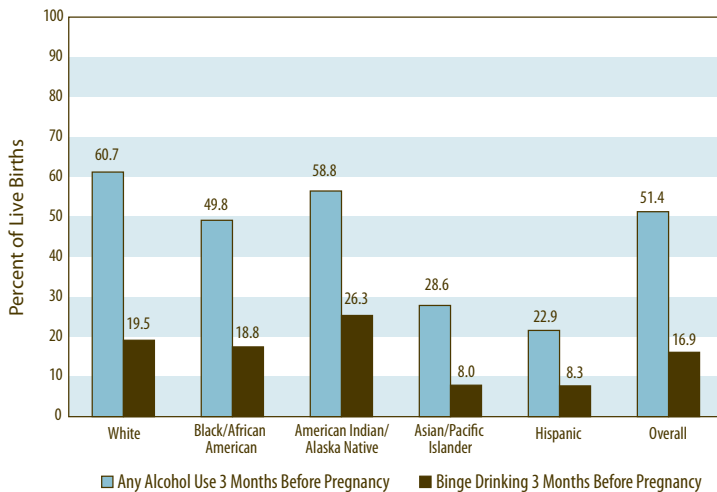
Alcohol use during pregnancy is one of the leading preventable causes of birth defects, mental retardation, neuro-developmental disorders and fetal alcohol syndrome (FAS).³⁰ Women may not know they are pregnant until after a critical period of early fetal development and the minimum quantity of alcohol required to produce such adverse fetal consequences is unknown. Therefore, the American Academy of Pediatrics and U.S. Surgeon General recommend abstinence from alcohol use for women who are pregnant or are planning to become pregnant.^{30, 31}

- In 2004, the overall prevalence of pre-pregnancy alcohol use was not significantly different in Oregon compared to the U.S.³² – 51.4 and 47.5 percent, respectively.
- In 2004, binge drinking* during the three months before pregnancy was highest among American Indian/Alaska Native, white, and black/African American women – 26.3, 19.5, and 18.8 percent, respectively. Women in these groups were more than twice as likely as Asian/Pacific Islander and Hispanic women to report binge drinking.
- Approximately half (51.4 percent) of all women reported using alcohol during the three months before pregnancy. There were no significant differences between maternal age groups.
- Women who had more than a high school education were twice as likely to use any alcohol during the three months before pregnancy as women who had less than a high school education – 63.7 and 27.7 percent, respectively.

*PRAMS 2004 (Phase 5 questionnaire) defines binge drinking as five or more alcoholic drinks in one sitting. Beginning in 2009 (Phase 6 questionnaire), the definition of binge drinking will change to four or more drinks in one sitting.

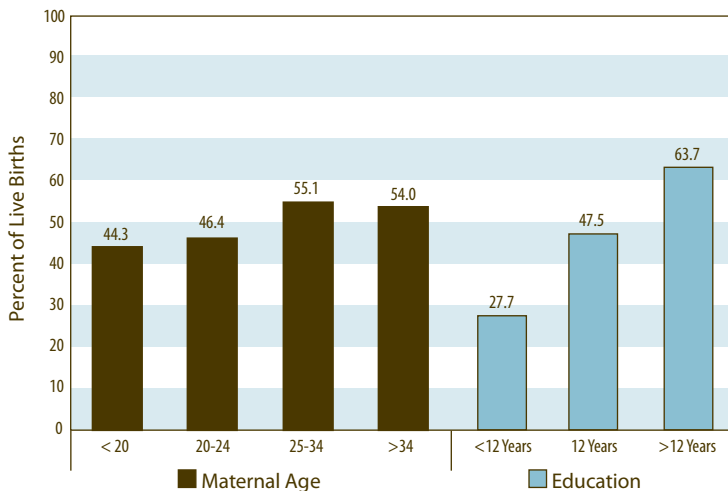
CHAPTER 3: PERINATAL HEALTH

Alcohol Use Before Pregnancy by Race/Ethnicity, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

Any Alcohol Use Before Pregnancy by Age & Education, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

ALCOHOL USE DURING PREGNANCY

Alcohol use during pregnancy is linked to low birth weight, growth abnormalities, developmental delays, fetal alcohol syndrome (FAS) and fetal and infant death.^{33,34}

- In 2004, the overall prevalence of alcohol use during the last three months of pregnancy was significantly higher in Oregon compared to the U.S.³⁵ – 8.1 and 5.6 percent, respectively.
- While 8.1 percent of Oregon women in 2004 reported alcohol use during pregnancy, less than 1 percent (0.3 percent) reported binge drinking during pregnancy*.
- White women were significantly more likely to report alcohol use during pregnancy than Asian/Pacific Islander and Hispanic women – 9.5 versus 4.4 percent, respectively. Differences between other race/ethnic groups were not significant.
- Although white women were more than twice as likely as Hispanic women to drink during pregnancy, they were significantly less likely to binge drink.
- Women 25 years or older were at least twice as likely to use alcohol during pregnancy as women who were 24 years or younger.
- Women who had more than a high school education were six times more likely to use alcohol during pregnancy than women who had less than a high school education – 11.9 versus 1.9 percent, respectively.

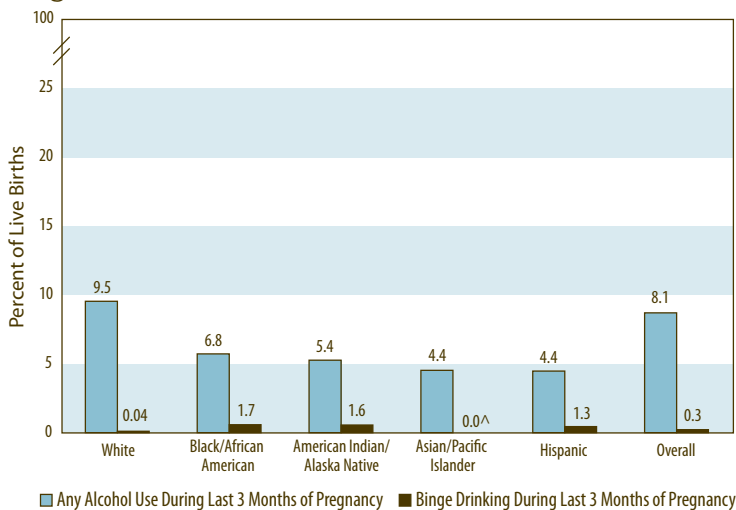
Healthy People 2010 Target

Prenatal Alcohol Use < 6%
Prenatal Binge Drinking 0%

*PRAMS 2004 (Phase 5 questionnaire) defines binge drinking as five or more alcoholic drinks in one sitting. Beginning in 2009 (Phase 6 questionnaire), the definition of binge drinking will change to four or more drinks in one sitting.

CHAPTER 3: PERINATAL HEALTH

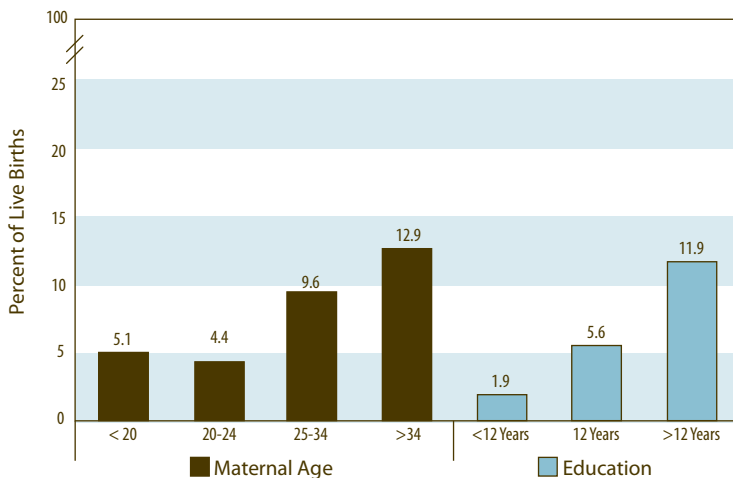
Alcohol Use During Pregnancy by Race/Ethnicity, Oregon, 2004



[^] No respondents reported this indicator.

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

Any Alcohol Use During Pregnancy (last 3 months) by Age & Education, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

UNINTENDED BIRTHS

Pregnancy is considered to be unintended when the woman did not want to be pregnant (unwanted) or desired a pregnancy later (mistimed). A pregnancy is intended when the woman wanted to be pregnant at that time or sooner. For the information presented here, an unintended birth is an unintended pregnancy that results in a live-born infant.

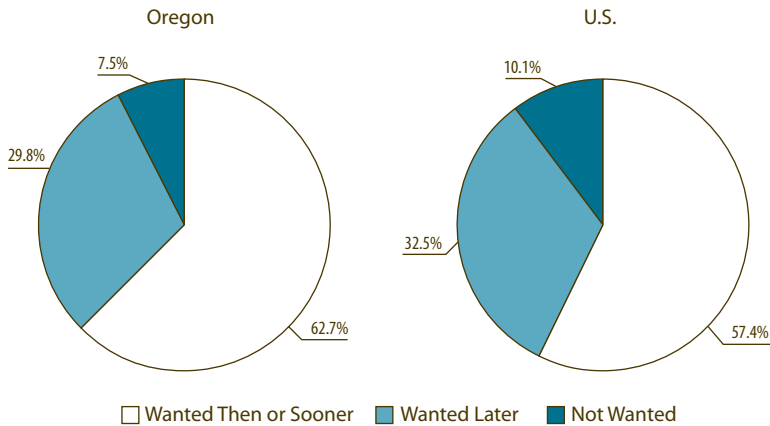
Compared to women with intended pregnancies, women with unintended pregnancies are more likely to: find out they are pregnant later; initiate prenatal care later; have inadequate birth-spacing; give birth earlier or later than the prime childbearing years; have inadequate folic acid intake; and use alcohol and tobacco early in the pregnancy.³⁶

- Oregon women were significantly less likely to have an unintended birth* compared to women in the U.S.³⁷ – 37.3 versus 42.6 percent, respectively.
- In 2004, more than one-third (37.3 percent) of all Oregon births were unintended – 29.8 percent were mistimed and 7.5 percent were not wanted.
- In 2004, Oregon women less than 20 years of age were significantly more likely to have an unintended birth compared to all other age groups.

*Unintended births” combines the categories “wanted later” and “not wanted”.

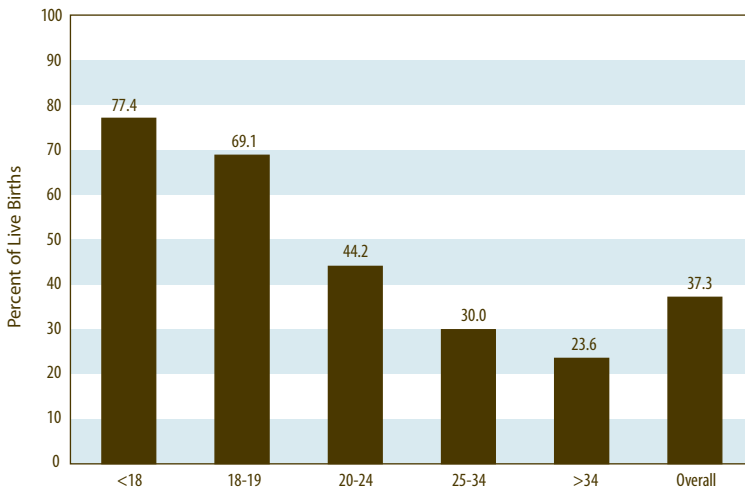
CHAPTER 3: PERINATAL HEALTH

Feeling About Pregnancy Among Women With a Live Birth, Oregon, 2004 & U.S., 2002



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS); aggregate data from 27 states participating in PRAMS during 2002 ³⁷

Unintended* Births by Age, Oregon, 2004



*Unintended = Wanted Later + Not Wanted

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

CHAPTER 4: MATERNAL & INFANT HEALTH



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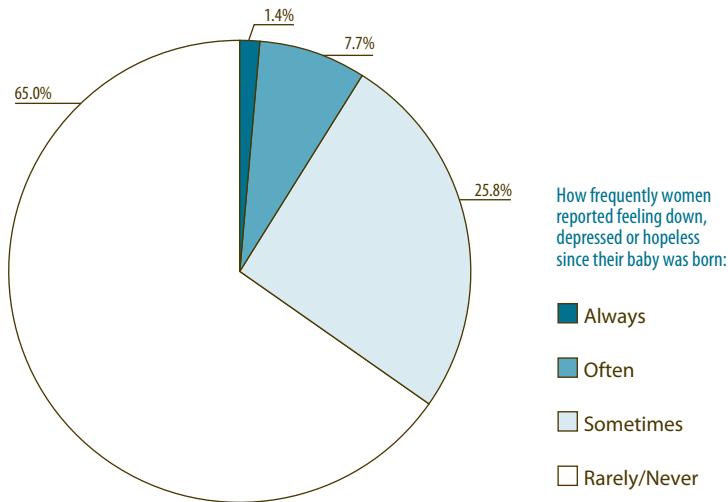
POSTPARTUM DEPRESSIVE SYMPTOMS*

Postpartum depression adversely affects infants, children, and families. Postpartum depression can be disabling for a new mother and can impact her ability to adequately care for her infant. Any woman who is pregnant, has had a baby within the past few months, miscarried, or recently weaned a child from breastfeeding can develop postpartum depression.³⁸

- In 2004, 9.1 percent of mothers of newborns in Oregon reported that they were always or often depressed since their baby was born. In addition, more than one-quarter (25.8 percent) reported that they were sometimes depressed.
- American Indian/Alaska Native and black/African American women were significantly more likely than women of other race/ethnic groups to report that they were always or often depressed since the birth of their baby. Nearly 1 in 6 mothers of newborns who were American Indian/Alaska Native or black/African American reported that they were always or often depressed.
- Stress is significantly associated with self-reported severe depression among mothers of newborns.³⁹ Common maternal stressors in the perinatal period among Oregon PRAMS respondents (2004) were: moving to a new address (43.5 percent), problems paying bills (26.1 percent), and arguing with husband/partner more than usual (22.1 percent).

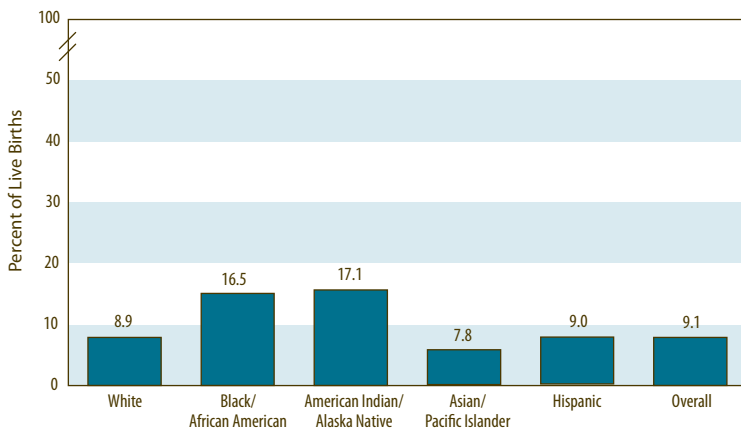
*The Pregnancy Risk Assessment Monitoring System (PRAMS) provides data for postpartum depressive symptoms, which is not a clinical diagnosis of postpartum depression. PRAMS survey responses were gathered an average of 3-4 months after delivery.

Postpartum Depressive Symptoms, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

Postpartum Depressive Symptoms (Always/Often) by Race/Ethnicity, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

BREASTFEEDING*

Breast milk is widely acknowledged to be the most complete form of nutrition for infants; its benefits for infants' health, growth, immunity, and development are well documented.⁴⁰ The American Academy of Pediatrics (AAP) recommends breastfeeding for reduced risk of infection in infants and for the prevention of childhood obesity.⁴¹ The AAP recommends exclusive breastfeeding for the first six months of life, with continued breastfeeding supplemented with appropriate solid foods at least until the infant's first birthday.⁴²

- Oregon has one of the highest rates of breastfeeding initiation in the U.S. In 2004, Oregon was one of 14 states that reached the Healthy People 2010 (HP 2010) target of at least 75 percent of mothers initiating breastfeeding. Furthermore, Oregon was one of two states that achieved three out of the four HP 2010 breastfeeding goals.⁴³
- In 2004, breastfeeding initiation in Oregon was significantly higher than the U.S.⁴⁴ – 90.4 percent compared to 70.3 percent, respectively.
- Although black/African American women had the lowest breastfeeding initiation of any race/ethnic group in Oregon (86.3 percent), they still achieved the HP 2010 target of 75 percent and were significantly more likely to initiate breastfeeding compared to U.S. women⁴⁴ as a whole.
- Nearly half (49.1 percent) of Oregon women in 2004 reported that they exclusively breastfed their infants for at least 8 weeks.
- White women were significantly more likely than black/African American women to report exclusive breastfeeding at 8 weeks postpartum – 51.6 percent compared to 40.5 percent, respectively. There were no significant differences between any other race/ethnic groups.

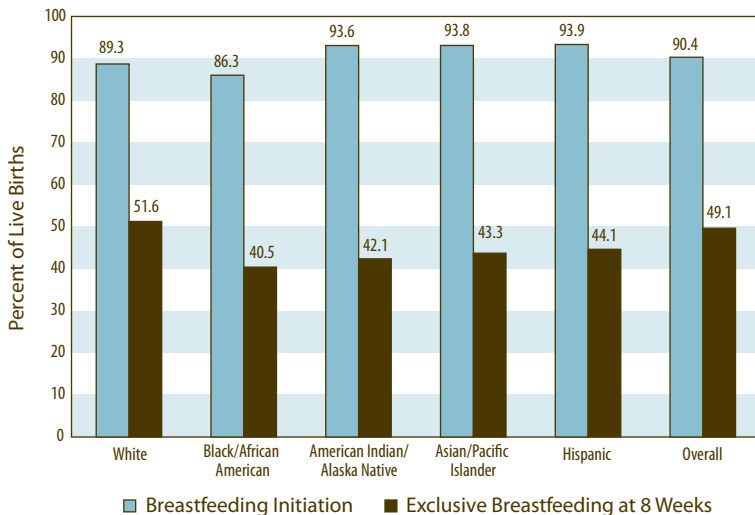
*The standard for measuring exclusive breastfeeding is at 6 months postpartum. However, the use of PRAMS data (which provides Oregon-specific race, age, and education sub-population rates) limited us to presenting exclusive breastfeeding rates at 8 weeks postpartum.

Breastfeeding Rates and Healthy People 2010 Goals, Oregon & U.S., 2004

Indicator	Oregon 2004	U.S. 2004	Healthy People 2010 Goal
Initiating breastfeeding	90.4%*	70.3%	75%
Any breastfeeding at 6 months	53.0%	36.2%	50%
Any breastfeeding at 12 months	26.2%	17.8%	25%
Exclusive breastfeeding at 6 months	22.3%	14.1%	25%

Data Source: 2004 National Immunization Survey; *Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

Breastfeeding Initiation & Exclusive Breastfeeding at 8 Weeks by Race/Ethnicity, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

BREASTFEEDING (CONTINUED)

The American Academy of Pediatrics recommends exclusive breastfeeding for the first six months of life, with continued breastfeeding supplemented with appropriate solid foods at least until the infant's first birthday.⁴⁵ The standard for measuring exclusive breastfeeding is at 6 months postpartum. However, the use of PRAMS data (which provides Oregon-specific race, age, and education sub-population rates) limited us to presenting exclusive breastfeeding rates at 8 weeks postpartum.

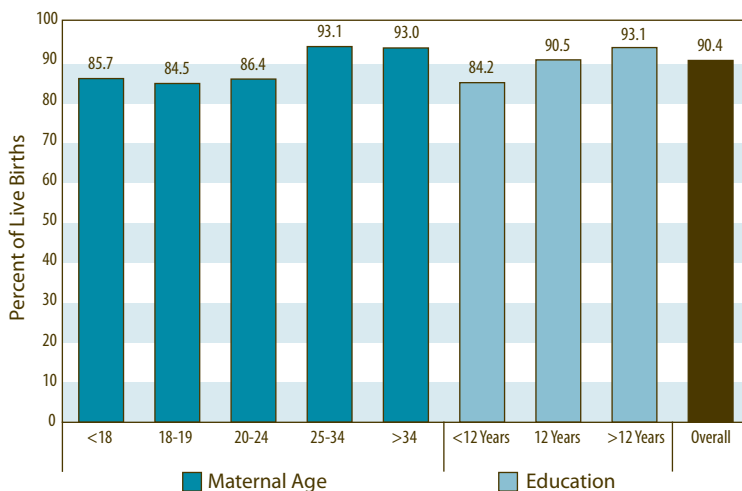
Breastfeeding Initiation

- Breastfeeding initiation rates were similar among all maternal age groups. Differences between age groups were not statistically significant.
- Although women with at least some college education had the highest prevalence of breastfeeding initiation (93.1 percent), the differences between education levels were not statistically significant.

Exclusive Breastfeeding at 8 Weeks

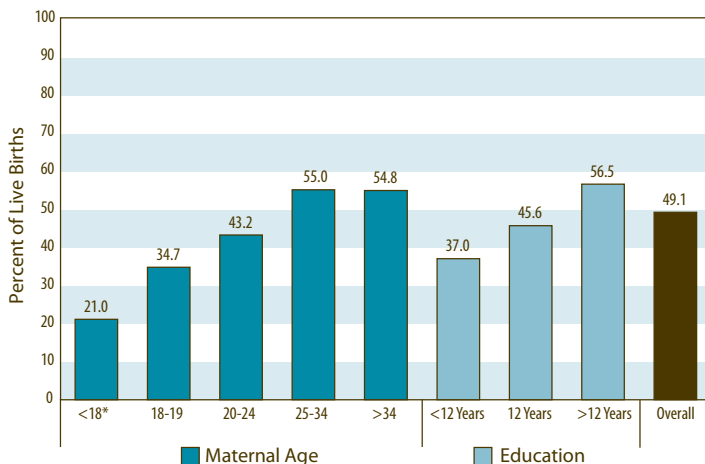
- Older mothers were significantly more likely to exclusively breastfeed for at least 8 weeks than younger women. Oregon women who were 25 years or older were nearly twice as likely as women less than 20 years old to exclusively breastfeed for at least 8 weeks.
- Oregon women with at least some college education had the highest prevalence of exclusive breastfeeding for at least 8 weeks (56.5 percent) – significantly higher than women with less than a high school education (37.0 percent).

Breastfeeding Initiation by Age & Education, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

Exclusive Breastfeeding at 8 weeks by Age & Education, Oregon, 2004



* Data may be unreliable. Number of respondents was at least 30 but less than 60.
Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

INFANT SLEEP POSITION

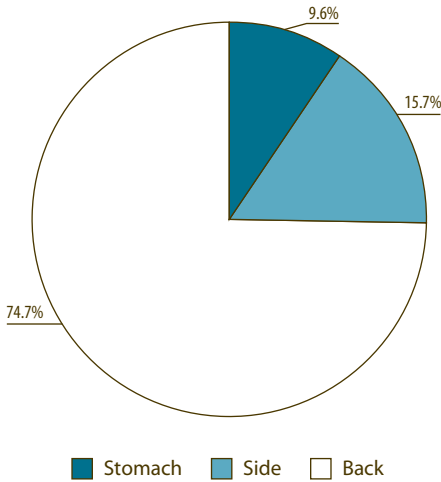
Placing infants to sleep on their backs reduces the risk of Sudden Infant Death Syndrome (SIDS) – one of the leading causes of death to infants.⁴⁶ In Oregon, SIDS is the number one cause of death to older infants (between 28 days and up to 1 year), accounting for nearly 30 percent of all deaths in this age group during 2002-2004.⁴⁷ The American Academy of Pediatrics recommends that healthy infants younger than 6 months of age be placed to sleep on their back.⁴⁸

- In 2004, Oregon mothers were significantly more likely than other U.S.⁴⁹ mothers to place their infants to sleep on their backs – 74.7 versus 65.1 percent, respectively. Furthermore, Oregon achieved the Healthy People 2010 target of having at least 70 percent of infants put to sleep on their backs.
- Although Oregon mothers were more likely to place their infants to sleep on their backs than any other position, more than a quarter (25.3 percent) of Oregon infants were put to sleep in the higher risk stomach or side positions.
- Stomach sleeping puts infants at highest risk for SIDS. Approximately 10 percent of Oregon infants were put to sleep on their stomachs.
- Black/African American women had the highest prevalence of placing their infants to sleep on their stomachs (19.8 percent) and were significantly more likely than any other race/ethnic group to place their infants in this sleep position.
- White women had the second highest prevalence of placing their infants to sleep on their stomachs (11.6 percent).

The PRAMS survey asks respondents to indicate how they most often lay their baby down to sleep – side, back or stomach. Respondents who indicated more than one of these positions were excluded from this analysis (3.3 percent).

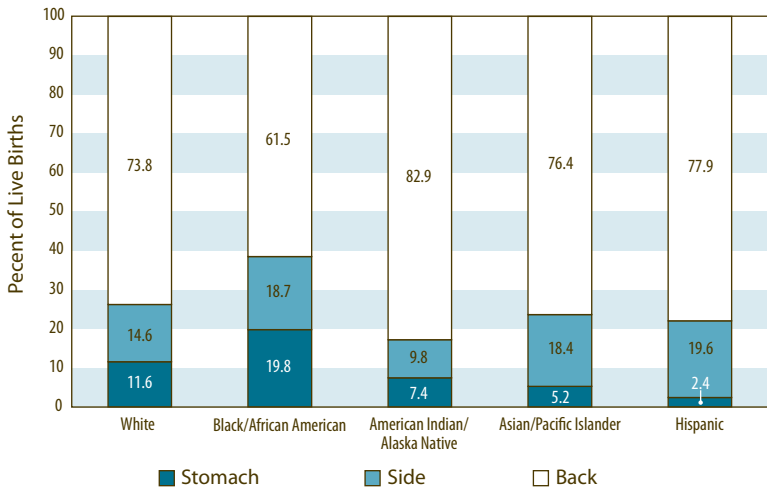
CHAPTER 4: MATERNAL & INFANT HEALTH

Infant Sleep Position, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

Infant Sleep Position by Race/Ethnicity, Oregon, 2004



Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS)

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APPENDIX A: GLOSSARY

Adequate Prenatal Care: This measure is calculated using the Kotelchuck Index, also known as the Adequacy of Prenatal Care Utilization (APNCU) Index. It assesses prenatal care based upon the following birth certificate information: trimester of initiation, number of prenatal visits, and gestational age of infant at birth. Adequate prenatal care is defined as prenatal care that is started by month 4 and when 80-109% of expected visits were received.

Age-specific Birth Rate: The number of births that occur within a specified age group per 1,000 females within that specified age group. For example, the birth rate for women ages 18-19 years is the number of live births to Oregon females ages 18-19 years per 1,000 Oregon females ages 18-19 years.

American Indian/Alaska Native: This race category includes American Indians and Alaska Natives as defined by Oregon Vital Statistics and the National Center for Health Statistics.

Asian/Pacific Islander: This race category includes Chinese, Japanese, Hawaiian, Filipino, or other Asian or Pacific Islander as defined by National Center for Health Statistics.

Binge Drinking: PRAMS 2004 (Phase 5 questionnaire) data used in this publications defines binge drinking as five or more alcoholic drinks in one sitting. Beginning in 2009 (Phase 6 questionnaire), the definition of binge drinking will change to four or more drinks in one sitting.

Body Mass Index (BMI), pre-pregnancy: Pre-pregnancy Body Mass Index (BMI), the ratio of a person's height to weight before the woman became pregnant, is calculated as weight in kilograms divided by height in meters squared. PRAMS calculates BMI from self-reported height and weight just before pregnancy.

APPENDIX A: GLOSSARY

Body Mass Index (BMI), pre-pregnancy (cont.):The BMI cut-off values specified by the Institute of Medicine (IOM) in 1990²² are commonly used to classify women as underweight, normal weight, overweight, or obese prior to pregnancy:

Underweight BMI < 19.8 kg/m²

Normal weight . . . 19.8 ≤ BMI ≤ 26.0 kg/m²

Overweight 26.0 < BMI ≤ 29.0 kg/m²

Obese BMI > 29.0 kg/m²

Childbearing Age: Women who are ages 15 through 44 years.

Crude Birth Rate: The number of births that occur per 1,000 total population.

Exclusive Breastfeeding: For the purposes of this publication, exclusive breastfeeding is defined as feeding an infant only breast milk – no formula, no baby food, no juice, no cow’s milk, no water, no sugar water, nor anything else besides breast milk.

First Trimester Initiation of Prenatal Care: Prenatal care that begins during the first three months of pregnancy.

Gestational Age, calculated: Age of the fetus (in weeks) measured from the first day of the woman’s last menstrual period to the date of birth.

Gestational Age, estimated: Age of the fetus (in weeks) is determined by physician’s estimate at time of birth.

Healthy People 2010 (HP 2010): HP 2010 is a statement of national health objectives designed to identify the most preventable threats to health and to establish national goals to reduce these threats. For more information visit www.healthypeople.gov.

APPENDIX A: GLOSSARY

Infant: A newborn from birth up to one year of age.

Infant Mortality: Death of an infant from birth up to one year of age.

Kotelchuck Index: See Adequate Prenatal Care.

Low Birth Weight (LBW): Infant birth weight less than 2,500 grams (5 pounds, 8 ounces).

Moderately Low Birth Weight (MLBW): Infant birth weight between 1,500 and 2,499 grams (between 3 pounds, 4 ounces and 5 pounds, 8 ounces).

Moderately Preterm Birth: Birth occurring between 32-36 weeks of gestation. Estimated gestational age was used to determine the number of weeks gestation in this publication.

Neonatal Mortality: Death of an infant occurring during the neonatal period.

Neonatal Period: Period of time from birth up to 28 days after birth.

Normal Weight: See Body Mass Index.

Obese/Obesity: See Body Mass Index.

Oregon Benchmarks: Used to measure and assess Oregon's progress toward the goals developed through Oregon Shines – a collaborative effort between policy makers and the public to retain and improve Oregon's quality of life. Currently there are 91 Oregon Benchmarks. For more information, visit the Oregon Progress Board Web site at www.oregon.gov/DAS/OPB/.

Oregon Births: Live births that occurred in Oregon to women who listed Oregon as their place of residence on the birth certificate.

APPENDIX A: GLOSSARY

Oregon Pregnancy Risk Assessment Monitoring System (PRAMS): Oregon PRAMS is a population-based survey of Oregon resident women who have recently delivered a live-born infant. PRAMS was developed by the Centers for Disease Control and Prevention (CDC) to gather information on the health risk behaviors and circumstances of pregnant and postpartum women. The average survey response time by PRAMS respondents is when the baby is, on average, 3-4 months of age. Oregon's PRAMS Web site: www.oregon.gov/DHS/ph/pnh/prams/.

Oregon Resident Live Births: See "Oregon Births".

Overweight: See Body Mass Index.

Perinatal Period: Period of time surrounding pregnancy. For the purposes of this publication, the perinatal period is defined as conception through one year after birth.

Postneonatal Mortality: Death of an infant occurring during the postneonatal period.

Postneonatal Period: Period of time from 28 days after birth up to 1 year of age.

Pregnancy Risk Assessment Monitoring System (PRAMS): See Oregon Pregnancy Risk Assessment Monitoring System (PRAMS).

Prenatal Care: Health care services provided to a woman between conception and delivery that are pregnancy-related.

Preterm Birth: Birth occurring at less than 37 weeks gestation. Estimated gestational age was used to determine the number of weeks gestation in this publication.

Singleton: A singleton is a baby that is not a twin or other multiple birth.

APPENDIX A: GLOSSARY

Sudden Infant Death Syndrome (SIDS): Sudden, unexplained death of an infant.

Underweight: See Body Mass Index.

Unintended Birth: A birth in which the woman did not ever want to be pregnant (unwanted) or desired a later pregnancy (mistimed).

Very Low Birth Weight (VLBW): Infant birth weight less than 1,500 grams (3 pounds, 4 ounces).

Very Preterm Birth: Birth occurring at less than 32 weeks of gestation. Estimated gestational age was used to determine the number of weeks gestation in this publication.

Chapter 1: Live Birth Demographics

Crude Birth Rate

Crude birth rate is expressed as the number of live births in the total population per 1,000. Where the crude birth rate is presented for each race/ethnicity group, the number of births (numerator) and population (denominator) are limited to only those within the specified race/ethnicity group.

Numerator: Number of Oregon resident live births.

Denominator: Total Oregon population.

Expressed as: Rate per 1,000

Data Source: Oregon Vital Statistics, 1995-2004.

Age-specific Birth Rate

Age-specific birth rate is the number of live births within a specified age group per 1,000 females within that specified age group. For example, the birth rate for women ages 18-19 years is the number of live births to Oregon females ages 18-19 years (numerator) per 1,000 Oregon females ages 18-19 years (denominator).

Numerator: Number of live births to Oregon females within a specified age group.

Denominator: Total number of Oregon females within a specified age group.

Expressed as: Rate per 1,000

Data Source: Oregon Vital Statistics, 1995-2004.

Chapter 2: Birth Outcomes

Preterm Births

The percent of infants born at less than 37 weeks gestation. This measure is based on an estimated gestational age, which is determined by physician's estimate at time of birth. Infants with unknown gestational age were excluded from the analysis.

Numerator: Number of infants born at less than 37 weeks gestation.

Denominator: Total number of Oregon resident live births.

Expressed as: Percent

Data Source: Oregon Vital Statistics, 1995-2004.

APPENDIX B: INDICATOR DEFINITIONS

Moderately Preterm Births

The percent of infants born between 32-36 weeks gestation. This measure is based on an estimated gestational age, which is determined by physician's estimate at time of birth. Infants with unknown gestational age were excluded from the analysis.

Numerator: Number of infants born between 32-36 weeks gestation.

Denominator: Total number of Oregon resident live births.

Expressed as: Percent

Data Source: Oregon Vital Statistics, 1995-2004.

Very Preterm Births

The percent of infants born at less than 32 weeks gestation. This measure is based on an estimated gestational age, which is determined by physician's estimate at time of birth. Infants with unknown gestational age were excluded from the analysis.

Numerator: Number of infants born at less than 32 weeks gestation.

Denominator: Total number of Oregon resident live births.

Expressed as: Percent

Data Source: Oregon Vital Statistics, 1995-2004.

Low Birth Weight (LBW)

The percent of infants born weighing less than 2,500 grams (5 pounds, 8 ounces). Infants with unknown birth weight were excluded from the analysis.

Numerator: Number of infants born weighing less than 2,500 grams.

Denominator: Total number of Oregon resident live births.

Expressed as: Percent

Data Source: Oregon Vital Statistics, 1995-2004.

Moderately Low Birth Weight (MLBW)

The percent of infants born weighing between 1,500-2,499 grams (3 pounds, 4 ounces up to 5 pounds, 8 ounces). Infants with unknown birth weight were excluded from the analysis.

Numerator: Number of infants born weighing between 1,500-2,499 grams.

Denominator: Total number of Oregon resident live births.

Expressed as: Percent

Data Source: Oregon Vital Statistics, 1995-2004.

Very Low Birth Weight (VLBW)

The percent of infants born weighing less than 1,500 grams (3 pounds, 4 ounces). Infants with unknown birth weight were excluded from the analysis.

Numerator: Number of infants born weighing less than 1,500 grams.

Denominator: Total number of Oregon resident live births.

Expressed as: Percent

Data Source: Oregon Vital Statistics, 1995-2004.

Infant Mortality

Infant mortality is expressed as the number of deaths to infants less than one year of age per 1,000 live births. All infant mortality rates were calculated using the death year cohort method. Due to the small number of events experienced in Oregon, infant mortality rates are presented in three-year moving averages.

Numerator: Number of deaths to infants less than one year of age.

Denominator: Total number of Oregon resident live births.

Expressed as: Rate per 1,000

Data Source: Oregon Vital Statistics, 1993-2004.

Neonatal Mortality

Neonatal mortality is expressed as the number of deaths to infants from birth up to 28 days of age per 1,000 live births. All infant mortality rates were calculated using the death year cohort method. Due to the small number of events experienced in Oregon, neonatal mortality rates are presented in three-year moving averages.

Numerator: Number of deaths to infants from birth up to 28 days of age.

Denominator: Total number of Oregon resident live births.

Expressed as: Rate per 1,000

Data Source: Oregon Vital Statistics, 1993-2004.

APPENDIX B: INDICATOR DEFINITIONS

Postneonatal Mortality

Postneonatal mortality is expressed as the number of deaths to infants from 28 days to less than one year of age per 1,000 live births. All infant mortality rates were calculated using the death year cohort method. Due to the small number of events experienced in Oregon, postneonatal mortality rates are presented in three-year moving averages.

Numerator: Number of deaths to infants from 28 days to less than one year of age.

Denominator: Total number of Oregon resident live births.

Expressed as: Rate per 1,000

Data Source: Oregon Vital Statistics, 1993-2004.

Chapter 3: Perinatal Health

Pre-pregnancy Vitamin Use (Regular Pre-pregnancy Vitamin Use)

Percent of women who reported they took a multivitamin or prenatal vitamin at least 4 times per week during the month before they became pregnant. Respondents with a missing or unknown response were excluded from the analysis.

Numerator: Number of women who reported they took a multivitamin or prenatal vitamin at least 4 times per week during the month before they became pregnant.

Denominator: Total number of Oregon resident women who delivered a live-born infant.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

Pre-pregnancy Overweight/Obesity

Percent of women whose body mass index (BMI) (as calculated from self-reported weight and height just before pregnancy) was $> 26.0 \text{ kg/m}^2$, among women whose BMI can be calculated (i.e., respondents with a missing or unknown response for either height or weight were excluded from the analysis).

Numerator: Number of women whose pre-pregnancy body mass index was $> 26.0 \text{ kg/m}^2$.

Denominator: Total number of Oregon resident women who delivered a live-born infant.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

First Trimester Initiation of Prenatal Care

The percent of women initiating prenatal care in the first trimester. Births with unknown month at which prenatal care was initiated were excluded from the analysis.

Numerator: Number of women initiating prenatal care in the first trimester.

Denominator: Total number of Oregon resident live births.

Expressed as: Percent

Data Source: Oregon Vital Statistics, 1995-2004.

Adequate Prenatal Care

Percent of women receiving at least adequate prenatal care. This measure is calculated using the Adequate Prenatal Care Utilization (APNCU) Index. It assesses prenatal care based upon the following birth certificate information: trimester of entry into prenatal care, number of prenatal visits, and gestational age of infant at birth. Births for which the APNCU Index could not be calculated were excluded from the analysis.

Numerator: Number of women receiving at least adequate prenatal care as defined by APNCU Index.

Denominator: Total number of Oregon resident live births.

Expressed as: Percent

Data Source: Oregon Vital Statistics, 1995-2004.

Method of Payment for Prenatal Care

Percent of women who indicated a single-source of payment for their prenatal care services by type. Possible methods were 1) no insurance [paid for prenatal care with their own income], 2) private insurance, 3) Oregon Health Plan/Medicaid, or 4) Indian Health Service. Women who indicated 'Other' or who had multiple methods of payment for prenatal care services were excluded from this analysis.

Numerator: Number of women who reported a single-source of payment for their prenatal care services by payment source type.

Denominator: Total number of Oregon resident women who delivered a live-born infant and indicated a single-source of payment for prenatal care services.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

APPENDIX B: INDICATOR DEFINITIONS

Cigarette Smoking Before Pregnancy (Pre-pregnancy Tobacco Use)

Percent of women who smoked cigarettes during the 3 months prior to pregnancy. Respondents with a missing or unknown response were excluded from the analysis.

Numerator: Number of women who reported they smoked cigarettes during the 3 months prior to pregnancy.

Denominator: Total number of Oregon resident women who delivered a live-born infant.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

Cigarette Smoking During Pregnancy (Prenatal Tobacco Use)

Percent of women who smoked cigarettes during the last 3 months of their pregnancy. Respondents with a missing or unknown response were excluded from the analysis.

Numerator: Number of women who reported they smoked cigarettes during the last 3 months of their pregnancy.

Denominator: Total number of Oregon resident women who delivered a live-born infant.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

Cigarette Smoking: Quitting During Pregnancy

Percent of women who smoked cigarettes during the 3 months prior to their pregnancy and who did not smoke during the last 3 months of their pregnancy. Respondents with a missing or unknown response were excluded from the analysis. Due to the small number of respondents who report smoking during pregnancy in Oregon, three years of data were combined in order to provide more reliable estimates.

Numerator: Number of women who reported they smoked cigarettes during the 3 months prior to their pregnancy and who did not smoke cigarettes during the last 3 months of their pregnancy.

Denominator: Total number of Oregon resident women who delivered a live-born infant who smoked 3 months prior to their pregnancy.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2002-2004.

Cigarette Smoking: Staying Quit After Pregnancy

Percent of women who quit smoking cigarettes during their pregnancy and who responded they were still not smoking at the time of the survey (average of 3-4 months after delivery). Respondents with a missing or unknown response were excluded from the analysis. Due to the small number of respondents who report smoking during pregnancy in Oregon, three years of data were combined in order to provide more reliable estimates.

Numerator: Number of women who reported they quit smoking cigarettes during their pregnancy and who responded they were still not smoking at the time of the survey (average of 3-4 months after delivery).

Denominator: Total number of Oregon resident women who delivered a live-born infant who quit smoking by the last 3 months of pregnancy.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2002-2004.

Alcohol Use Before Pregnancy – Any Amount

(Pre-pregnancy Alcohol Use – Any Amount)

Percent of women who consumed any alcohol during the 3 months prior to pregnancy. Respondents with a missing or unknown response were excluded from the analysis.

Numerator: Number of women who reported they drank any alcohol during the 3 months prior to pregnancy.

Denominator: Total number of Oregon resident women who delivered a live-born infant.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

APPENDIX B: INDICATOR DEFINITIONS

Alcohol Use Before Pregnancy – Binge

(Pre-pregnancy Alcohol Use - Binge)

Percent of women who consumed 5 or more alcoholic drinks in one sitting during the 3 months prior to pregnancy. Respondents with a missing or unknown response were excluded from the analysis.

Numerator: Number of women who reported they drank 5 alcoholic drinks or more in one sitting during the 3 months prior to pregnancy.

Denominator: Total number of Oregon resident women who delivered a live-born infant.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

Alcohol Use During Pregnancy – Any Amount

(Prenatal Alcohol Use – Any Amount)

Percent of women who consumed any alcohol during the last 3 months of their pregnancy. Respondents with a missing or unknown response were excluded from the analysis.

Numerator: Number of women who reported they drank any alcohol during the last 3 months of their pregnancy.

Denominator: Total number of Oregon resident women who delivered a live-born infant.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

Alcohol Use During Pregnancy – Binge

(Prenatal Alcohol Use – Binge)

Percent of women who consumed 5 or more alcoholic drinks in one sitting during the last 3 months of their pregnancy. Respondents with a missing or unknown response were excluded from the analysis.

Numerator: Number of women who reported they drank 5 alcoholic drinks or more in one sitting during the last 3 months of their pregnancy.

Denominator: Total number of Oregon resident women who delivered a live-born infant.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

Unintended Births

Percent of women who delivered a live-born infant who had a mistimed or unwanted pregnancy. Respondents with a missing or unknown response were excluded from the analysis.

Numerator: Number of women who indicated, postpartum, that just before getting pregnant they wanted to be pregnant either later or never.

Denominator: Total number of Oregon resident women who delivered a live-born infant.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

Chapter 4: Maternal & Infant Health

Postpartum Depressive Symptoms

Percent of women who indicated that they always or often felt down, depressed or hopeless since the birth of their newborn. Respondents with a missing or unknown response were excluded from the analysis.

Numerator: Number of women who reported that they always or often felt down, depressed or hopeless since the birth of their newborn.

Denominator: Total number of Oregon resident women who delivered a live-born infant.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

Breastfeeding Initiation

Percent of mothers of newborns who indicated that they had ever breastfed their newborn. Respondents with a missing or unknown response were excluded from the analysis.

Numerator: Number of women who reported they had ever breastfed their newborn.

Denominator: Total number of Oregon resident women who delivered a live-born infant.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

APPENDIX B: INDICATOR DEFINITIONS

Exclusive Breastfeeding at 8 weeks

Percent of mothers of newborns who indicated that they had given their baby only breast milk for at least 8 weeks postpartum. Exclusive breastfeeding was defined as feeding their infant only breast milk – no formula, no baby food, no juice, no cow's milk, no water, no sugar water, or anything else besides breast milk. Respondents with a missing or unknown response were excluded from the analysis.

Numerator: Number of women who reported they had given their baby only breast milk for at least the first 8 weeks.

Denominator: Total number of Oregon resident women who delivered a live-born infant.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

Back Sleeping Infants

Percent of mothers of newborns who indicated (average of 3-4 months after delivery) that they most often put their infant down to sleep on his/her back. Women who indicated they used a combination of sleep positions, and those who had a missing or unknown response, were excluded from this analysis.

Numerator: Number of women who indicated they most often put their infant down to sleep on his/her back.

Denominator: Total number of Oregon resident women who delivered a live-born infant.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

Stomach Sleeping Infants

Percent of mothers of newborns who indicated (average of 3-4 months after delivery) that they most often put their infant down to sleep on his/her stomach. Women who indicated they used a combination of sleep positions, and those who had a missing or unknown response, were excluded from this analysis.

Numerator: Number of women who indicated they most often put their infant down to sleep on his/her stomach.

Denominator: Total number of Oregon resident women who delivered a live-born infant.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

Side Sleeping Infants

Percent of mothers of newborns who indicated (average of 3-4 months after delivery) that they most often put their infant down to sleep on his/her side. Women who indicated they used a combination of sleep positions, and those who had a missing or unknown response, were excluded from this analysis.

Numerator: Number of women who indicated they most often put their infant down to sleep on his/her side.

Denominator: Total number of Oregon resident women who delivered a live-born infant.

Expressed as: Percent

Data Source: Oregon Pregnancy Risk Assessment Monitoring System (PRAMS), 2004.

APPENDIX C: METHODOLOGY

All statistical analyses were performed at a significance level of $\alpha = 0.05$. Any mention of a significant trend or significant difference between two groups means that it is statistically significant at $\alpha = 0.05$.

Trend Analyses

Tests for linear trend for each indicator were done using Mantel-Haenszel Chi-square test for trend at the 95% confidence level. P-values ≤ 0.05 were considered to be statistically significant. P-values for all trends are reported in the respective trend table.

Some trends (e.g., infant mortality rates) were graphed as three-year moving averages (see Moving Averages in this section for detailed explanation). However, all trend analyses were performed on the single year data, not the averaged data presented in the graph. Although the graphs of trends may show what appears to be a declining trend, it should be noted that these are moving averages and the change over time may not be statistically significant since the trend test was performed on single year data, not the averaged data.

Comparison Between Groups

Several methods were used to make comparisons between groups, such as univariate analyses, rate ratios, and relative percent difference.

Univariate Analysis (PRAMS Indicators only)

Univariate analyses were done for selected demographics (race/ethnicity, maternal age, and education) on PRAMS indicators for birth year 2004. Because PRAMS uses a complex survey design, appropriate statistical methods must be used when analyzing the data. Percentages and standard errors were calculated for the characteristic of interest using PROC CROSSTAB in SURvey DATA ANalysis Software (SUDAAN). SUDAAN takes the complex survey design into account, in particular, when standard errors are computed. The 95% confidence intervals (CI) were computed using the formula $CI = \text{percentage} + (1.96 \times \text{standard error})$. Groups were determined to be significantly different if their respective confidence intervals did not overlap. All missing (blank and “don’t know”) observations were excluded when calculating the percentages. All tables were produced using weighted PRAMS data. The number of respondents is the number of mothers who answered that PRAMS question. Note that analyses in this publication are all univariate. Multivariate analyses may show statistical significance where the univariate analyses do not.

Rate Ratios

Significant differences between groups have been noted within the narrative and have been examined using rate ratios. Rate ratios, the ratio of two rates, are used to compare rates for two populations – the general formula follows:

$$RR = \frac{(E_1/P_1) \times 10^n}{(E_2/P_2) \times 10^n} = \frac{Rate_1}{Rate_2}$$

where E_1 = number of events occurring in population 1
 E_2 = number of events occurring in population 2
 P_1 = number of people in population 1 at risk of an event
 P_2 = number of people in population 2 at risk of an event
 n = base for multiplier
 $Rate_1$ = rate for population 1
 $Rate_2$ = rate for population 2

so $n = 3 \rightarrow 10^3$ would give a rate per 1,000

Note: The multiplier, 10^n , must be the same for both rates. A rate ratio of 1.0 indicates that there is no difference in the race-specific or age-specific rates for the two populations being compared. It is customary for the group of interest to be labeled as population 1 and the reference group as population 2, so, the group of interest is always in the numerator.

Relative Percent Difference

Relative percent difference was used to compare differences between groups and when comparing Oregon to the United States overall.

$$RPD = \frac{(P_1 - P_2)}{P_2} \times 100 = \left(\frac{P_1}{P_2} - 1 \right) \times 100$$

where P_1 = prevalence of event in population 1
 P_2 = prevalence of event in population 2

Note: It is customary for the group of interest to be labeled as population 1 and the reference group as population 2, so, the group of interest is always in the numerator.

APPENDIX C: METHODOLOGY

Percent Change

Percent change between two time periods is calculated as follows:

$$PC = \frac{(P_n - P_o)}{P_o} \times 100$$

where P_n = later time period
 P_o = earlier time period

Moving Averages

Moving averages are overlapping sequences of time periods that are used to smooth out the year-to-year variability that is often observed when dealing with small numbers. A general formula for calculating the first and second time periods using the moving average method is as follows:

$$MA = \frac{\sum_{P_i - (w-1)}^{P_i} \text{events}}{\sum_{P_i - (w-1)}^{P_i} \text{population}} \times 10^n, \frac{\sum_{P_{i+1} - (w-1)}^{P_{i+1}} \text{events}}{\sum_{P_{i+1} - (w-1)}^{P_{i+1}} \text{population}} \times 10^n$$

where P_i = time period of interest
 w = width of interval
 n = base for multiplier
pop = population
so $w = 3$ would be a three-year moving average
 $n = 3 \rightarrow 10^3$ would give a rate per 1,000

Example: The three-year moving average for the year 1991 is comprised of data from 1989-1991, 1992 is comprised of data from 1990-1992, and so forth. Using the formula, the rate per 1,000 for this example is:

$$\frac{(\text{events}_{1989} + \text{events}_{1990} + \text{events}_{1991})}{(\text{pop}_{1989} + \text{pop}_{1990} + \text{pop}_{1991})} \times 10^3, \frac{(\text{events}_{1990} + \text{events}_{1991} + \text{events}_{1992})}{(\text{pop}_{1990} + \text{pop}_{1991} + \text{pop}_{1992})} \times 10^3$$

Race/Ethnicity Determination

Race/ethnicity groups were defined by the maternal race and maternal ethnicity fields in the birth certificate. An individual was determined to be Hispanic if his/her race/ethnicity group was Hispanic, regardless of race (i.e., Hispanic, any race).

If maternal ethnicity was non-Hispanic and maternal race was known, the race/ethnicity group was determined by the maternal race.

If maternal ethnicity was unknown, the race/ethnicity group was considered unknown, regardless of race.

Unless otherwise noted, race/ethnicity groups for this publication are as follows:

- » White, non-Hispanic
- » Black/African American, non-Hispanic
- » American Indian/Alaska Native, non-Hispanic
- » Asian/Pacific Islander*, non-Hispanic
- » Hispanic (any race)

Race/ethnicity groups were determined differently for the following indicators: infant mortality, neonatal mortality and postneonatal mortality. Race/ethnicity groups for these indicators are as follows:

- » White, non-Hispanic
- » Black/African American (regardless of ethnicity)
- » American Indian/Alaska Native (regardless of ethnicity)
- » Asian/Pacific Islander* (regardless of ethnicity)
- » Hispanic (any race)

* **For Asian/Pacific Islander race/ethnicity group**, the Centers for Disease Control and Prevention, National Center for Health Statistics definition was used in this publication. An individual was considered Asian/Pacific Islander if the maternal race on the birth certificate was reported as Chinese, Japanese, Hawaiian, Filipino, or other Asian or Pacific Islander.

APPENDIX D: TREND DATA

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Oregon Population¹, overall	3,184,369	3,247,111	3,304,310	3,352,449	3,393,941	3,431,066	3,474,161	3,523,281	3,564,330	3,594,586
White, non-Hispanic	2,811,846	2,849,620	2,878,633	2,898,677	2,910,395	2,918,855	2,937,788	2,963,987	2,982,986	2,992,766
Black/African American, non-Hispanic	54,749	57,014	58,252	60,405	62,132	64,583	66,389	68,288	69,537	70,351
American Indian/Alaska Native, non-Hispanic	42,324	43,573	44,946	46,198	47,542	48,316	48,512	48,681	48,672	48,482
Asian/Pacific Islander, non-Hispanic [△]	92,747	98,424	103,862	109,380	114,987	121,026	126,129	131,060	135,870	139,709
Hispanic	182,703	198,480	218,617	237,789	258,885	278,286	295,343	311,265	327,265	343,278
Number of Oregon-resident Live Births², overall	42,715	43,645	43,765	45,228	45,193	45,787	45,317	45,190	45,935	45,660
White, non-Hispanic	34,689	34,972	34,319	35,077	34,221	34,266	33,350	33,022	32,989	32,375
Black/African American, non-Hispanic	859	872	913	949	877	993	905	895	976	1,018
American Indian/Alaska Native, non-Hispanic	577	630	700	698	654	673	704	660	706	719
Asian/Pacific Islander, non-Hispanic [△]	1,554	1,646	1,867	1,914	2,139	2,314	2,266	2,371	2,462	2,474
Hispanic	4,996	5,455	5,851	6,499	6,902	7,397	7,903	8,051	8,433	8,850

1. National Center for Health Statistics (NCHS) bridged-race intercensal estimates (1995-1999), 2000 counts, and postcensal estimates (2001 onward). Prepared in collaboration with the US Census Bureau.

2. Oregon Vital Statistics.

[△] Asian/Pacific Islander includes Chinese, Japanese, Hawaiian, Filipino, or other Asian or Pacific Islander.

* P-value for trend is statistically significant at the 0.05 level.

Note: p-value is the p-value for the Mantel-Haenszel chi-square test for trend.

APPENDIX D: TREND DATA

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	P-value
Preterm² (percent), overall	6.9	7.0	7.0	7.1	7.2	7.8	7.6	8.2	8.4	8.5	<0.001*
White, non-Hispanic	6.8	6.8	7.0	7.0	7.3	7.8	7.5	8.3	8.6	8.7	<0.001*
Black/African American, non-Hispanic	10.4	11.5	10.7	9.0	11.7	11.5	11.5	10.5	10.2	12.1	0.47
American Indian/Alaska Native, non-Hispanic	6.7	6.4	6.8	9.8	10.8	10.0	10.0	12.0	10.8	9.8	<0.001*
Asian/Pacific Islander, non-Hispanic ^	6.6	6.9	7.8	7.2	6.3	7.7	7.5	7.7	7.6	8.9	0.01*
Hispanic	7.2	7.5	6.5	7.0	6.4	7.4	7.4	7.1	7.4	7.3	0.24
Very Preterm² (percent), overall	1.0	1.1	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	<0.001*
White, non-Hispanic	1.0	1.0	1.0	0.9	1.0	1.0	1.1	1.1	1.2	1.2	<0.001*
Black/African American, non-Hispanic	1.9	2.5	2.5	1.7	1.6	2.3	2.2	1.2	2.3	2.4	0.88
American Indian/Alaska Native, non-Hispanic	0.7	1.1	1.0	1.0	1.9	1.2	1.4	1.8	1.6	1.5	0.07
Asian/Pacific Islander, non-Hispanic ^	0.6	1.3	1.2	1.1	0.8	1.0	1.1	1.3	0.7	1.2	0.90
Hispanic	0.9	1.4	0.9	1.2	1.1	1.4	1.0	1.1	1.0	1.1	0.71

2. Oregon Vital Statistics.

^ Asian/Pacific Islander includes Chinese, Japanese, Hawaiian, Filipino, or other Asian or Pacific Islander.

* P-value for trend is statistically significant at the 0.05 level.

Note: p-value is the p-value for the Mantel-Haenszel chi-square test for trend.

APPENDIX D: TREND DATA

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	P-values
Low Birth Weight² (percent), overall	5.5	5.4	5.5	5.4	5.4	5.7	5.6	5.8	6.1	6.1	<0.001*
White, non-Hispanic	5.3	5.1	5.3	5.1	5.3	5.4	5.4	5.7	6.1	6.0	<0.001*
Black/African American, non-Hispanic	10.6	11.5	11.0	9.9	10.7	11.1	9.9	9.8	11.6	10.5	0.82
American Indian/Alaska Native, non-Hispanic	5.9	4.3	6.2	6.3	6.3	6.1	7.7	7.7	7.6	6.7	0.02*
Asian/Pacific Islander, non-Hispanic ^	5.2	5.8	7.0	6.2	5.1	7.3	6.0	7.1	6.8	7.5	<0.01*
Hispanic	6.0	5.9	5.4	5.8	5.2	5.8	5.6	5.3	5.3	5.2	0.02*
Very Low Birth Weight² (percent), overall	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.1	<0.001*
White, non-Hispanic	0.9	0.9	0.9	0.8	0.9	0.9	0.9	1.0	1.0	1.1	<0.001*
Black/African American, non-Hispanic	1.9	2.1	2.3	1.1	1.7	2.1	2.0	1.8	2.4	2.4	0.35
American Indian/Alaska Native, non-Hispanic	0.6	1.2	1.3	1.0	0.7	0.9	1.1	1.2	0.7	1.3	0.23
Asian/Pacific Islander, non-Hispanic ^	0.7	0.8	0.7	0.7	1.8	0.9	1.1	1.4	1.0	1.1	0.55
Hispanic	0.8	1.1	0.8	1.2	0.9	1.1	0.9	0.9	0.9	1.0	0.94

2. Oregon Vital Statistics.

^ Asian/Pacific Islander includes Chinese, Japanese, Hawaiian, Filipino, or other Asian or Pacific Islander.

* P-value for trend is statistically significant at the 0.05 level.

Note: p-value is the p-value for the Mantel-Haenszel chi-square test for trend.

APPENDIX D: TREND DATA

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	P-value
Infant Mortality² (rate per 1,000 live births), overall	7.1	7.2	6.1	5.5	5.6	5.4	5.7	5.6	5.3	5.7	5.6	5.4	<0.001*
White, non-Hispanic	7.0	7.3	6.1	5.1	5.3	5.3	5.3	5.3	5.5	6.0	5.3	5.3	<0.001*
Black/African American+	20.2	12.7	13.8	9.0	10.7	11.4	5.6	11.8	8.6	13.9	6.9	10.5	0.06
American Indian/Alaska Native+	7.0	6.4	4.8	7.5	2.7	9.3	11.4	11.0	6.4	7.5	14.0	12.8	0.03*
Asian/Pacific Islander ^+	5.0	5.5	1.9	6.1	5.3	4.1	6.0	2.6	3.5	5.4	5.7	5.2	0.75
Hispanic	5.5	6.4	5.6	7.2	6.7	4.8	7.2	6.9	4.8	3.5	5.9	4.5	0.05*
Neonatal Mortality² (rate per 1,000 live births), overall	3.7	4.0	3.2	3.2	3.5	3.1	4.2	3.6	3.4	3.8	3.7	3.8	0.41
White, non-Hispanic	3.5	4.0	3.3	2.9	3.2	2.9	3.9	3.4	3.5	4.0	3.6	3.7	0.31
Black/African American+	10.1	6.4	5.7	4.5	4.3	5.2	4.5	7.9	2.2	5.4	5.0	5.8	0.29
American Indian/Alaska Native+	3.5	3.2	1.6	3.0	2.7	4.0	5.7	6.9	5.1	5.0	7.0	5.8	0.07
Asian/Pacific Islander ^+	3.6	2.1	0†	4.8	3.7	3.1	4.6	1.7	2.6	2.9	3.6	4.0	0.45
Hispanic	3.8	4.6	3.0	4.6	5.3	3.5	5.4	4.9	3.4	2.7	4.2	3.7	0.40

2. Oregon Vital Statistics.

^ Asian/Pacific Islander includes Chinese, Japanese, Hawaiian, Filipino, or other Asian or Pacific Islander.

+ Race/ethnic group includes Hispanic.

† Zero events occurred.

* P-value for trend is statistically significant at the 0.05 level.

Note: p-value is the p-value for the Mantel-Haenszel chi-square test for trend.

APPENDIX D: TREND DATA

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	P-value
Postneonatal Mortality ² (rate per 1,000 live births), overall	3.4	3.2	2.8	2.2	2.1	2.3	1.5	1.9	1.9	1.9	1.9	1.6	<0.001*
White, non-Hispanic	3.5	3.3	2.8	2.1	2.1	2.3	1.4	1.9	2.0	1.9	1.8	1.6	<0.001*
Black/African American+	10.1	6.4	8.0	4.5	6.4	6.2	1.1	3.9	6.5	8.6	2.0	4.8	0.10
American Indian/Alaska Native+	3.5	3.2	3.2	4.5	0†	5.3	5.7	4.1	1.3	2.5	7.0	7.0	0.21
Asian/Pacific Islander ^+	1.4	3.5	1.9	1.2	1.6	1.0	1.4	0.9	0.9	2.5	2.0	1.2	0.62
Hispanic	1.8	1.8	2.6	2.6	1.4	1.2	1.9	2.0	1.4	0.8	1.8	0.8	0.02*

2. Oregon Vital Statistics.

^ Asian/Pacific Islander includes Chinese, Japanese, Hawaiian, Filipino, or other Asian or Pacific Islander.

+ Race/ethnic group includes Hispanic.

† Zero events occurred.

* P-value for trend is statistically significant at the 0.05 level.

Note: p-value is the p-value for the Mantel-Haenszel chi-square test for trend.

APPENDIX D: TREND DATA

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	P-value
Prenatal Care: First Trimester Initiation² (percent), overall	78.8	79.9	79.9	80.2	80.9	81.3	81.5	81.6	81.1	80.4	<0.001*
White, non-Hispanic	81.4	82.6	82.6	82.8	83.8	84.3	84.6	84.5	84.3	84.0	<0.001*
Black/African American, non-Hispanic	72.9	76.4	76.4	79.6	76.1	76.2	76.9	75.6	77.6	73.9	0.62
American Indian/Alaska Native, non-Hispanic	67.5	62.7	62.7	67.7	67.9	67.5	70.0	68.6	68.3	66.6	0.23
Asian/Pacific Islander, non-Hispanic ^	76.9	78.3	78.3	81.2	81.6	81.8	82.2	82.2	81.3	81.6	<0.001*
Hispanic	63.6	65.6	65.6	67.2	68.5	69.0	69.9	71.4	69.9	69.3	<0.001*
Prenatal Care: Adequate Prenatal Care² (percent), overall	69.8	71.1	71.6	71.1	71.2	72.8	72.9	72.2	72.0	70.3	<0.001*
White, non-Hispanic	72.3	73.5	74.2	73.8	74.3	76.1	75.6	74.6	74.6	74.0	<0.001*
Black/African American, non-Hispanic	63.1	62.8	68.6	71.6	68.2	71.2	69.1	68.9	70.2	65.7	0.02*
American Indian/Alaska Native, non-Hispanic	58.8	57.9	61.1	59.2	62.8	63.1	61.1	62.6	62.6	60.6	0.08
Asian/Pacific Islander, non-Hispanic ^	68.4	67.7	69.4	69.3	68.5	71.9	71.8	70.2	69.7	66.5	0.81
Hispanic	55.7	59.2	59.7	58.8	58.1	58.9	63.0	64.1	63.1	59.2	<0.001*

2. Oregon Vital Statistics.

^ Asian/Pacific Islander includes Chinese, Japanese, Hawaiian, Filipino, or other Asian or Pacific Islander.

* P-value for trend is statistically significant at the 0.05 level.

Note: p-value is the p-value for the Mantel-Haenszel chi-square test for trend.

Chapter 3: Perinatal Health

Pre-pregnancy Vitamin Use

	n ¹	% ²	95% CI ³
None	1954	53.2	(49.7, 56.8)
1-3 times per week	1954	9.4	(7.3, 11.5)
4-6 times a week	1954	6.4	(4.6, 8.1)
Every day of the week	1954	31.0	(27.7, 34.4)

Regular Vitamin Use (≥4 times/week)

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	697	38.6	(33.9, 43.4)
Black/African American, non-Hispanic	253	30.3	(25.4, 35.2)
American Indian/Alaska Native, non-Hispanic	251	24.6	(20.3, 28.9)
Asian/Pacific Islander, non-Hispanic [^]	328	45.0	(40.0, 50.1)
Hispanic	422	32.1	(27.7, 36.4)
Maternal Age			
<20	189	13.8	(7.7, 19.9)
20-24	544	28.3	(22.1, 34.4)
25-34	952	44.0	(38.9, 49.1)
>34	269	50.5	(40.7, 60.4)
Overall	1954	37.4	(33.9, 40.8)

Pre-pregnancy Body Weight

	n ¹	% ²	95% CI ³
Underweight (BMI <19.8 kg/m ²)	1793	11.0	(8.7, 13.3)
Normal (BMI 19.8-26.0 kg/m ²)	1793	52.7	(48.9, 56.5)
Overweight (BMI >26.0-29.0 kg/m ²)	1793	14.2	(11.5, 16.8)
Obese (BMI >29.0 kg/m ²)	1793	22.1	(18.9, 25.3)

Pre-pregnancy Overweight/Obesity (BMI >26.0 kg/m²)

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	683	36.0	(31.3, 40.8)
Black/African American, non-Hispanic	245	44.0	(38.6, 49.4)
American Indian/Alaska Native, non-Hispanic	240	47.1	(42.0, 52.2)
Asian/Pacific Islander, non-Hispanic [^]	310	20.1	(15.9, 24.3)
Hispanic	312	39.5	(34.2, 44.9)
Overall	1793	36.3	(32.6, 40.0)

Source of Payment for Prenatal Care

	n ¹	% ²	95% CI ³
No Insurance	1381	8.2	(6.5, 9.9)
Oregon Health Plan/Medicaid	1381	39.1	(34.9, 43.2)
Private Insurance	1381	52.6	(48.4, 56.7)
Indian Health Service	1381	0.1	(0.1, 0.2)

1. The number of respondents who answered that PRAMS question.

2. Weighted percent

3. 95% Confidence Interval

[^] Asian/Pacific Islander includes Chinese, Japanese, Hawaiian, Filipino, or other Asian or Pacific Islander.

APPENDIX E: DETAILED INDICATOR DATA

No Insurance Coverage for Prenatal Care

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	494	25.9	(12.8, 39.0)
Black/African American, non-Hispanic	198	0.9	(0.3, 1.6)
American Indian/Alaska Native, non-Hispanic	135	0.1	(0.0, 0.3)
Asian/Pacific Islander, non-Hispanic ^	237	4.6	(2.3, 6.8)
Hispanic	300	68.5	(56.1, 81.0)
Overall	1364	8.3	(6.5, 10.0)

Cigarette Smoking Before Pregnancy (3 months before)

Daily number of cigarettes smoked	n ¹	% ²	95% CI ³
None	1905	76.4	(73.2, 79.7)
<1 to 10	1905	12.0	(9.5, 14.5)
11-20	1905	8.4	(6.1, 10.6)
>20	1905	3.2	(1.8, 4.6)

Cigarette Smoking Before Pregnancy (3 months before)

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	689	29.1	(24.6, 33.7)
Black/African American, non-Hispanic	243	22.5	(17.9, 27.2)
American Indian/Alaska Native, non-Hispanic	237	46.4	(41.3, 51.6)
Asian/Pacific Islander, non-Hispanic ^	321	8.9	(5.9, 11.8)
Hispanic	412	5.8	(3.5, 8.0)
Overall	1905	23.6	(20.3, 26.8)

Cigarette Smoking During Pregnancy (last 3 months)

Daily number of cigarettes smoked	n ¹	% ²	95% CI ³
None	1909	86.3	(83.5, 89.0)
<1 to 10	1909	10.3	(7.9, 12.7)
11-20	1909	2.7	(1.3, 4.1)
>20	1909	0.8	(0.0, 1.5)

Cigarette Smoking During Pregnancy (last 3 months)

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	690	17.4	(13.6, 21.2)
Black/African American, non-Hispanic	244	11.5	(8.0, 15.1)
American Indian/Alaska Native, non-Hispanic	238	28.4	(23.6, 33.1)
Asian/Pacific Islander, non-Hispanic ^	321	2.9	(1.2, 4.7)
Hispanic	413	2.3	(0.8, 3.7)
Overall	1909	13.7	(5.6, 21.9)

1. The number of respondents who answered that PRAMS question.

2. Weighted percent

3. 95% Confidence Interval

^ Asian/Pacific Islander includes Chinese, Japanese, Hawaiian, Filipino, or other Asian or Pacific Islander.

Change in Smoking Behavior During Pregnancy Among Smokers

Daily number of cigarettes smoked	n ¹	% ²	95% CI ³
Quit	933	45.6	(40.4, 50.8)
Decreased	933	35.4	(30.4, 40.5)
No Change/Increased	933	18.9	(14.7, 23.2)

Cigarette Smoking: Quitting During Pregnancy

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	370	44.3	(38.5, 50.2)
Black/African American, non-Hispanic	150	44.9	(37.8, 52.0)
American Indian/Alaska Native, non-Hispanic	280	49.3	(44.5, 54.2)
Asian/Pacific Islander, non-Hispanic ^	69	59.7	(48.7, 70.7)
Hispanic	64	62.2	(50.5, 73.9)
Maternal Age			
<20	156	44.8	(30.3, 59.3)
20-24	371	46.5	(38.5, 54.4)
25-34	330	50.0	(41.2, 58.9)
>34	76	25.8	(11.5, 40.0)
Education			
<12 Years	246	38.7	(27.5, 49.9)
12 Years	413	39.8	(32.4, 47.2)
>12 Years	260	61.8	(52.8, 70.8)
Overall	933	45.6	(40.4, 50.8)

Cigarette Smoking: Staying Quit After Pregnancy

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	156	60.9	(52.3, 69.6)
Black/African American, non-Hispanic	68	56.8	(46.3, 67.3)
American Indian/Alaska Native, non-Hispanic	140	54.4	(47.5, 61.4)
Asian/Pacific Islander, non-Hispanic ^*	42	75.8	(63.5, 88.1)
Hispanic *	40	56.8	(41.7, 71.9)
Maternal Age			
<20	84	28.8	(9.9, 47.7)
20-24	184	57.4	(46.0, 68.9)
25-34	155	71.7	(60.5, 82.9)
>34 *	23	83.9	(59.7, 100)
Education			
<12 Years	101	45.7	(27.5, 64.0)
12 Years	186	52.9	(41.1, 64.7)
>12 Years	152	76.9	(67.0, 86.9)
Overall	446	60.7	(53.3, 68.2)

1. The number of respondents who answered that PRAMS question.

2. Weighted percent

3. 95% Confidence Interval

^ Asian/Pacific Islander includes Chinese, Japanese, Hawaiian, Filipino, or other Asian or Pacific Islander.

* Data may be unreliable. Number of respondents less than 60.

APPENDIX E: DETAILED INDICATOR DATA

Any Alcohol Use Before Pregnancy (3 months before)

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	686	60.7	(55.9, 65.5)
Black/African American, non-Hispanic	244	49.8	(44.4, 55.3)
American Indian/Alaska Native, non-Hispanic	240	58.8	(53.8, 63.9)
Asian/Pacific Islander, non-Hispanic ^	318	28.6	(24.0, 33.3)
Hispanic	405	22.9	(18.8, 26.9)
Maternal Age			
<20	182	44.3	(32.2, 56.4)
20-24	519	46.4	(39.4, 53.3)
25-34	937	55.1	(50.1, 60.1)
>34	258	54.0	(44.1, 63.9)
Education			
<12 Years	431	27.7	(20.8, 34.6)
12 Years	556	47.5	(40.4, 54.6)
>12 Years	890	63.7	(58.8, 68.6)
Overall	1896	51.4	(47.9, 55.0)

Binge Drinking Before Pregnancy (3 months before)

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	687	19.5	(15.6, 23.4)
Black/African American, non-Hispanic	224	18.8	(14.5, 23.2)
American Indian/Alaska Native, non-Hispanic	240	26.3	(21.8, 30.8)
Asian/Pacific Islander, non-Hispanic	318	8.0	(5.2, 10.7)
Hispanic	409	8.3	(5.6, 11.0)
Overall	1901	16.9	(14.0, 19.7)

Any Alcohol Use During Pregnancy (last 3 months)

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	688	9.5	(6.7, 12.3)
Black/African American, non-Hispanic	246	6.8	(4.0, 9.6)
American Indian/Alaska Native, non-Hispanic	241	5.4	(3.1, 7.7)
Asian/Pacific Islander, non-Hispanic ^	318	4.4	(2.3, 6.5)
Hispanic	410	4.4	(2.4, 6.4)
Maternal Age			
<20	183	5.1	(0.0, 11.0)
20-24	522	4.4	(1.7, 7.1)
25-34	942	9.6	(6.5, 12.8)
>34	259	12.9	(6.0, 19.7)
Education			
<12 Years	435	1.9	(0.7, 3.2)
12 Years	561	5.6	(2.4, 8.9)
>12 Years	891	11.9	(8.4, 15.3)
Overall	1906	8.1	(6.1, 10.1)

1. The number of respondents who answered that PRAMS question.

2. Weighted percent

3. 95% Confidence Interval

^ Asian/Pacific Islander includes Chinese, Japanese, Hawaiian, Filipino, or other Asian or Pacific Islander.

Binge Drinking During Pregnancy (last 3 months)

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	688	0.04	(0.0, 0.1)
Black/African American, non-Hispanic	245	1.7	(0.0, 3.4)
American Indian/Alaska Native, non-Hispanic	241	1.6	(0.0, 3.2)
Asian/Pacific Islander, non-Hispanic	317	0.0+	(0.0, 0.0)
Hispanic	411	1.3	(0.2, 2.4)
Overall	1905	0.3	(0.1, 0.6)

Feeling About Pregnancy

	n ¹	% ²	95% CI ³
Wanted Then or Sooner	1935	62.7	(59.2, 66.2)
Wanted Later	1935	29.8	(26.5, 33.1)
Not Wanted	1935	7.5	(5.5, 9.5)

Unintended Births

Maternal Age	n ¹	% ²	95% CI ³
<18	66	77.4	(63.8, 91.0)
18-19	122	69.1	(55.6, 82.7)
20-24	538	44.2	(37.4, 51.1)
25-34	945	30.0	(25.4, 34.7)
>34	264	23.6	(15.5, 31.7)
Overall	1935	37.3	(33.8, 40.8)

Chapter 4: Maternal & Infant Health

Postpartum Depressive Symptoms

	n ¹	% ²	95% CI ³
Always	1916	1.4	(0.6, 2.2)
Often	1916	7.7	(5.8, 9.6)
Sometimes	1916	25.8	(22.7, 28.9)
Rarely	1916	38.8	(35.2, 42.3)
Never	1916	26.3	(23.2, 29.4)

Postpartum Depressive Symptoms: Always/Often

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	687	8.9	(6.2, 11.7)
Black/African American, non-Hispanic	244	16.5	(12.4, 20.7)
American Indian/Alaska Native, non-Hispanic	246	17.1	(13.1, 21.0)
Asian/Pacific Islander, non-Hispanic ^	321	7.8	(5.1, 10.6)
Hispanic	415	9.0	(6.2, 11.7)
Overall	1916	9.1	(7.1, 11.2)

1. The number of respondents who answered that PRAMS question.

2. Weighted percent

3. 95% Confidence Interval

^ Asian/Pacific Islander includes Chinese, Japanese, Hawaiian, Filipino, or other Asian or Pacific Islander.

+ Zero events occurred.

APPENDIX E: DETAILED INDICATOR DATA

Breastfeeding Initiation

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	669	89.3	(86.2, 92.4)
Black/African American, non-Hispanic	234	86.3	(82.4, 90.2)
American Indian/Alaska Native, non-Hispanic	237	93.6	(91.0, 96.2)
Asian/Pacific Islander, non-Hispanic ^	318	93.8	(91.3, 96.3)
Hispanic	407	93.9	(91.6, 96.1)
Maternal Age			
<18	61	85.7	(71.5, 99.9)
18-19	114	84.5	(71.5, 97.6)
20-24	517	86.4	(81.4, 91.4)
25-34	924	93.1	(90.5, 95.8)
>34	252	93.0	(87.7, 98.4)
Education			
<12 Years	424	84.2	(78.1, 90.3)
12 Years	541	90.5	(86.4, 94.6)
>12 Years	885	93.1	(90.3, 95.9)
Overall	1868	90.4	(88.1, 92.7)

Exclusive Breastfeeding at 8 Weeks

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	631	51.6	(46.6, 56.6)
Black/African American, non-Hispanic	215	40.5	(34.8, 46.1)
American Indian/Alaska Native, non-Hispanic	219	42.1	(36.8, 47.4)
Asian/Pacific Islander, non-Hispanic ^	288	43.3	(37.9, 48.6)
Hispanic	377	44.1	(39.2, 49.0)
Maternal Age			
<18 *	55	21.0	(5.2, 36.8)
18-19	103	34.7	(19.3, 50.1)
20-24	492	43.1	(36.1, 50.2)
25-34	857	55.0	(49.7, 60.2)
>34	226	54.8	(44.4, 65.2)
Education			
<12 Years	389	37.0	(30.1, 43.9)
12 Years	496	45.6	(38.3, 52.9)
>12 Years	832	56.5	(51.2, 61.7)
Overall	1733	49.1	(45.4, 52.9)

1. The number of respondents who answered that PRAMS question.

2. Weighted percent

3. 95% Confidence Interval

^ Asian/Pacific Islander includes Chinese, Japanese, Hawaiian, Filipino, or other Asian or Pacific Islander.

* Data may be unreliable. Number of respondents less than 60.

APPENDIX E: DETAILED INDICATOR DATA

Infant Sleep Position: Stomach

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	649	11.6	(8.3, 14.8)
Black/African American, non-Hispanic	217	19.8	(15.2, 24.4)
American Indian/Alaska Native, non-Hispanic	220	7.4	(4.7, 10.1)
Asian/Pacific Islander, non-Hispanic ^	301	5.2	(2.8, 7.6)
Hispanic	393	2.4	(0.9, 4.0)
Overall	1783	9.6	(7.2, 11.9)

Infant Sleep Position: Side

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	649	14.6	(11.1, 18.2)
Black/African American, non-Hispanic	217	18.7	(14.1, 23.3)
American Indian/Alaska Native, non-Hispanic	220	9.8	(6.5, 13.0)
Asian/Pacific Islander, non-Hispanic ^	301	18.4	(14.3, 22.5)
Hispanic	393	19.6	(15.8, 23.5)
Overall	1783	15.7	(13.1, 18.4)

Infant Sleep Position: Back

Race/Ethnicity	n ¹	% ²	95% CI ³
White, non-Hispanic	649	73.8	(69.4, 78.2)
Black/African American, non-Hispanic	217	61.5	(55.9, 67.2)
American Indian/Alaska Native, non-Hispanic	220	82.9	(78.8, 86.9)
Asian/Pacific Islander, non-Hispanic ^	301	76.4	(71.9, 80.9)
Hispanic	393	77.9	(73.9, 82.0)
Overall	1783	74.7	(71.4, 78.0)

1. The number of respondents who answered that PRAMS question.

2. Weighted percent

3. 95% Confidence Interval

^ Asian/Pacific Islander includes Chinese, Japanese, Hawaiian, Filipino, or other Asian or Pacific Islander.

APPENDIX F: HEALTHY PEOPLE & OREGON BENCHMARKS

Indicator Objectives	Oregon 2004	Oregon 2010 Target ¹	Healthy People 2010 Target ²	Data Source
Reduce preterm births				
Total preterm (<37 wks gestation)	8.5%	---	7.6%	Oregon Vital Statistics ³
Very Preterm (<32 wks gestation)	1.2%	---	1.1%	
Reduce low and very low birth weight				
Low birth weight (LBW)	6.1%	---	5%	Oregon Vital Statistics ³
Very low birth weight (VLBW)	1.1%	---	0.9%	
Reduce infant deaths				
All infant deaths (within 1 year) [^]	5.6*	4.5	4.5	Oregon Vital Statistics ³
Neonatal deaths (within the first 28 days of life) [^]	3.8*	---	2.9	
Postneonatal deaths (between 28 days and 1 year) [^]	1.8*	---	1.5	
Increase prenatal care				
Beginning in first trimester of pregnancy	80.4%	90%	90%	Oregon Vital Statistics ³
Adequate prenatal care* (APNCU Index)	70.3%	---	90%	
Increase abstinence from alcohol and cigarettes among pregnant women				
Alcohol use (last 3 months of pregnancy)	91.9%	98%	94%	Oregon PRAMS ⁴
Binge drinking (last 3 months of pregnancy)	99.7%	---	100%	
Cigarette smoking (last 3 months of pregnancy)	86.3%	98%	99%	
Increase mothers who breastfeed				
Ever initiated breastfeeding	90.4%	---	75%	Oregon PRAMS ⁴
Exclusive breastfeeding at 6 months postpartum	22.3%	---	25%	National Immunization Survey ⁵
Increase percentage of infants put down to sleep on their backs				
Total infants put down to sleep on their backs	74.7%	---	70%	Oregon PRAMS ⁴

[^] Rate per 1,000 live births.

*Three-year average (2002-2004).

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* Data note: The estimate used for the U.S. prevalence of these indicators is aggregate data from 27 states participating in PRAMS during 2002 (Alabama, Alaska, Arkansas, Colorado, Florida, Hawaii, Illinois, Louisiana, Maine, Maryland, Michigan, Minnesota, Montana, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Rhode Island, South Carolina, Utah, Vermont, Washington, and West Virginia).

OREGON PERINATAL DATA BOOK

Many of the data used in this report are available on the Oregon Public Health Division's website:

www.oregon.gov/DHS/ph

More current data for the indicators presented may also be available on the web. For PRAMS data see www.oregon.gov/DHS/ph/pnh/prams. For Vital statistics data see www.oregon.gov/DHS/ph/chs/data.

A PDF copy of the Oregon Perinatal Data Book can be downloaded at www.oregon.gov/DHS/ph/pnh/databook.shtml.

For help accessing more current data, or for additional information about the Perinatal Data Book and perinatal health in Oregon please contact:

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