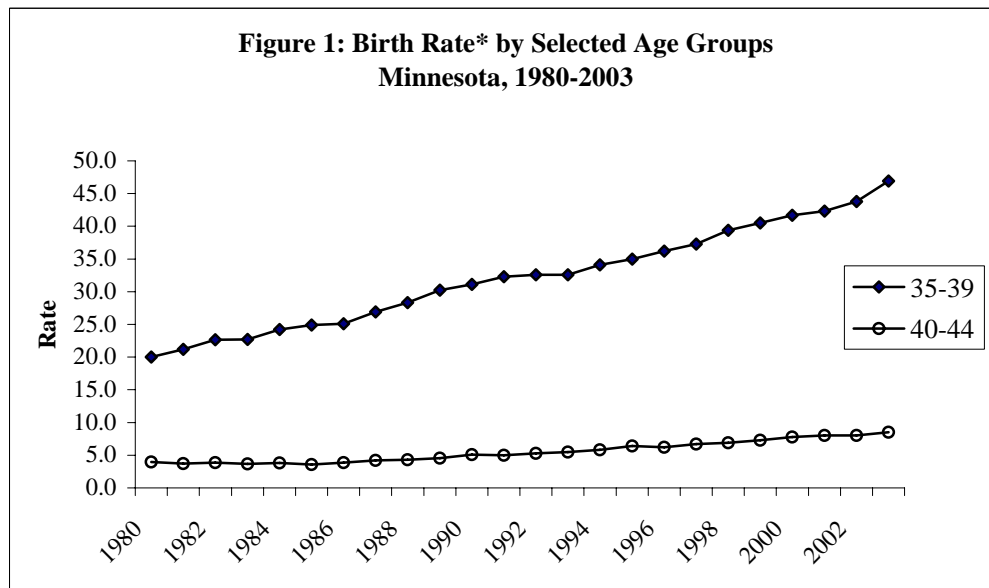


Births to Older Mothers

The number and rate of births to older mothers in the United States has increased substantially since the late 1970s (National Center for Health Statistics, 2005). Since 1978, birth rates for women 35-39 and 40-44 years old have more than doubled in the U.S. Researchers have proposed that these trends are the result of delayed childbirth due to mothers' careers and education and perhaps a reduction in medical risk in later childbearing years. This report examines trends in births to older women (35 years of age and older) in Minnesota including the number and rate of births, race, and prenatal care. In addition, birth outcomes including preterm births (less than 37 weeks gestation), low birth weight (less than 2500 grams), and infant mortality rates (deaths per 1,000 live births) are also discussed.

Birth certificate data for older mothers were obtained for 1980-2003. Infant death rates were obtained from a linked birth and death database for 1980-2002.



*per 1,000 population in that age group

Overview

The number of older women giving birth in Minnesota has increased dramatically over the years. Figure 1 indicates that since 1980, birth rates have more than doubled for both 35-39 and 40-44 year olds. In 1980, the birth rate for 35-39 year old women was 20.0 per 1,000 females. Currently, the birth rate for women in this age group is 46.9 per 1,000 females 35-39 years old. Although the birth rate is considerably lower for the women in the 40-44 year old age group, the rate has also more than doubled from 4.0 per 1,000 in 1980 to 8.5 per 1,000 in 2003. Birth rates for women 45 and over are not reported due to small numbers.

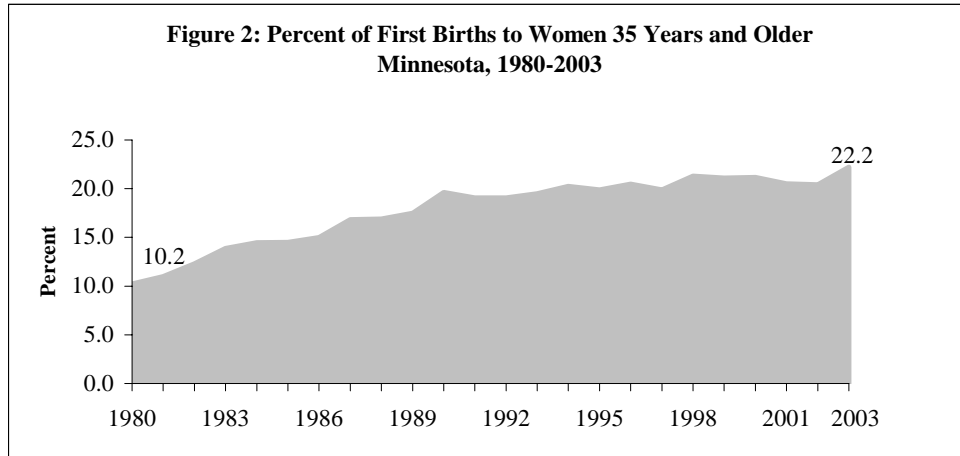
The actual number of births also demonstrates the growth in births to older mothers. In 2003, 10,657 births were to women ages 35 and over which is greater than three times the number of births in 1980 for this same age group (2,922). The percent of total births to women 35 and over increased from 4.3 percent in 1980 to 15.2 percent of total births in 2003.

Table 1: Births by Age of Mother Minnesota (Selected Years)

Age Group	Number of Births by Year				
	1980	1985	1990	1995	2003
35-39	2,485	3,804	5,587	7,109	8,764
40-44	408	432	785	1,166	1,786
45 and Over	29	35	44	56	107
35 and Over Total	2,922	4,271	6,416	8,331	10,657
Total	67,836	67,402	67,982	63,246	70,053
% of Births to Women 35+	4.3%	6.3%	9.4%	13.2%	15.2%

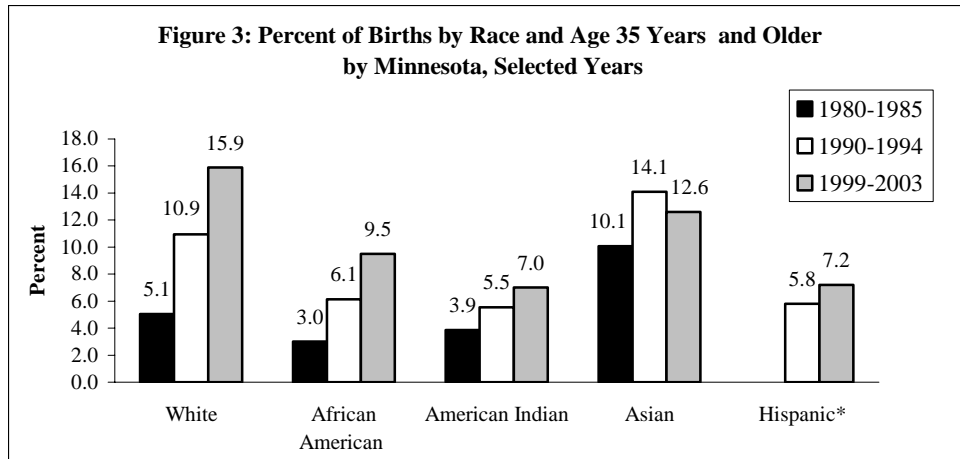
First Time Mothers

Women are delaying the age at which they have their first child. 10.2 percent of women who had their first baby in 1980 were 35 years old and over. By 2003 this had increased to 22.2 percent (Figure 2), the highest since 1980.



Race and Ethnicity

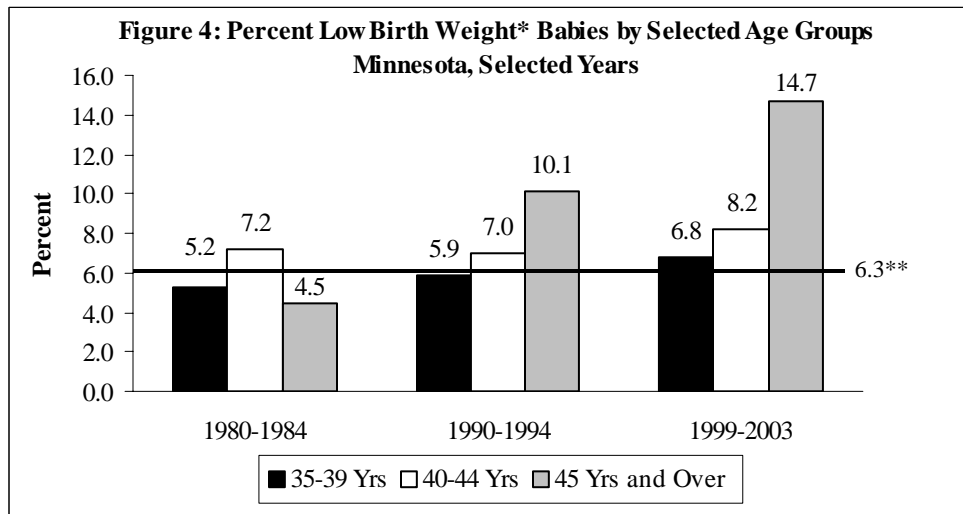
Most recent data indicate that the percent of births to women ages 35 and older has increased among Whites, African Americans, American Indians, and Hispanics. The most dramatic of these increases are births to Whites and African Americans. Currently, the percent of births to White and African American mothers 35 years and older is over three times higher than 1980-85 figures. In the most recent time period, the percent of births to mothers 35 years and older has decreased for mothers of Asian descent though the 1999-2003 figures are higher than 1980-1984 figures.



*Hispanic data was not available for the 1980-1985 time period.

Prematurity and Low Birth Weight

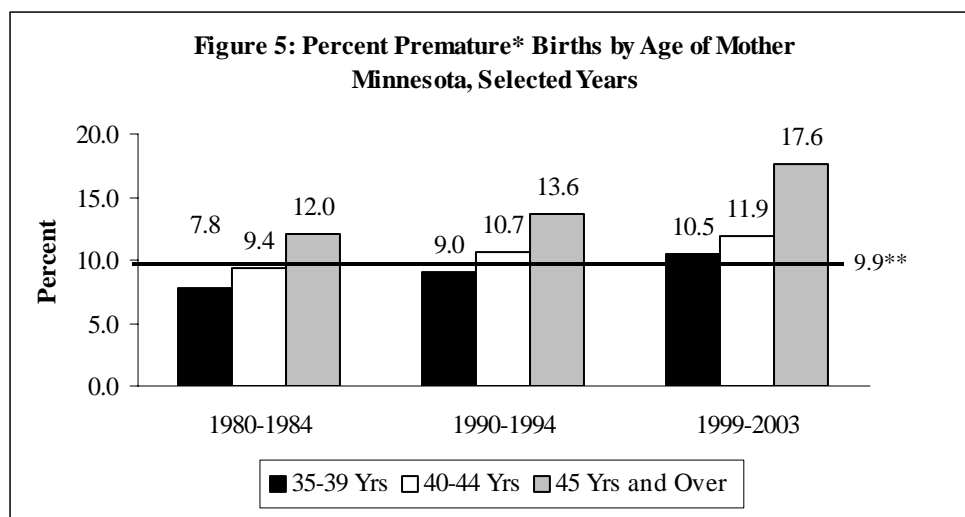
Preterm delivery and low birth weight are closely associated with poor birth outcomes. Data indicate that the incidence of low birth weight births (under 2,500 grams) has increased among 35-39, 40-44, and 45 years and older age groups. Most notable is the increase in low birth weight births among those 45 years and older where the percent of low birth weight in this age group is more than three times the percent in 1980-84. Also, while the percent of low birth weight births is lower among 35-39 and 40-44 year olds, the percent of low birth weight births has continued to increase from previous years reporting.



*Less than 2500 grams

**Overall percent of low birth weight babies for Minnesota in 2003

Prematurity (37 weeks or less gestation) is an increasing concern for women giving birth at 35 years and older. While the overall percent of premature births in 2003 was 9.9 percent, the percent of premature births for women 45 years and older is 17.6 percent. Figure 5 shows that for older women, the risk of having an infant prematurely increases with age.

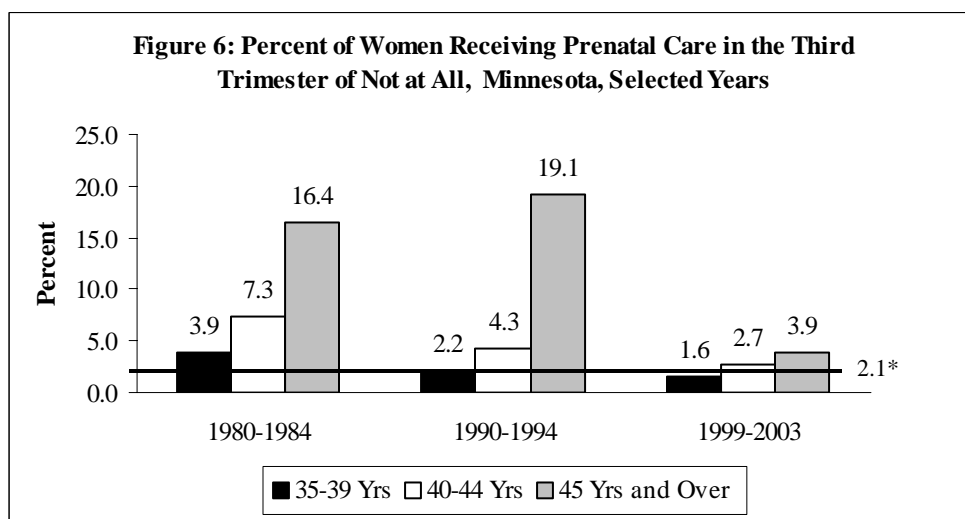


*Less than 37 weeks gestation

**Overall percent of babies born prematurely for Minnesota in 2003

Prenatal Care

Early and regular prenatal care can lead to improved birth outcomes. It is especially important for older women because as data in this edition has shown, having children later in life increases the risk for poor birth outcomes. The data indicate several trends for older women seeking prenatal care. In 2003, the overall percent of mothers in Minnesota receiving late or no prenatal care was 2.1 percent. Among women 35-39 years old, the percent of women receiving late or no prenatal care was lower than the overall rate. Just 1.6 percent of the 35-39 year olds initiated prenatal care in the third trimester or not at all. Interestingly, the percent of women in the 40-44 year old age group (2.7 percent) is higher than the overall percent. Also interesting is the high percent of women 45 years and older (3.9 percent) receiving prenatal care in the third trimester or not at all.



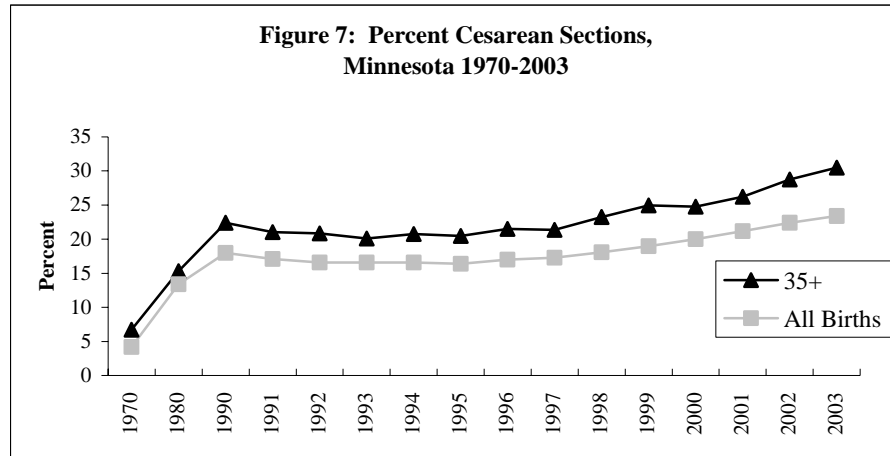
*Percent of overall births in 2003 in which prenatal care was initiated in the third trimester or not at all

Multiple Births

See Minnesota Vital Signs (Volume 1, No. 3). This volume indicates that the rate of multiple pregnancy increases with age.

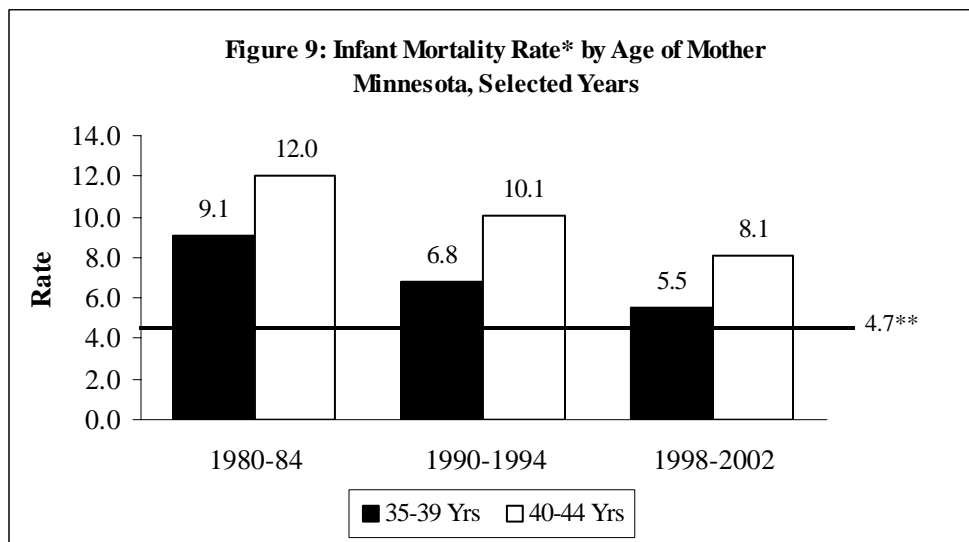
Labor and Delivery

The percent of births to mothers 35 years and older delivered via Cesarean section has increased from 22.4 percent in 1990 to 30.5 percent in 2003 (Figure 7). While the trend is similar for all births, the percent of Cesarean births for mothers 35 years and older remains higher.



Infant Mortality

In 2003, the overall infant death rate (number deaths to infants under 1 year of age per 1,000 live births) in Minnesota was 4.7 per 1,000 births, one of the lowest in the country. These figures reflect dramatic decreases in infant deaths since the 1930s. For women 35-39 and 40-44 years old the infant mortality rate has also decreased as shown in Figure 9.



*Number of deaths to infants under 1 year of age per 1,000 live births

**Overall infant mortality rate for Minnesota in 2003

For women 35-39 and 40-44 years old, infant mortality rates show a steady decline from 1980-84 figures. While the current rate for the 35-39 year old age group of 5.5 per 1,000 births is only slightly higher than the overall rate, the rate for 40-44 year olds (8.1 per 1,000) is dramatically higher.

Minnesota Vital Signs

**Minnesota Center for Health Statistics
Office of Health Policy, Statistics and Informatics
Minnesota Department of Health**

Vital Signs is available on the Minnesota Center for Health Statistics website, <http://www.health.state.mn.us/divs/chs/vitalsigns/index.html>. If you require this document in another format such as large print, Braille, or cassette tape call 651/296-1232 or email healthstats@health.state.mn.us.



Protecting, maintaining and improving the health of all Minnesotans