

## **Prenatal Care**

**United States, 1969 - 1975**

An analysis of recent trends and differentials in prenatal care, based upon data reported on birth certificates. Discusses variations in care received by different groups of mothers and the outcome of pregnancy as related to month of pregnancy prenatal care began and number of prenatal visits.

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# PRENATAL CARE IN THE UNITED STATES, 1969 - 1975

Selma Taffel, Division of Vital Statistics

## INTRODUCTION

Concern about reproductive wastage and the physical and mental impairment of the newborn has given impetus in recent years to the study of the role of prenatal care in the prevention of low birth weight and shortened gestational periods. It has become increasingly evident that low birth weight and prematurity are highly associated with elevated levels of infant morbidity and mortality and an increased incidence of congenital anomalies.<sup>1-6</sup>

In order to explore further the relationship between prenatal care and the outcome of pregnancy, and to assess the care received by different groups of mothers, two items were added to the 1968 revision of the U.S. Standard Certificate of Live Birth. The first—month of pregnancy prenatal care began—provides an indication of the duration of prenatal care. The second—total number of prenatal visits—gives an indication of the amount of care received.

This report presents information on recent trends in prenatal care derived from these two items and from other information entered on birth certificates. Data on month of pregnancy prenatal care began are shown for the period 1969-75, and for number of prenatal visits, for the years 1972-75.

Since not all State birth certificates include items on prenatal care, the data in this report refer only to mothers residing in those areas where such questions are included. During 1975, 42 States and the District of Columbia reported on the item "month of pregnancy prenatal care began," and 38 States and the District of Columbia

reported on the item "number of prenatal visits"; this represented 86.5 and 57.5 percent of all births, respectively. (See table I of the Technical Appendix for the composition of the reporting areas in each year.) The data presented are drawn from individual birth certificates; hence the figures shown technically refer to numbers of births rather than to numbers of mothers. However, since very few women have more than one child in a given year, for ease and clarity in writing, the terms "women" and "mothers" rather than "births," are sometimes used in the ensuing discussion.

## Criterion for Measuring Care

One of the basic aims of this report is to identify those groups of women who are receiving late or no prenatal care. To accomplish this, demographic and socioeconomic information available from birth certificates is related to the timing of the initiation of prenatal care and the number of prenatal visits. Because it is not possible to evaluate the excellence of medical supervision from information entered on birth certificates, the principal criterion used in this report for measuring prenatal care is the time of the first prenatal visit. The early initiation of prenatal care is deemed critical to the health of the mother and child because it affords the opportunity to identify and treat existing medical and obstetric problems and to educate the mother in regard to proper nutrition and other aspects of the hygiene of pregnancy.<sup>7</sup> The early termination of pregnancy may preclude the start of prenatal care for those women who would ordinarily have begun care late in pregnancy. It seems



reasonable therefore to combine the number of mothers who had no care with those starting care in the third trimester of pregnancy. Mothers in these two categories combined are referred to in this report as having received late or no prenatal care.

### **Prenatal Care and Outcome of Pregnancy**

Another objective of this study is to explore the relationship between prenatal care and pregnancy outcome. Birth weight was chosen as the measure of pregnancy outcome to be studied since this item is more completely and accurately reported on birth certificates than length of gestation. A major problem in performing such an assessment is that the women who are most likely to seek early and continuous prenatal care are also likely to have an inherently lower risk of an adverse outcome because of their favored socioeconomic or demographic status. Where possible, therefore, such factors as age and education of mother have been held constant in order to evaluate more meaningfully the interaction between the time of the initiation of prenatal care and birth weight.

### **SUMMARY OF FINDINGS**

According to information entered on birth certificates, there were large variations in the prenatal care received by mothers of different social and demographic backgrounds. Differences in the month of pregnancy prenatal care began were observed for women of various ages, educational levels, marital status, and areas of residence. Moreover, within each of these groups, there was a consistent pattern of less care for black mothers.

For the period covered by this report, 1969-75, there was a gradual increase in the proportion of both white and black mothers who initiated care during the first trimester of pregnancy, concomitant with a decrease in the proportion of mothers who received late care (care starting in the third trimester of pregnancy) or no care. Although there were greater gains in the utilization of care among black than among white mothers, in 1975 there remained very substantial differences in the care received by these two racial groups. Approximately twice

the proportion of black as of white mothers received late or no care (10.5 percent compared with 5.0 percent); care started in the first trimester of pregnancy for 75.9 percent of white mothers compared with only 55.8 percent of black mothers.

Similarly, there was a greater decline between 1972 and 1975 in the proportion of black mothers making few prenatal visits, but still as of 1975, more than three times the proportion of black as of white mothers limited their care to less than five visits or had no care (17.5 percent compared with 5.5 percent, respectively). Three-quarters of the white mothers, but only slightly more than half of the black mothers made nine or more prenatal visits for births of 36 weeks of gestation or longer during 1975.

Teenage girls and women aged 45 years or more were least likely to start care early in pregnancy, and these age groups were also the most likely to receive late or no prenatal care. Women aged 25-29 years were most apt to start care early and least likely to receive late or no care.

Women bearing their first child were not as likely to start care in the first trimester of pregnancy as were women bearing their second child (72.3 percent compared with 76.5 percent, respectively, in 1975). The proportion of mothers starting care early decreased with successive births after the second birth for all age groups of mothers.

In 1975, less than half (43.5 percent) of the unmarried mothers started care as early as the first trimester of pregnancy in contrast to slightly more than three-quarters (76.7 percent) of the married mothers. The proportion of unwed mothers who received late or no care was nearly four times that of married mothers (16.2 percent compared with 4.3 percent). Care was generally started earlier, and there were proportionately fewer unmarried black than white mothers who had late or no care. Between 1969 and 1975 the proportion of black mothers (both married and unmarried) receiving late or no care dropped by about half; for married white mothers the decline was 26 percent and for unmarried white mothers, 30 percent.

Mothers who did not complete high school were far less likely to start care early and were more likely to have late or no care than were mothers with at least 12 years of schooling. In 1975, about half (50.7 percent) of the mothers

who had completed 8 years of schooling or less started care in the first trimester of pregnancy compared with about three-quarters (76.0 percent) of the mothers who had 12 years of schooling and 85.4 percent of the mothers with 13 years of schooling or more. Racial differences in the timing of care were not as noticeable for women with very limited educational attainment as for those with 9 years of schooling or more.

Although there were large variations in care received by mothers according to State of residence, there was a generally consistent pattern within each State of higher levels of late or no care for black mothers. For most States there were marked declines between 1969 and 1975 in the proportion of mothers having late or no care. Women living in metropolitan areas averaged 11.1 prenatal visits compared with 10.3 visits for women living in nonmetropolitan areas. For both types of areas, higher levels of education were associated with a greater average number of prenatal visits.

The relationship between the extent of care received and the outcome of pregnancy as measured by birth weight is equivocal. For mothers receiving care, the likelihood of a low-birth-weight outcome (2,500 grams or less—5 pounds 8 ounces or less) was found to be more dependent on the mother's educational attainment than on when care was initiated. As years of schooling increased, the incidence of low birth weight decreased, regardless of when care began. However, at all educational levels, the percent low birth weight was far higher when mothers had no care at all than when some care was received. This difference, however, is to some extent a reflection of the relatively high proportion of women in the "no-care" group delivering prematurely before they may have had the opportunity to receive care.

The proportion of low-birth-weight babies generally decreased as the frequency of prenatal visits increased, but for each level of visits, there was a higher proportion of black than white babies of low birth weight. The largest racial disparity was seen for mothers making 13-16 prenatal visits, where the percent low birth weight was nearly 2½ times as great for black as for white babies.

Out-of-wedlock births were far more likely than other births were to be of low birth weight when care was started at similar points in preg-

nancy. The incidence of low birth weight was about twice as high among out-of-wedlock as among other births when care started in the first trimester of pregnancy (12.3 percent compared with 6.0 percent in 1975). The percent low birth weight increased for legitimate births with each delay in initiation of care (from 6.0 percent in the first trimester of pregnancy to 7.4 percent in the last trimester). However, for out-of-wedlock births, there was a decrease in percent low birth weight when care was delayed (from 12.3 percent in the first trimester to 10.8 percent in the last trimester).

## TRENDS IN PRENATAL CARE

### Month of Pregnancy Prenatal Care Began

During the period 1969-75, there was a steady increase in the proportion of mothers starting care in the first few months of pregnancy. Concomitantly, the proportion of mothers initiating care in late pregnancy or having no prenatal care declined (table A and figure 1). For both white and black mothers, the most usual time for the first prenatal visit was during the first 3 months of pregnancy. In 1969, 72.4 percent of all white mothers started care in the first trimester of pregnancy; by 1975 this proportion had risen to 75.9 percent. The proportion of black mothers starting care in the first 3 months was far lower during this entire period, despite substantial year-to-year gains (42.7 percent in 1969 compared with 55.8 percent in 1975). The proportion of white mothers receiving late care (care starting in the third trimester of pregnancy) or no care declined from 6.4 percent in 1969 to 5.0 percent in 1975; for black mothers, the comparable decline was from 18.2 percent in 1969 to 10.5 percent in 1975. Thus in 1975, there still remained a very substantial gap between these racial groups in utilization of prenatal care services.

*Deterrents to care.*—A wide variety of factors have been identified as being influential in the delay in seeking care.<sup>8</sup> Foremost among these is the attitude that childbearing is a natural function that does not require medical intervention until the time of delivery. This assumption appears to be related to the cultural and socioeconomic background of the mother, and is

Table A. Percent distribution of live births by month of pregnancy prenatal care began, according to race: Reporting areas, 1969-75

Race	Total	Month of pregnancy prenatal care began								
		1st and 2d	3d	4th	5th	6th	7th	8th	9th	No prenatal care
<b>All races<sup>1</sup></b>										
1975	100.0	45.5	26.8	11.4	6.3	3.9	2.6	1.5	0.6	1.3
1974	100.0	44.9	27.2	11.4	6.4	3.9	2.6	1.6	0.6	1.4
1973	100.0	43.8	27.0	11.6	6.8	4.2	2.8	1.7	0.7	1.5
1972	100.0	42.4	27.0	12.0	7.1	4.5	3.0	1.7	0.7	1.6
1971	100.0	41.4	27.2	12.2	7.2	4.7	3.1	1.8	0.7	1.6
1970	100.0	41.2	26.7	12.1	7.3	4.8	3.4	2.0	0.8	1.7
1969	100.0	41.5	26.5	11.9	7.2	4.8	3.4	2.0	0.8	1.9
<b>White</b>										
1975	100.0	48.5	27.4	10.5	5.4	3.2	2.2	1.3	0.5	1.0
1974	100.0	48.0	27.9	10.4	5.4	3.2	2.2	1.3	0.5	1.0
1973	100.0	47.1	27.8	10.6	5.7	3.4	2.3	1.4	0.6	1.1
1972	100.0	45.7	27.9	11.1	6.0	3.7	2.4	1.4	0.6	1.1
1971	100.0	44.7	28.3	11.3	6.1	3.8	2.6	1.5	0.6	1.1
1970	100.0	44.5	27.9	11.3	6.2	3.9	2.7	1.6	0.7	1.2
1969	100.0	44.7	27.7	11.2	6.2	3.9	2.7	1.6	0.7	1.3
<b>Black</b>										
1975	100.0	31.6	24.2	16.0	10.8	6.9	4.4	2.4	1.0	2.7
1974	100.0	30.1	23.8	16.1	11.3	7.3	4.7	2.6	1.1	3.0
1973	100.0	28.2	23.2	16.3	11.9	7.9	5.0	2.8	1.2	3.4
1972	100.0	26.4	22.6	16.7	12.5	8.5	5.5	3.0	1.1	3.6
1971	100.0	24.8	21.8	16.5	13.0	9.2	6.1	3.3	1.2	4.0
1970	100.0	23.7	20.6	16.2	13.1	9.8	6.9	3.8	1.5	4.4
1969	100.0	22.8	19.9	15.8	13.0	10.3	7.3	4.2	1.6	5.1

<sup>1</sup>Includes races other than white and black.

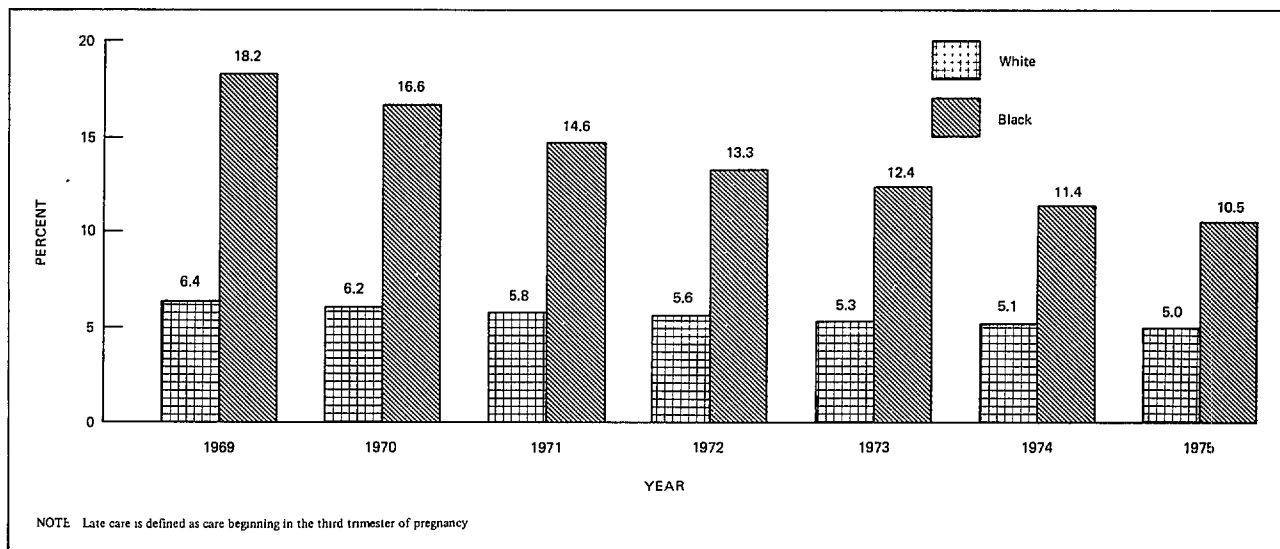


Figure 1. Percent of births where mother had late or no prenatal care, by race: Reporting areas, 1969-75

Table B. Percent distribution of live births by number of prenatal visits, according to race: Reporting areas, 1972-75

Race	Total	Number of prenatal visits										
		None	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19 or more
<b>All races<sup>1</sup></b>												
1975.....	100.0	1.0	2.2	4.6	8.7	13.7	22.6	26.9	11.2	6.3	1.3	1.5
1974.....	100.0	1.1	2.3	4.8	9.0	13.9	22.8	25.7	11.2	6.3	1.2	1.7
1973.....	100.0	1.2	2.6	5.1	9.5	14.3	22.9	24.8	10.7	6.2	1.2	1.4
1972.....	100.0	1.3	2.8	5.6	10.0	14.7	22.8	24.1	10.2	5.9	1.2	1.4
<b>White</b>												
1975.....	100.0	0.7	1.5	3.3	7.2	13.0	23.3	29.0	12.4	6.7	1.4	1.5
1974.....	100.0	0.7	1.6	3.5	7.4	13.2	23.4	28.0	12.4	6.8	1.4	1.7
1973.....	100.0	0.7	1.7	3.7	7.8	13.6	23.6	27.3	12.0	6.8	1.3	1.5
1972.....	100.0	0.8	1.9	4.1	8.3	14.0	23.8	26.5	11.4	6.5	1.3	1.4
<b>Black</b>												
1975.....	100.0	2.3	5.2	10.0	15.3	17.1	20.0	17.5	5.9	4.4	0.9	1.4
1974.....	100.0	2.8	5.6	10.4	15.9	17.2	20.1	16.0	5.6	4.2	0.7	1.6
1973.....	100.0	3.2	6.1	11.3	17.1	17.6	19.7	14.0	5.2	3.8	0.7	1.2
1972.....	100.0	3.5	6.8	12.3	17.7	17.9	18.6	13.5	4.6	3.3	0.7	1.1

<sup>1</sup>Includes races other than white and black.

more prevalent among low income and poorly educated groups. Ineligibility for and the inaccessibility of free medical care for women who do not have enough money to pay for private care are also major deterrents. Another obstacle for many pregnant women is the difficulty in arranging for medical visits, which often requires making provisions for child care or arranging to take time away from work. Additional deterrents for many are the forbidding settings and brusqueness that may be encountered in maternity clinics. For the unmarried mother, a potent factor causing delay in the initiation of care is the desire to conceal pregnancy as long as possible.

### Number of Prenatal Visits

According to standards recommended by the American College of Obstetricians and Gynecologists, pregnant women should ideally be seen at least once every 4 weeks for the first 28 weeks of pregnancy, every 2 weeks until the 36th week, and weekly thereafter. This amounts to about 13 visits for a normal 38-week pregnancy. Women with health problems should of necessity be seen more frequently.<sup>7</sup> The major factors that determine the total number of

prenatal visits are the time of the initiation of care, the length of the gestational period, and how frequently visits are made. These elements, in turn, are often correlated with the health or socioeconomic status of the mother. In 1975 only one-quarter of the variation in the total number of prenatal visits made by white and black mothers could be explained in terms of the timing of the first visit.<sup>a</sup> Thus length of gestation and frequency of visits were major determinants in the total care received.

Data on number of prenatal care visits have been available since 1972. Since that year, the proportion of black mothers making very few or no prenatal visits has been consistently higher than the comparable proportion of white mothers. In 1975, 17.5 percent of all black mothers limited their care to fewer than five visits, in contrast to only 5.5 percent of white mothers (table B). In 1972, the comparable proportions of women making fewer than five visits were 22.6 percent for black mothers and 6.8

<sup>a</sup>The relative explained variance ( $r^2$ ) between the number of prenatal visits and month of pregnancy care began was 0.25 in 1975 for white mothers and 0.26 for black mothers.

percent for white mothers. Thus, the racial disparity in amount of care received remained quite large, despite the proportionately greater gains during this period for black mothers.

*Gestational period.*—Nine or more prenatal visits has been defined as a minimum standard for births of 36 weeks of gestation or longer,<sup>2</sup> and is, therefore, used as a reference point in this discussion. On the average, three-quarters of all white mothers but only slightly more than half of the black mothers met this minimum criterion in 1975, despite greater gains for black mothers since 1972, as shown in table C.

Table D presents the median number of visits made for varying periods of gestation. For mothers seeing a doctor at least once before birth, the median number of visits made by white mothers was 11.0 in 1975, relatively unchanged from the median of 10.8 in 1972. For black mothers, the median number of visits increased from 8.2 in 1972 to 9.0 in 1975. As would be expected, the longer the gestational interval, the greater the median number of visits. However, there was only a minimal increase in the median number of visits after the 40th week of gestation. In 1975, the median number of visits made by white mothers still remained between 16 and 20 percent greater

Table C. Percent of births where mother made nine prenatal visits or more, by period of gestation and race: Reporting areas, 1972 and 1975

Period of gestation	White		Black	
	1975	1972	1975	1972
Total, 36 weeks and over .....	75.9	72.9	52.9	45.4
36 weeks.....	55.4	52.2	37.8	31.4
37-39 weeks.....	72.0	68.9	50.0	42.5
40 weeks.....	78.1	75.4	55.7	49.0
41-42 weeks.....	80.2	77.8	58.5	51.4
43 weeks and over .....	78.4	76.6	57.1	51.0

than for black mothers for similar gestational periods.

*Trimester of pregnancy prenatal care began.*—There were only small increases between 1972 and 1975 in the median number of prenatal care visits made when care was started in the same trimester of pregnancy (table E). The increases were slightly greater, generally, for black mothers than for white mothers. By 1975, relative racial differences were most noticeable when care began in the second trimester of pregnancy (8.8 visits for white mothers compared

Table D. Median number of prenatal visits, by period of gestation and race: Reporting areas, 1972 and 1975

[Excludes births to mothers with no prenatal care]

Race	Total <sup>1</sup>	Period of gestation							
		Under 28 weeks	28-31 weeks	32-35 weeks	36 weeks	37-39 weeks	40 weeks	41-42 weeks	43 weeks and over
<u>All races<sup>2</sup></u>									
1975.....	10.7	5.1	6.4	8.1	9.1	10.4	11.1	11.4	11.5
1972.....	10.4	4.8	6.1	7.8	8.7	10.1	10.8	11.2	11.3
<u>White</u>									
1975.....	11.0	5.4	6.7	8.5	9.5	10.6	11.2	11.6	11.8
1972.....	10.8	5.2	6.4	8.2	9.2	10.4	11.0	11.4	11.6
<u>Black</u>									
1975.....	9.0	4.6	5.7	7.1	7.9	9.1	9.6	9.9	9.8
1972.....	8.2	4.3	5.5	6.6	7.3	8.4	9.0	9.2	9.2

<sup>1</sup>Includes not stated period of gestation which is not shown separately.

<sup>2</sup>Includes races other than white and black.

Table E. Median number of prenatal visits, by trimester of pregnancy prenatal care began and race: Reporting areas, 1972 and 1975

[Excludes births to mothers with no prenatal care]

Race	All mothers receiving prenatal care	Trimester of pregnancy prenatal care began		
		First	Second	Third
<b>All races<sup>1</sup></b>				
1975 .....	10.8	11.5	8.4	4.6
1972 .....	10.4	11.4	8.1	4.4
<b>White</b>				
1975 .....	11.1	11.6	8.8	4.9
1972 .....	10.8	11.5	8.5	4.6
<b>Black</b>				
1975 .....	9.1	10.6	7.5	4.2
1972 .....	8.2	10.1	7.1	4.0

<sup>1</sup>Includes races other than white and black.

with 7.5 visits for black mothers) and least when care started in the first trimester (11.6 visits for white mothers compared with 10.6 visits for black mothers). Detailed information for the year 1975 on the number of prenatal visits made according to the month of pregnancy care began is presented in table 1.

The data shown in tables D and E suggest that the overall increase between 1972 and 1975 in median number of prenatal visits made by black mothers can be ascribed to an increase in the average length of gestation and to the trend to earlier initiation of care as well as to a greater frequency of visits. Table D shows that for each period-of-gestation category the increase in median number of visits from 1972 to 1975 was less than the increase for all gestational periods combined. This seeming anomaly is explained by the fact that during this time the distribution of black births by gestational period shifted to slightly longer gestations. For example, the percent born at 37 weeks or more increased from 82.3 to 83.9 percent. The overall increment in median number of visits for all gestational periods combined reflects this increase in proportion of full-term births, where the average number of visits is greater. Similarly, when com-

paring the median number of visits made in 1972 and 1975 by black mothers who started care in like trimesters of pregnancy (table E), the gain is greater for all trimesters combined than for any individual trimester, a reflection of the trend toward earlier care. In 1972, 49.0 percent of black mothers started care in the first trimester of pregnancy compared with 55.8 percent in 1975.

The small overall increase in the average number of visits made by white mothers, however, can be attributed mainly to an increased frequency of visits, since this increment is generally equal to or is less than the increases seen for individual periods of gestation or trimesters of pregnancy.

## DEMOGRAPHIC AND SOCIAL CHARACTERISTICS

### Age of Mother

*Teenage mothers.*—Teenage girls were less likely to start prenatal care early in pregnancy than any other age group of women, with the exception of mothers aged 45 years or more (table F). In 1975, only 30.5 percent of very young white mothers (those under 15 years of age) and 31.4 percent of black mothers in this age group started care in the first trimester of pregnancy. The situation was more favorable for older teenagers, with 56.7 percent of the white mothers and 45.2 percent of the black mothers aged 15-19 years starting care this early. Among these older teenagers, there was a greater likelihood of care starting early with each successively higher year of age.

In 1975, 23 percent of all white births to teenage mothers and 78 percent of all black births to teenagers were out of wedlock. The low percentage of teenage mothers initiating care early may thus be a consequence of the very large proportions of such mothers who were unmarried. (A further discussion of patterns of care for unwed mothers is presented in the section, "Marital Status of Mother.")

A major biological problem of pregnancy for young mothers is that the demands of the growing fetus are superimposed on the nutritional needs of teenagers who are often themselves still

Table F. Percent distribution of live births by month of pregnancy prenatal care began, according to age of mother and race of child:  
Total of 42 reporting States and the District of Columbia, 1975

Age of mother and race of child	Total	Month of pregnancy prenatal care began				
		1st and 2d	3d	4th-6th	7th-9th	No prenatal care
All races <sup>1</sup> .....	100.0	45.5	26.8	21.6	4.7	1.3
Under 15 years .....	100.0	14.5	16.4	48.0	16.2	4.9
15-19 years .....	100.0	27.8	25.5	35.8	8.5	2.3
15 years .....	100.0	18.5	21.2	44.3	12.6	3.4
16 years .....	100.0	20.9	23.4	42.5	10.4	2.8
17 years .....	100.0	24.5	25.2	38.7	9.2	2.4
18 years .....	100.0	28.1	25.9	35.5	8.3	2.2
19 years .....	100.0	33.9	26.8	30.4	7.0	1.9
20-24 years .....	100.0	46.1	27.3	20.8	4.5	1.3
25-29 years .....	100.0	54.3	27.1	15.0	2.8	0.8
30-34 years .....	100.0	51.7	27.2	16.9	3.3	1.0
35-39 years .....	100.0	43.3	27.0	23.0	5.0	1.7
40-44 years .....	100.0	34.9	26.1	28.6	7.8	2.7
45-49 years .....	100.0	26.4	23.1	37.1	8.4	5.0
White .....	100.0	48.5	27.4	19.1	3.9	1.0
Under 15 years .....	100.0	15.2	15.3	46.4	17.7	5.5
15-19 years .....	100.0	30.0	26.7	33.5	7.9	1.9
15 years .....	100.0	19.4	21.9	42.6	12.9	3.2
16 years .....	100.0	22.1	24.6	40.8	10.1	2.5
17 years .....	100.0	25.9	26.4	37.0	8.7	2.0
18 years .....	100.0	29.9	27.1	33.7	7.6	1.8
19 years .....	100.0	36.4	27.8	28.0	6.3	1.5
20-24 years .....	100.0	48.8	27.9	18.5	3.8	1.0
25-29 years .....	100.0	56.3	27.3	13.4	2.3	0.6
30-34 years .....	100.0	53.7	27.5	15.2	2.8	0.8
35-39 years .....	100.0	45.1	27.7	21.3	4.5	1.4
40-44 years .....	100.0	36.8	26.5	26.9	7.3	2.5
45-49 years .....	100.0	28.1	24.6	33.3	8.5	5.5
Black .....	100.0	31.6	24.2	33.7	7.8	2.7
Under 15 years .....	100.0	14.1	17.3	49.3	14.9	4.4
15-19 years .....	100.0	22.5	22.7	41.6	9.9	3.2
15 years .....	100.0	17.6	20.3	46.4	11.9	3.7
16 years .....	100.0	18.8	21.6	45.7	10.7	3.3
17 years .....	100.0	21.2	22.9	42.7	9.8	3.3
18 years .....	100.0	23.4	23.0	40.5	9.7	3.3
19 years .....	100.0	26.3	23.8	37.9	9.1	3.0
20-24 years .....	100.0	33.5	24.6	31.8	7.4	2.6
25-29 years .....	100.0	40.7	25.7	26.2	5.4	2.0
30-34 years .....	100.0	39.0	25.2	27.8	5.8	2.3
35-39 years .....	100.0	33.1	24.5	32.3	7.0	3.1
40-44 years .....	100.0	27.6	24.1	36.1	9.1	3.1
45-49 years .....	100.0	21.2	18.4	50.6	7.1	2.7

<sup>1</sup>Includes races other than white and black.

in the growth stage. The resulting competition for nutrients—all too often obtained from an inadequate diet<sup>9</sup>—may result in low-birth-weight babies who are more likely to suffer injury, sickness, and death.<sup>4</sup> In addition, toxemia of preg-

nancy and iron deficiency anemia appear to be special hazards for very young mothers.<sup>10</sup> Yet it is evident that this age group is less likely than most others to receive the early medical attention that would provide the opportunity for cor-

rective medical and nutritional measures to be initiated.

*Other age groups.*—Mothers in the later years of childbearing (40 years and over) were also less likely to start prenatal care early (table F). As with teenagers, the racial differential is quite large. In 1975, between 53 and 63 percent of all white mothers past age 39 initiated prenatal care in the first trimester compared with 40-52 percent of black mothers. In contrast, in the age groups 20-39 years, between 73 and 84 percent of the white mothers and 58-66 percent of the black mothers started care this early.

*Late or no care.*—Table G presents the percent of mothers starting care as late as the third trimester or receiving no care in 1969 and 1975, by the age of the mother. The proportion of white mothers with late or no care declined for all age groups except for women aged 40 years and over. The relative drop in this proportion was greatest for mothers aged 25-29 and 30-34 years and least for teenage girls and for women aged 35-39 years. For black mothers, the decline in late or no care was substantial for all ages, and in all instances, these declines far exceeded those for white mothers. Despite these greater declines for black mothers, by 1975 the overall percent of black mothers receiving late or no care was twice that of white mothers (10.5 percent compared with 5.0 percent).

In 1975, women aged 25-29 years were least likely to start care late or have no care (3.0 per-

cent of white mothers and 7.4 percent of black mothers). The proportion of mothers who had late or no care increased from these lows as the age of the mother increased or decreased (table G and figure 2). For women aged 45-49 years, the percent with late or no care was 14.0 for white mothers and 9.8 for black mothers; for girls under 15 years of age the comparable figures were 23.1 percent and 19.3 percent, respectively. The only two age groups where white mothers were more apt than black mothers were to receive late or no care were very young mothers (less than 15 years old) and women in the oldest years of childbearing (ages 45 years or more).

### Birth Order

Women bearing their first child were not as likely to start care in the first trimester of pregnancy as were women bearing their second child (table H). This is probably due to the fact that a higher proportion of first than of second births are to teenage mothers or are out of wedlock. As already noted, these two characteristics are closely associated with delay in seeking care. The proportion of mothers starting care early decreased with successive births after the second birth. In 1975, 72.3 percent of the women bearing their first child had early care compared with 76.5 percent of women having their second child. Only 55.5 percent of the mothers having a fifth or higher order birth started care early.

Table G. Percent of live births where mother received late<sup>1</sup> or no prenatal care, by age of mother and race of child: Reporting areas, 1969 and 1975

Age of mother	All races <sup>2</sup>		White		Black	
	1975	1969	1975	1969	1975	1969
All ages .....	6.0	8.2	5.0	6.4	10.5	18.2
Under 15 years.....	21.1	26.9	23.1	25.2	19.3	27.8
15-19 years .....	10.8	13.9	9.8	11.1	13.2	21.7
20-24 years .....	5.8	7.7	4.8	6.1	10.0	17.4
25-29 years .....	3.6	5.5	3.0	4.3	7.4	15.0
30-34 years .....	4.2	6.7	3.6	5.3	8.0	15.5
35-39 years .....	6.7	8.7	5.9	7.2	10.1	16.7
40-44 years .....	10.5	10.4	9.8	8.8	12.2	18.8
45-49 years .....	13.4	12.8	14.0	11.2	9.8	20.7

<sup>1</sup>Care initiated in the third trimester of pregnancy.

<sup>2</sup>Includes races other than white and black.



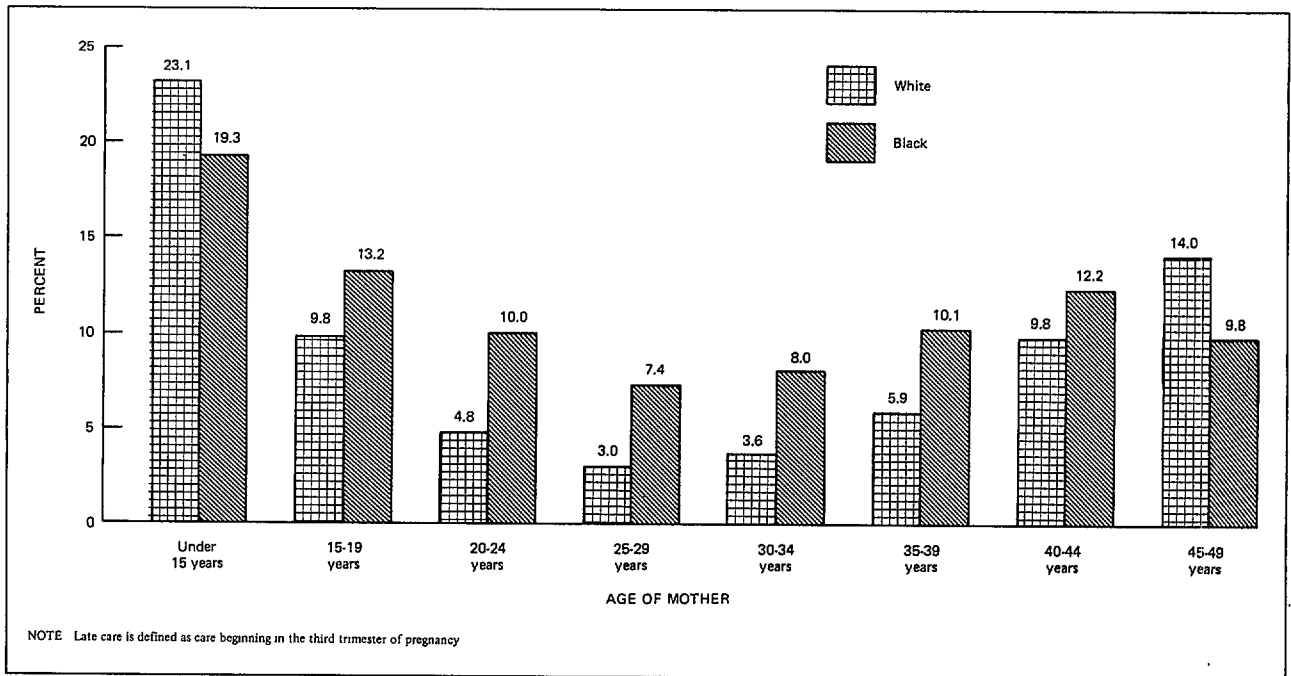


Figure 2. Percent of births where mother had late or no prenatal care, by age of mother and race: Reporting areas, 1975

Between 1969 and 1975, there was only a small increase (3 percentage points) in the proportion of white mothers having their first or second child who initiated care in the first trimester of pregnancy. For white mothers of higher order births, the gain was even less. Concomitantly, the proportion of white mothers with late or no care dropped slightly for all orders, except fifth and higher, where this proportion rose slightly. Regardless of the birth order of the child, black mothers showed substantial improvement in the proportion starting care early (increases ranging between 11 and 14 percentage points) and reduction in proportion receiving late or no care. For both races, the improvement in early care was due primarily to the increase in the proportion of mothers who started care in the first 2 months of pregnancy.

*Age and birth order.*—The interrelationship of the time of initiation of care, the age of the mother, and birth order of the child is presented in table J. Within each age group, the general pattern is that care is less likely to start early with each successive birth. For example, 78.9 percent of the mothers aged 20-24 years bearing their first child started care in the first trimester of pregnancy compared with 60.6 percent of the

mothers in this age group bearing their third child. A study of women who had given birth to one or more children revealed that though the great majority knew it was desirable that care be initiated during the first trimester of pregnancy, the proportion actually following this regimen was considerably less. The gap between performance and belief widened with increasing numbers of children.<sup>11</sup> Regardless of age of mother, the presence of other children in the home, particularly preschool children, may thus be a critical factor causing a delay in seeking care.

Since age of the mother and birth order of the child are such important determinants in the utilization of care, an effort was made to see how much of the changing pattern of care described earlier can be ascribed to changes in age of motherhood and in the proportion of low-order births that have taken place since 1969. The increase in low-order births since 1969 would tend to enhance any trend towards earlier initiation of care, while the small increase in proportion of teenage mothers would have the opposite effect.

To determine how much of the modification in distribution of care between 1969 and 1975 was a result of the net effect of these changes,

Table H. Percent distribution of live births by month of pregnancy prenatal care began, according to live-birth order and race: Reporting areas, 1969 and 1975

Live-birth order and month of pregnancy prenatal care began	All races <sup>1</sup>		White		Black	
	1975	1969	1975	1969	1975	1969
All birth orders .....	100.0	100.0	100.0	100.0	100.0	100.0
1st and 2d month.....	45.5	41.5	48.5	44.7	31.6	22.8
3d month.....	26.8	26.5	27.4	27.7	24.2	19.9
4th-6th month .....	21.6	23.9	19.1	21.2	33.7	39.1
7th-9th month .....	4.7	6.3	3.9	5.0	7.8	13.1
No prenatal care.....	1.3	1.9	1.0	1.3	2.7	5.1
First child.....	100.0	100.0	100.0	100.0	100.0	100.0
1st and 2d month.....	45.7	42.8	48.7	46.1	31.0	23.5
3d month.....	26.5	25.8	27.0	26.7	24.5	20.6
4th-6th month .....	22.1	23.8	19.6	21.1	34.8	40.2
7th-9th month .....	4.5	6.1	3.9	5.0	7.4	12.0
No prenatal care.....	1.1	1.4	0.9	1.0	2.2	3.7
Second child.....	100.0	100.0	100.0	100.0	100.0	100.0
1st and 2d month.....	49.3	45.4	52.0	48.4	34.1	24.3
3d month.....	27.3	27.4	27.8	28.5	24.2	20.2
4th-6th month .....	18.6	20.5	16.3	18.2	31.5	37.0
7th-9th month .....	3.8	5.1	3.1	3.9	7.5	13.1
No prenatal care.....	1.1	1.6	0.8	1.0	2.7	5.3
Third child .....	100.0	100.0	100.0	100.0	100.0	100.0
1st and 2d month.....	45.1	42.3	47.9	45.2	32.3	23.1
3d month.....	27.5	27.9	28.2	29.1	24.3	19.8
4th-6th month .....	21.5	22.5	19.1	20.2	32.7	38.1
7th-9th month .....	4.6	5.5	3.8	4.2	7.7	13.3
No prenatal care.....	1.4	1.8	1.1	1.2	2.9	5.7
Fourth child .....	100.0	100.0	100.0	100.0	100.0	100.0
1st and 2d month.....	39.6	37.8	42.1	40.6	30.7	22.0
3d month.....	27.1	27.2	28.1	28.6	23.8	19.9
4th-6th month .....	25.2	26.1	22.9	23.7	33.8	39.2
7th-9th month .....	6.0	6.6	5.3	5.4	8.2	13.1
No prenatal care.....	2.1	2.3	1.7	1.7	3.5	5.8
Fifth child and over.....	100.0	100.0	100.0	100.0	100.0	100.0
1st and 2d month.....	30.8	28.7	32.6	31.7	26.6	19.5
3d month.....	24.7	24.1	25.7	26.0	22.6	18.1
4th-6th month .....	31.3	32.3	29.3	29.9	36.9	40.5
7th-9th month .....	9.4	10.8	9.1	9.3	9.6	15.1
No prenatal care.....	3.8	4.1	3.5	3.1	4.3	6.9

<sup>1</sup>Includes races other than white and black.

the direct method of standardization was used. The results are shown in table K.

For white mothers, slightly more than half of the modest gain in early care (care beginning in the first trimester) between 1969 and 1975 can be attributed to the net effect of age and birth-order changes during this period. By contrast, the changes in age and birth-order distribu-

tion of black births since 1969 accounted for only a very small part of the increase in proportion of mothers receiving early care. Nearly 90 percent of the substantial gain in early care for black mothers can thus be attributed to other factors.

*Number of visits.*—For those mothers who made at least one visit for prenatal care, there

Table J. Percent of live births where prenatal care was initiated in the first trimester of pregnancy, by age of mother, live-birth order, and race of child: Total of 42 reporting States and the District of Columbia, 1975

Live-birth order and race of child	All ages	Age of mother				
		Under 20 years	20-24 years	25-29 years	30-39 years	40 years and over
All races <sup>1</sup> .....	72.4	52.9	73.4	81.5	76.9	60.3
First child.....	72.3	54.3	78.9	87.3	84.3	71.8
Second child.....	76.5	48.6	73.1	85.4	85.6	73.9
Third child.....	72.6	40.3	60.6	77.7	81.2	71.3
Fourth child.....	66.7	37.4	49.1	66.8	74.7	68.6
Fifth child and over.....	55.5	33.6	41.1	52.2	58.7	53.2
White.....	75.9	56.4	76.7	83.7	79.3	62.7
First child.....	75.7	57.4	81.2	88.7	85.6	72.9
Second child.....	79.8	52.9	76.0	86.9	87.2	75.1
Third child.....	76.0	42.4	64.2	79.9	83.1	73.3
Fourth child.....	70.2	41.0	51.2	69.6	76.9	69.6
Fifth child and over.....	58.2	41.3	40.7	53.8	61.4	55.7
Black.....	55.8	44.6	58.1	66.4	62.3	51.0
First child.....	55.6	46.3	64.7	76.1	74.8	63.4
Second child.....	58.3	40.6	58.8	72.4	73.2	64.8
Third child.....	56.7	38.2	50.9	65.0	67.7	61.4
Fourth child.....	54.5	35.3	46.2	57.2	62.7	61.2
Fifth child and over.....	49.2	28.4	42.3	49.8	50.9	46.6

<sup>1</sup>Includes races other than white and black.

Table K. Observed and standardized percent distribution of live births, by month of pregnancy prenatal care began and race: Reporting areas, 1969 and 1975

Month of pregnancy prenatal care began and race	1969	1975	
		Observed	Standardized <sup>1</sup>
<b>White</b>			
Total.....	100.0	100.0	100.0
1st-3d month.....	72.4	75.9	73.9
4th-6th month.....	21.2	19.1	20.4
7th-9th month.....	5.0	3.9	4.5
No prenatal care.....	1.3	1.0	1.3
<b>Black</b>			
Total.....	100.0	100.0	100.0
1st-3d month.....	42.7	55.8	54.2
4th-6th month.....	39.1	33.7	34.6
7th-9th month.....	13.1	7.8	8.2
No prenatal care.....	5.1	2.7	3.0

<sup>1</sup>Standardized by the direct method on the basis of the age of mother and birth-order distribution of births in 1969; see Technical Appendix.

was little change between 1972 and 1975 in the total number of prenatal visits, regardless of the birth order of the child (table L). For each birth order, the median number of visits made by white mothers increased by only 2-3 percent during this period. Increases in the median number of visits for each order were far higher for black mothers, ranging from 8 percent for first births to 11 percent for second and fifth and higher order births. Because of this greater increase in utilization of care by black mothers, the racial differential for each order narrowed somewhat. By 1975, however, white mothers still averaged between 17 and 22 percent more visits than black mothers did for each order.

For both races, the highest median numbers of visits in 1975 were for first and second order births (an average of 11.2 visits for white first and second order births compared with 9.2 visits for black first order births and 9.3 visits for black second order births). The median number of visits declined thereafter with each successive birth to a low of 9.8 and 8.4 visits for white and black fifth and higher order births, respectively.

Table L. Median number of prenatal visits, by live-birth order and race: Reporting areas, 1972 and 1975

[Excludes births to mothers with no prenatal care]

Race	All mothers receiving prenatal care	Live-birth order				
		First child	Second child	Third child	Fourth child	Fifth child and over
<u>All races<sup>1</sup></u>						
1975 .....	10.8	10.9	11.0	10.7	10.3	9.4
1972 .....	10.4	10.6	10.7	10.4	10.0	9.0
<u>White</u>						
1975 .....	11.1	11.2	11.2	11.0	10.6	9.8
1972 .....	10.8	10.9	11.0	10.8	10.3	9.5
<u>Black</u>						
1975 .....	9.1	9.2	9.3	9.1	8.9	8.4
1972 .....	8.3	8.5	8.4	8.3	8.1	7.6

<sup>1</sup>Includes races other than white and black.

### Marital Status of Mother

The number of out-of-wedlock<sup>b</sup> births has risen steadily in the last few decades. Moreover, the proportion of all births that are out of wedlock has also shown a long-term rise. In 1969, there were an estimated 360,800 out-of-wedlock births, representing 10 percent of all live births. By 1975, the estimated number of out-of-wedlock births had risen to 447,900 despite a general decline in the total number of births during this period. As a result, the proportion of all births that were out of wedlock increased to 14 percent in 1975.

The risk of a low-birth-weight outcome in 1975 was 67 percent higher for illegitimate than for legitimate white births (10.0 percent compared with 6.0 percent) and 30 percent higher for illegitimate than for legitimate black births (15.0 percent compared with 11.5 percent). Low birth weight in turn has been shown to be associated with an increased risk of both physical and mental impairment, and a higher rate of infant mortality, as noted earlier. The critical need for adequate prenatal care for unmarried pregnant women is thus clearly evident.

<sup>b</sup>The term "illegitimate" is used occasionally for convenience in writing.

Unmarried women encounter the whole range of deterrents to prenatal care that married women do. In addition, some deterrents, such as the desire to conceal pregnancy or to deny the existence of the pregnancy, are uniquely associated with unmarried status and are potent factors in delaying prenatal care.<sup>8</sup> In 1975, 16.2 percent of all unwed mothers had no care or started care as late as the third trimester of pregnancy. The comparable figure for married mothers was 4.3 percent. Less than half (43.5 percent) of the unmarried mothers had care starting as early as the first trimester of pregnancy compared with over three-quarters (76.7 percent) of the married mothers (table M).

Racial differences in the timing of care were far less pronounced among unmarried than among married mothers. Indeed, care was generally started earlier and there were proportionately fewer unmarried black than white mothers having late or no care. The proportion of unmarried black mothers starting care in the first trimester of pregnancy was 45.4 percent compared with 41.4 percent of white unmarried mothers. The proportion of unmarried black mothers with late or no care was 13.6 percent compared with 18.9 percent of unmarried white mothers. Among married women, however, the

Table M. Percent distribution of live births by month of pregnancy prenatal care began, according to legitimacy status and race: Total of 33 reporting States and the District of Columbia, 1975

Legitimacy status and race	Total	Month of pregnancy prenatal care began				
		1st and 2d	3d	4th-6th	7th-9th	No prenatal care
All races <sup>1</sup> .....	100.0	44.7	27.3	22.0	4.7	1.4
Legitimate births .....	100.0	48.4	28.3	19.0	3.5	0.9
Illegitimate births .....	100.0	21.9	21.6	40.3	11.9	4.3
White .....	100.0	47.7	28.0	19.3	3.9	1.0
Legitimate births .....	100.0	49.8	28.6	17.8	3.1	0.8
Illegitimate births .....	100.0	20.3	21.1	39.7	14.2	4.7
Black .....	100.0	30.7	24.1	34.7	7.7	2.7
Legitimate births .....	100.0	37.9	26.0	28.7	5.8	1.7
Illegitimate births .....	100.0	23.2	22.2	41.0	9.8	3.8

<sup>1</sup>Includes races other than white and black.

situation was more favorable for white than for black mothers. Care was initiated in the first trimester for 78.4 percent of the white married mothers compared with 63.9 percent of the black married mothers; the proportion of black married mothers starting care late or having no care was nearly double that of white married mothers (7.5 percent compared with 3.9 percent).

Figure 3 presents the changes that have taken place since 1969 in the proportion of mothers with late or no care by race and legitimacy status of the child. Although a reduction can be seen for each group, the greatest declines were for black mothers, both married and unmarried. Between 1969 and 1975, the proportion of black mothers receiving late or no care dropped by about half (from 14.9 to 7.5 percent for married women and from 26.0 to 13.6 percent for unmarried women). For white mothers, the comparable declines were 26 percent for married women (from 5.3 to 3.9 percent) and 30 percent for unmarried women (from 26.9 to 18.9 percent).

### Educational Attainment of Mother

Items on educational attainment of parents have been included on birth certificates in recent

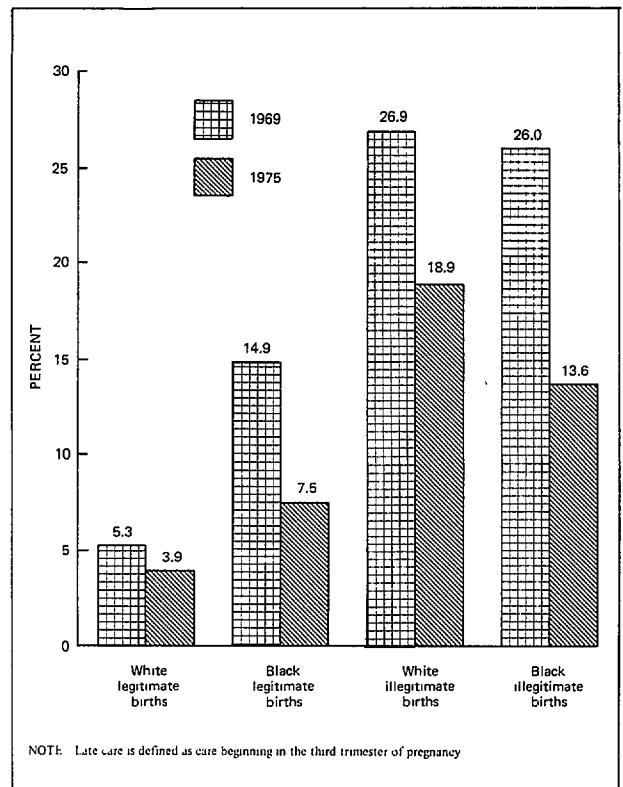


Figure 3. Percent of births where mother received late or no prenatal care, by legitimacy status and race: Reporting areas, 1969 and 1975

years to provide a measure of the socioeconomic status of the family. Data on education of the mother are particularly useful in measuring socioeconomic differences since information about the father is often missing for out-of-wedlock births.

The point in pregnancy at which a mother seeks prenatal care is directly related to the years of schooling she has completed. Mothers with low educational attainment are less apt to start care early in pregnancy than are mothers with more adequate schooling.<sup>c</sup> In 1975, only 50.7 percent of the mothers who had completed 8 years of schooling or less started care in the first trimester of pregnancy, compared with 76.0 percent of the mothers who had 12 years of schooling only, and 85.4 percent of the mothers with 13 years of schooling or more (table N). Differences in the proportion of mothers with late or no care in relation to educational attainment are even more striking. Only 4.2 percent of the mothers who had completed high school only and 2.1 percent of the mothers with more than 12 years of schooling delayed care until the third trimester of pregnancy or received no care, compared with 14.4 percent of the mothers who had completed 8 years of schooling or less. Similarly, large differences in care received according to educational attainment were seen for each racial group (figure 4).

Since 1969, there has been an increase in the proportion of mothers at all educational levels starting care early, with a concomitant decrease in proportion having late or no care. However, at each educational level, the gains have been relatively greater for black than for white mothers.

Racial differences in the timing of care were not as noticeable for women with low educational attainment (0-8 years of schooling) as for women with higher levels of schooling, as shown in table O, which is based on data for the year 1975.

### Place of Residence

There are extremely large variations in the prenatal care pregnant women receive according

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<sup>c</sup>Many of these mothers are, of course, young teenagers who have not had the opportunity to complete their schooling. In 1975, teenagers comprised 31 percent of all mothers having 8 years of schooling or less and 46 percent of the mothers with 9-11 years of schooling.

to State of residence (table P and tables 2 and 3). Moreover, within each State there is a generally consistent pattern of higher levels of late or no care for black than for white mothers. In 1975, the proportion of white mothers with late or no care varied from a low of 1.6 percent (Utah) to a high of 11.0 percent (Arizona); for black mothers the proportion with late or no care ranged from 1.6 percent (Maine) to 18.3 percent (West Virginia). There was an even wider variation among States in the care received by women of other races. However, when interpreting these data, it should be borne in mind that the category "other races" includes a wide diversity of racial and ethnic groups (see Technical Appendix) with varying representation from State to State. Additionally, for both the "black" and "other races" categories, the percents shown are frequently based on relatively small numbers that may cause large year-to-year fluctuations.

For many reporting States, there was a noticeable reduction between 1969 and 1975 in the proportion of mothers with late or no care. The decreases were generally far more substantial for black than for white mothers. However, as noted earlier, the level of late or no care within each State generally remained substantially higher for black mothers at the end of this period.

Women living in metropolitan areas tended to make more prenatal visits than did women living in nonmetropolitan areas (table Q). In 1975, white mothers living in metropolitan areas averaged 11.4 prenatal visits, about 8 percent more than did their counterparts living in nonmetropolitan areas, who averaged 10.6 visits. Black mothers averaged fewer visits for prenatal care than white mothers did in both metropolitan areas and nonmetropolitan areas. Additionally, the difference in number of visits between these two types of areas was nearly twice as great for black as for white mothers. In metropolitan areas, black mothers averaged 9.5 prenatal visits, 14 percent more than did black mothers in nonmetropolitan areas who averaged 8.3 visits. Both white and black mothers living in large urban places within metropolitan areas averaged slightly fewer prenatal visits than did their counterparts residing in less urbanized portions of metropolitan areas.

Table N. Percent distribution of live births by month of pregnancy prenatal care began, according to educational attainment of mother and race of child: Reporting areas, 1969 and 1975

Years of school completed by mother and race of child	Total	Month of pregnancy prenatal care began				
		1st and 2d	3d	4th-6th	7th-9th	No pre-natal care
<u>All races<sup>1</sup></u>						
All levels of schooling:						
1975 .....	100.0	45.4	27.1	21.8	4.6	1.1
1969 .....	100.0	41.5	26.7	24.0	6.3	1.6
0-8 years:						
1975 .....	100.0	27.5	23.3	34.9	11.2	3.2
1969 .....	100.0	24.4	21.0	35.8	14.0	4.8
9-11 years:						
1975 .....	100.0	31.0	25.6	33.2	8.1	2.1
1969 .....	100.0	30.0	23.9	32.9	10.3	2.9
12 years:						
1975 .....	100.0	47.6	28.4	19.8	3.5	0.7
1969 .....	100.0	44.6	28.5	21.5	4.5	0.9
13 years or more:						
1975 .....	100.0	58.3	27.2	12.4	1.8	0.3
1969 .....	100.0	53.4	27.8	15.6	2.8	0.4
<u>White</u>						
All levels of schooling:						
1975 .....	100.0	48.8	27.9	18.9	3.7	0.7
1969 .....	100.0	44.9	28.0	21.2	4.9	1.0
0-8 years:						
1975 .....	100.0	29.3	24.0	33.0	10.8	2.8
1969 .....	100.0	27.1	22.4	33.8	12.8	3.8
9-11 years:						
1975 .....	100.0	34.0	26.9	30.4	7.2	1.4
1969 .....	100.0	34.5	26.1	29.4	8.2	1.9
12 years:						
1975 .....	100.0	50.5	29.1	17.2	2.7	0.5
1969 .....	100.0	47.2	29.5	19.3	3.5	0.5
13 years or more:						
1975 .....	100.0	60.0	27.4	11.0	1.4	0.2
1969 .....	100.0	54.7	28.1	14.6	2.4	0.2
<u>Black</u>						
All levels of schooling:						
1975 .....	100.0	30.7	23.8	34.6	8.2	2.7
1969 .....	100.0	22.6	19.4	39.6	13.7	4.7
0-8 years:						
1975 .....	100.0	21.9	20.9	41.4	11.8	4.0
1969 .....	100.0	16.0	16.9	43.0	17.3	6.8

See footnote at end of table.

Table N. Percent distribution of live births by month of pregnancy prenatal care began, according to educational attainment of mother and race of child: Reporting areas, 1969 and 1975—Con.

Years of school completed by mother and race of child	Total	Month of pregnancy prenatal care began				
		1st and 2d	3d	4th-6th	7th-9th	No prenatal care
<b>Black—Con.</b>						
<b>9-11 years:</b>						
1975 .....	100.0	24.1	22.6	40.0	9.8	3.5
1969 .....	100.0	17.3	17.6	43.3	15.9	5.8
<b>12 years:</b>						
1975 .....	100.0	33.2	25.0	32.6	7.2	2.1
1969 .....	100.0	26.1	21.0	37.7	11.7	3.5
<b>13 years or more:</b>						
1975 .....	100.0	46.1	25.3	22.8	4.8	1.0
1969 .....	100.0	38.9	23.8	28.0	7.3	1.9

<sup>1</sup>Includes races other than white and black.

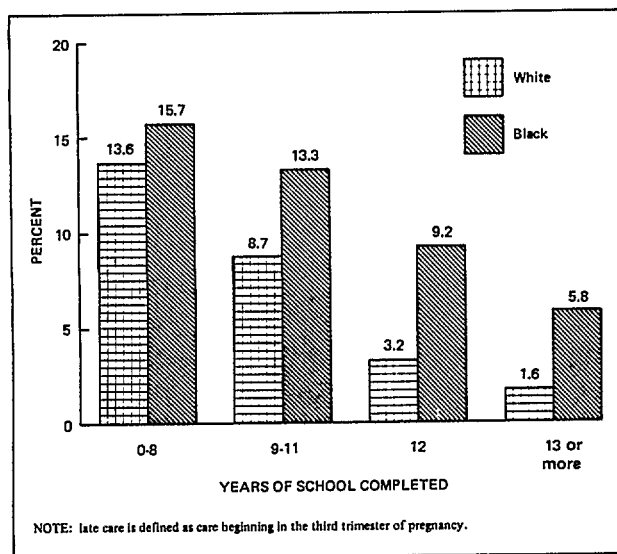


Figure 4. Percent of births where mother had late or no care, by educational attainment of mother and race: 39 reporting States and the District of Columbia, 1975

For mothers living in both metropolitan and nonmetropolitan areas, increasing educational attainment is associated with a greater number of prenatal visits. Women residing in metropolitan areas who had completed 16 years of schooling or more averaged 31 percent more

Table O. Percent of mothers starting care in first trimester of pregnancy and percent of mothers with late or no care, by educational attainment of mother and race: Total of 42 reporting States and the District of Columbia, 1975

Race	Years of school completed by mother	
	0-8 years	9 years or more
	Percent of mothers starting care in first trimester of pregnancy	
White .....	53.4	78.1
Black.....	42.8	55.6
	Percent of mothers with late or no care	
White .....	13.6	3.8
Black.....	15.7	10.3

prenatal care visits than did women with only 8 years of schooling or less living in these areas; the comparable difference for residents of non-metropolitan areas was 37 percent.

Differences in the average number of visits by area of residence are reduced as the educational attainment of the mother increases (table Q). For example, mothers with 8 years of



Table Q. Median number of prenatal visits in metropolitan and nonmetropolitan areas and in urban places of 50,000 population or more, by educational attainment of mother and race of child: Total of 37 reporting States and the District of Columbia, 1975

[Excludes births to mothers with no prenatal care]

Years of school completed by mother and race of child	All areas	Metropolitan areas			Non-metropolitan areas
		Total	Urban places of 50,000 or more	Bal-ance of area	
All races <sup>1</sup> .....	10.8	11.1	10.8	11.3	10.3
0-8 years.....	8.6	9.0	8.8	9.4	8.3
9-11 years.....	9.5	9.7	9.5	10.1	9.3
12 years.....	11.0	11.2	11.1	11.4	10.6
13-15 years.....	11.5	11.7	11.6	11.7	11.1
16 years or more.....	11.7	11.8	11.8	11.8	11.4
White.....	11.1	11.4	11.3	11.4	10.6
0-8 years.....	9.1	9.2	9.0	9.6	8.7
9-11 years.....	10.0	10.2	10.1	10.4	9.7
12 years.....	11.2	11.5	11.4	11.5	10.8
13-15 years.....	11.6	11.8	11.8	11.8	11.2
16 years or more.....	11.8	11.9	11.9	11.9	11.5
Black.....	9.1	9.5	9.4	9.7	8.3
0-8 years.....	7.5	8.1	8.2	7.9	6.9
9-11 years.....	8.2	8.5	8.6	8.4	7.6
12 years.....	9.5	9.8	9.7	10.0	8.9
13-15 years.....	10.4	10.6	10.5	10.8	9.8
16 years or more.....	11.4	11.5	11.5	11.7	11.1

<sup>1</sup>Includes races other than white and black.

## PRENATAL CARE AND LOW BIRTH WEIGHT

Reduction in number of low-birth-weight babies has been one of the prime objectives of all programs of prenatal care. As noted earlier, low birth weight is associated with a greatly increased frequency of infant mortality and morbidity. Weight at birth is known to be correlated with such factors as gestational age, race, age of mother (data from the National Center for Health Statistics), weight gain during pregnancy,<sup>12</sup> cigarette smoking,<sup>13</sup> and socioeconomic status.<sup>14</sup> Whether or not there is an association between prenatal care and birth weight is difficult to establish, since access to care and the quality of prenatal care are, in turn, related to many other variables. Thus if an association between prenatal care and birth weight is observed, it is

necessary to ascertain whether care itself is the critical factor.

### Educational Attainment of Mother

As shown in table R, the likelihood of a low-birth-weight outcome is far more dependent on the mother's educational attainment than on when prenatal care is initiated. For mothers of the same race with similar educational backgrounds, starting care late rather than early in pregnancy generally resulted in only a small increase or in an actual decline in the proportion of babies of low birth weight. As years of schooling increased, the incidence of low birth weight decreased, regardless of when care began. For white births, the decline in proportion of birth weight was from 8.8 percent for mothers with 0-8 years of schooling, to 4.7 percent for mothers who had completed college; for black

Table R. Percent of infants of low birth weight, by educational attainment of mother, month of pregnancy prenatal care began, and race of child: Total of 39 reporting States and the District of Columbia, 1975

Month of pregnancy prenatal care began and race of child	Total	Years of school completed by mother				
		0-8	9-11	12	13-15	16 or more
All races <sup>1</sup> .....	7.5	10.2	10.3	6.9	5.9	5.1
1st and 2d month .....	6.5	9.1	9.3	6.2	5.5	5.1
3d month.....	6.9	9.5	9.5	6.3	5.6	4.8
4th-6th month .....	8.9	10.3	10.5	8.0	6.8	5.4
7th-9th month .....	8.7	9.6	9.9	7.8	6.6	4.9
No prenatal care .....	22.6	21.3	24.1	22.0	18.0	15.8
White .....	6.3	8.8	8.5	5.9	5.2	4.7
1st and 2d month .....	5.7	8.1	7.9	5.6	5.0	4.7
3d month.....	5.9	8.4	8.1	5.5	4.9	4.4
4th-6th month .....	7.2	8.8	8.7	6.6	5.7	4.7
7th-9th month .....	7.3	8.3	8.4	6.5	5.3	3.8
No prenatal care .....	19.4	19.1	20.8	18.8	14.7	13.7
Black.....	13.2	15.0	14.8	12.1	11.0	9.5
1st and 2d month .....	12.1	14.0	14.3	11.3	10.6	9.3
3d month.....	12.4	13.9	13.8	11.6	10.6	9.5
4th-6th month .....	13.2	14.8	14.2	12.2	11.1	9.8
7th-9th month .....	12.0	13.9	13.0	10.8	9.8	7.4
No prenatal care .....	27.7	27.7	28.3	26.8	23.7	22.3

<sup>1</sup>Includes races other than white and black.

births, the comparable decline was from 15.0 percent to 9.5 percent. At all educational levels, however, the percent of low birth weight was far lower when mothers received some care than when no care at all was received. Some of this differential is explained by the large numbers of premature births included in the "no-care" category (see next section, "Effect of Premature Delivery").

### Effect of Premature Delivery

Several researchers have postulated that the large difference in the percent low birth weight between births to mothers who had received no care and births for which mothers had late care is not due to any benefits derived from the provision of care, but because when mothers deliver early they do not have the opportunity to receive care.<sup>15,16</sup> Mothers delivering before the ninth month of gestation who had delayed initiating care to that point would be classified in the "no-care" category. Such premature births (less than 37 weeks of gestation) would

be far more likely to be of low birth weight than would full-term births. The "no-care" category is thus heavily weighted with premature births of low birth weight. In 1975, 26 percent of the births to mothers with no care were premature compared with only 8 percent of the births to mothers starting care in the first trimester of pregnancy and 10 percent of the births to mothers starting care in the last trimester. The differential in proportion of babies of low birth weight for mothers having no care compared with mothers starting care in the third trimester is considerably reduced when premature births are excluded from the comparison. The effect of the exclusion of premature births is the same for both racial groups (table S).

### Age of Mother

Teenage girls and women 40 years of age or older were more likely than were women in other age groups to bear babies of low birth weight. For all groups, the proportion of low-birth-weight infants increased when the start of

Table S. Percent of infants of low birth weight, by time of initiation of prenatal care, period of gestation, and race: Total of 39 reporting States and the District of Columbia, 1975

Period of gestation and race	Care starting in third trimester	No prenatal care	Ratio of percents
<u>All races<sup>1</sup></u>			
All gestational ages.....	8.3	20.1	2.4
37 weeks or more.....	5.1	7.9	1.5
<u>White</u>			
All gestational ages.....	6.9	16.7	2.4
37 weeks or more.....	4.2	6.2	1.5
<u>Black</u>			
All gestational ages.....	12.2	27.4	2.2
37 weeks or more.....	7.6	11.1	1.5

<sup>1</sup>Includes races other than white and black.

care was delayed to the second or third trimester of pregnancy, and receiving no care at all was generally associated with a dramatic elevation in the incidence of low birth weight (table T). However, the increased likelihood of low birth weight when no care is received is due, in part, to the large number of women with no care who deliver prematurely, and thus lack the opportunity to receive care. For a more detailed explanation of this point, see the preceding section, "Effect of Premature Delivery." The risk of low birth weight was considerably higher for black than for white babies when mothers were under 40 years of age, no matter when care was initiated. However, at older ages this racial differential was reduced somewhat.

Educational attainment is of necessity limited for young girls and is, therefore, an inadequate measure of socioeconomic status for teenagers. For women who were old enough to have completed at least a high school education, the same relationship between low birth weight, timing of care, and years of school completed, previously noted for all women, was observed. That is, for each age group, the years of school completed was a more important predictor of the extent of low birth weight than was the trimester of pregnancy that care was initiated.

## Number of Prenatal Visits

Table U presents the proportion of low-birth-weight babies according to the number of prenatal visits and the time of pregnancy prenatal care was begun. In general, as the frequency of visits increased, the proportion of babies that were of low birth weight declined. This relationship was true regardless of what point in pregnancy prenatal care was initiated. When care was limited to 1-4 visits, 19.6 percent of the babies were of low birth weight; when mothers made 13-16 visits, only 3.3 percent of the babies were of low birth weight. However, when more than 16 visits were made, the percent low birth weight rose to 5.1. This is probably an indication that women having this intensity of care had a higher than average number of complications of pregnancy. A study of a large number of births during the years 1961 and 1962 found that there was an increase in perinatal mortality among the offspring of mothers who had made 16 or more prenatal visits. These women showed a marked increase in the number of maternal complications.<sup>17</sup>

At each level of visits, a higher proportion of black than of white babies were of low birth weight. Although these racial differences were not large when mothers made 1-8 visits, for mothers making 9-12 visits the proportion of low-birth-weight black babies was slightly more than twice that of white babies. The largest racial difference was seen for mothers making 13-16 visits, where the percent low birth weight was nearly 2½ times higher for black than for white babies.

It is of interest that for nearly all visit categories, earlier care was associated with a greater proportion of babies of low birth weight. For example, when 5-8 visits were made, the proportion low birth weight was 17.4 percent for care starting in the first or second month, but only 5.4 percent when care was delayed until the seventh to ninth month of pregnancy. These large differences in percent low birth weight are not seen when premature births are excluded from the comparison, as shown in table V. This is an indication that such births are more heavily represented in the early care categories for most visit levels.

Table W shows the percent low birth weight for different levels of educational attainment

Table T. Percent of infants of low birth weight, by age of mother, month of pregnancy prenatal care began, and race of child: Total of 39 reporting States and the District of Columbia, 1975

Month of pregnancy prenatal care began and race of child	Total	Age of mother			
		Under 20 years	20-29 years	30-39 years	40 years and over
All races <sup>1</sup> .....	7.5	10.3	6.8	7.3	9.7
1st and 2d month .....	6.5	9.4	6.0	6.5	8.6
3d month.....	6.9	9.4	6.3	6.8	8.6
4th-6th month.....	8.9	10.4	8.0	8.5	10.6
7th-9th month.....	8.7	9.8	8.0	8.2	9.4
No prenatal care .....	22.6	26.3	20.7	20.5	21.0
White .....	6.3	8.3	5.8	6.4	8.7
1st and 2d month .....	5.7	7.6	5.4	6.0	8.0
3d month.....	5.9	7.6	5.5	6.0	7.5
4th-6th month.....	7.2	8.4	6.6	7.3	9.4
7th-9th month.....	7.3	8.0	6.7	7.8	9.1
No prenatal care .....	19.4	23.6	17.2	16.9	24.8
Black.....	13.2	15.0	12.2	12.3	13.0
1st and 2d month .....	12.1	14.9	11.4	10.9	11.1
3d month.....	12.4	14.3	11.3	12.0	13.4
4th-6th month.....	13.2	13.1	12.4	12.6	14.6
7th-9th month.....	12.0	30.3	11.5	10.4	10.9
No prenatal care .....	27.7	18.2	26.0	27.4	15.0

<sup>1</sup>Includes races other than white and black.

according to the number of prenatal visits. It is apparent that at all educational levels the probability of a low-birth-weight outcome declined dramatically as the number of visits increased, up to 16 visits. In addition, when more than 8 visits were made, there was, in general, a consistent decline in the percent low birth weight as years of schooling increased.

It was not possible to analyze further these data according to differences in income within each level of schooling. However, a study of factors influencing prenatal care in the Boston metropolitan area<sup>11</sup> determined that for women having the same educational background, those with higher incomes were more likely to receive adequate care as measured by the time of initiation of care and the number of visits. Thus the intensity of care (as measured by number of visits) may be a further refinement in measurement of socioeconomic status within each educational category. The association between low birth weight and number of prenatal visits thus may be to some extent a secondary one, de-

pendent in part on the socioeconomic status of the mother.

### Marital Status of Mother

No matter at what point in pregnancy prenatal care began, out-of-wedlock births were more likely than were other births to be of low birth weight (table X). When care began in the first 2 months of pregnancy, the incidence of low birth weight was approximately two-thirds greater among white illegitimate births than among white legitimate births (9.2 compared with 5.5 percent) and more than one-third higher among black illegitimate births than among black legitimate births (14.9 percent compared with 10.8 percent). This differential by marital status was considerably reduced when care was delayed until the second or third trimester of pregnancy.

For legitimate white births, the percent low birth weight rose slightly with each delay in starting care, from 5.5 percent in the first and second months of pregnancy to 6.8 percent in

Table U. Percent of infants of low birth weight, by month of pregnancy prenatal care began, number of prenatal visits, and race: Total of 37 reporting States and the District of Columbia, 1975

Number of prenatal visits and race	Total	Month of pregnancy prenatal care began				
		1st and 2d	3d	4th-6th	7th-9th	No prenatal care
All races <sup>1</sup> .....	7.4	6.4	6.8	8.7	8.7	22.2
No visits.....	22.2	...	...	...	...	22.2
1-4 visits.....	19.6	30.5	30.2	21.7	11.5	...
5-8 visits.....	11.5	17.4	12.2	8.6	5.4	...
9-12 visits.....	4.9	5.1	4.6	4.8	4.2	...
13-16 visits.....	3.3	3.3	3.1	3.9	2.9	...
17 visits or more.....	5.1	5.1	5.2	5.9	3.7	...
White.....	6.2	5.6	5.8	7.1	7.4	18.9
No visits.....	18.9	...	...	...	...	18.9
1-4 visits.....	18.5	31.3	30.8	20.7	10.1	...
5-8 visits.....	10.8	16.9	11.5	7.4	4.7	...
9-12 visits.....	4.3	4.5	4.0	4.0	3.3	...
13-16 visits.....	2.9	2.9	2.7	3.3	1.9	...
17 visits or more.....	4.4	4.4	4.4	4.6	1.9	...
Black.....	13.2	12.3	12.3	13.2	12.3	27.9
No visits.....	27.9	...	...	...	...	27.9
1-4 visits.....	22.4	30.7	30.6	23.9	14.9	...
5-8 visits.....	14.0	19.8	15.3	11.8	7.8	...
9-12 visits.....	9.0	9.6	9.0	8.2	7.2	...
13-16 visits.....	7.1	7.1	7.2	6.8	7.7	...
17 visits or more.....	9.5	9.3	9.6	9.6	11.8	...

<sup>1</sup>Includes races other than white and black.

Table V. Percent of full-term<sup>1</sup> infants of low birth weight, by month of pregnancy prenatal care began and number of prenatal visits: Total of 35 reporting States and the District of Columbia, 1975

Number of prenatal visits	Total	Month of pregnancy prenatal care began				
		1st and 2d	3d	4th-6th	7th-9th	No prenatal care
Total.....	3.5	2.9	3.3	4.4	5.3	8.0
No visits.....	8.0	...	...	...	...	8.0
1-4 visits.....	6.9	6.7	7.6	6.9	6.8	...
5-8 visits.....	4.8	4.7	4.8	5.0	4.0	...
9-12 visits.....	3.0	2.9	3.0	3.3	2.9	...
13-16 visits.....	2.2	2.1	2.3	2.8	1.9	...
17 visits or more.....	3.0	2.8	3.3	3.9	5.1	...

<sup>1</sup>37 weeks of gestation or more.

Table W. Percent of infants of low birth weight, by educational attainment of mother, number of prenatal visits, and race of child: Total of 35 reporting States and the District of Columbia, 1975

Number of prenatal visits and race of child	Total	Years of school completed by mother				
		0-8	9-11	12	13-15	16 or more
All races <sup>1</sup> .....	7.5	10.4	10.1	6.8	5.9	5.0
No visits .....	22.2	20.7	24.0	21.0	16.8	18.9
1-4 visits .....	19.6	17.1	19.7	19.9	21.0	22.2
5-8 visits .....	11.5	10.8	11.7	11.2	11.9	11.9
9-12 visits .....	4.9	6.8	6.5	4.6	4.2	3.8
13-16 visits .....	3.4	5.3	5.0	3.1	2.8	2.6
17 visits or more .....	5.2	6.7	7.0	4.8	4.7	4.2
White .....	6.2	9.0	8.4	5.8	5.1	4.5
No visits .....	18.9	17.7	20.6	18.5	13.1	14.9
1-4 visits .....	18.5	15.3	18.7	19.1	20.6	21.6
5-8 visits .....	10.8	9.8	10.7	10.6	11.3	11.6
9-12 visits .....	4.3	6.0	5.5	4.1	3.8	3.4
13-16 visits .....	2.9	4.7	4.1	2.8	2.5	2.4
17 visits or more .....	4.4	5.4	5.9	4.1	4.2	3.7
Black .....	13.2	15.5	14.6	12.1	11.1	9.8
No visits .....	27.9	28.8	28.8	25.4	24.2	31.1
1-4 visits .....	22.3	21.8	21.9	22.3	23.7	29.5
5-8 visits .....	13.9	13.9	14.0	13.5	15.0	15.7
9-12 visits .....	9.0	11.2	9.9	8.5	7.9	7.9
13-16 visits .....	7.1	9.0	9.3	6.3	6.1	5.0
17 visits or more .....	9.6	12.2	10.6	9.3	8.7	7.8

<sup>1</sup>Includes races other than white and black.

Table X. Percent of infants of low birth weight, by month of pregnancy prenatal care began, legitimacy status, and race: Total of 33 reporting States and the District of Columbia, 1975

Legitimacy status and race	Total	Month of pregnancy prenatal care began				
		1st and 2d	3d	4th-6th	7th-9th	No prenatal care
All races <sup>1</sup> .....	7.4	6.4	6.8	8.7	8.6	20.0
Legitimate births .....	6.5	5.9	6.2	7.5	7.4	15.8
Illegitimate births .....	12.8	12.5	12.2	12.2	10.8	25.3
White .....	6.2	5.6	5.9	7.1	7.3	16.7
Legitimate births .....	6.0	5.5	5.7	6.7	6.8	14.3
Illegitimate births .....	10.0	9.2	9.2	9.3	8.9	21.5
Black .....	13.3	12.3	12.6	13.3	12.5	27.2
Legitimate births .....	11.5	10.8	11.2	11.6	10.9	22.5
Illegitimate births .....	15.1	14.9	14.3	14.5	13.4	29.4

<sup>1</sup>Includes races other than white and black.

Table Y. Percent of infants of low birth weight, by month of pregnancy prenatal care began, area of residence, and race: Total of 42 reporting States and the District of Columbia, 1975

Area of residence and race	Total	Month of pregnancy prenatal care began				
		1st and 2d	3d	4th-6th	7th-9th	No pre-natal care
All races <sup>1</sup> .....	7.4	6.4	6.8	8.5	8.3	20.1
Metropolitan counties.....	7.5	6.5	7.1	8.8	8.3	20.2
Nonmetropolitan counties.....	7.0	6.1	6.5	8.0	8.2	19.9
White.....	6.2	5.7	5.9	7.0	6.9	16.7
Metropolitan counties.....	6.2	5.7	5.9	7.0	6.7	16.2
Nonmetropolitan counties.....	6.2	5.6	5.9	7.0	7.3	18.0
Black.....	13.1	12.0	12.4	13.2	12.2	27.4
Metropolitan counties.....	13.3	12.1	12.6	13.4	12.2	27.2
Nonmetropolitan counties.....	12.6	11.9	11.8	12.6	12.0	27.9

<sup>1</sup>Includes races other than white and black.

the last trimester of pregnancy. However, for white out-of-wedlock births, the percent low birth weight was *lower* when care started late in pregnancy. There was virtually no change in the risk of low birth weight according to the timing of care for black legitimate births, but as observed for white out-of-wedlock births, the proportion low birth weight *declined* with delay in care for black out-of-wedlock births. However, these declines were not found when the comparison was limited to full-term out-of-wedlock births. The percent low birth weight for white out-of-wedlock full-term births increased from 4.4 when care started in the first 2 months of pregnancy to 5.1 when care was delayed to the last trimester; for black out-of-wedlock births, the corresponding rise was from 7.1 percent to 8.7 percent. It is evident, then, that premature out-of-wedlock births (of low birth weight) are

more heavily represented in the earlier than in the later care categories.

### Area of Residence

The risk of low birth weight for white babies was the same in metropolitan and nonmetropolitan areas, but was slightly higher for black babies in metropolitan than in nonmetropolitan areas (table Y). The timing of prenatal care does not change this relative risk of low birth weight for black babies. That is, the incidence of low birth weight was consistently greater in metropolitan areas, except when mothers received no care. For white babies, although the risk of low birth weight was the same in both areas when care began in the first or second trimester, when care was delayed past this point, the risk was somewhat higher in nonmetropolitan areas.



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Table 1. Live births by month of pregnancy prenatal care began, number of prenatal visits, and race: Total of 37 reporting States and the District of Columbia, 1975

Number of prenatal visits and race	Total	Month of pregnancy prenatal care began										No prenatal care	Not stated
		1st	2d	3d	4th	5th	6th	7th	8th	9th			
All races <sup>1</sup> .....	1,721,206	151,559	587,192	446,015	190,487	104,481	63,184	40,565	23,980	9,944	16,175	87,624	
No visits.....	16,175	...	...	...	...	...	...	...	...	...	16,175	...	
1-2 visits.....	36,306	757	1,922	2,722	2,798	3,528	4,576	6,024	7,423	5,591	...	965	
3-4 visits.....	74,435	1,551	5,578	9,004	10,609	12,784	12,667	11,060	8,061	1,939	...	1,182	
5-6 visits.....	142,265	3,998	18,229	32,362	29,003	23,060	17,305	11,209	4,790	680	...	1,629	
7-8 visits.....	224,429	9,530	53,942	65,337	43,285	27,311	14,333	6,740	1,797	246	...	1,908	
9-10 visits.....	368,396	24,326	125,683	127,742	53,945	21,868	8,029	3,009	737	280	...	2,777	
11-12 visits.....	431,339	45,785	207,031	129,677	31,510	9,326	3,441	1,162	473	323	...	2,611	
13-14 visits.....	180,512	30,218	93,462	42,492	9,092	2,559	949	401	144	112	...	1,083	
15-16 visits.....	99,946	20,703	50,063	21,412	4,803	1,443	542	179	100	58	...	643	
17-18 visits.....	21,691	4,517	11,249	4,348	1,003	261	125	33	20	14	...	121	
19 visits or more.....	24,260	6,589	11,171	4,396	1,184	472	144	61	35	28	...	180	
Not stated.....	101,452	3,585	8,862	6,523	3,255	1,869	1,073	687	400	673	...	74,525	
White.....	1,382,134	124,073	514,213	370,141	140,949	69,947	40,867	26,363	15,775	6,480	8,629	64,697	
No visits.....	8,629	...	...	...	...	...	...	...	...	...	8,629	...	
1-2 visits.....	19,834	393	1,040	1,414	1,274	1,715	2,276	3,209	4,425	3,531	...	557	
3-4 visits.....	43,766	780	3,419	5,320	6,005	7,012	7,196	6,782	5,297	1,295	...	660	
5-6 visits.....	95,391	2,491	13,063	22,342	18,917	14,908	11,147	7,615	3,393	485	...	1,030	
7-8 visits.....	171,511	6,911	43,686	52,096	32,233	18,951	10,034	4,794	1,335	163	...	1,308	
9-10 visits.....	306,374	19,345	109,787	108,244	42,288	15,904	5,758	2,195	506	186	...	2,161	
11-12 visits.....	376,582	38,736	186,281	112,908	25,443	6,967	2,548	852	364	250	...	2,233	
13-14 visits.....	160,940	26,088	85,364	37,821	7,501	1,978	744	324	106	88	...	926	
15-16 visits.....	86,508	17,572	44,843	18,138	3,720	1,020	399	137	80	44	...	555	
17-18 visits.....	18,850	3,853	10,094	3,699	807	188	74	21	17	12	...	85	
19 visits or more.....	20,038	5,441	9,632	3,490	819	313	100	51	30	23	...	139	
Not stated.....	73,711	2,463	7,004	4,669	1,942	991	591	383	222	403	...	55,043	
Black.....	294,348	23,600	61,017	65,561	44,061	30,789	19,828	12,252	6,734	2,735	6,379	21,392	
No visits.....	6,379	...	...	...	...	...	...	...	...	...	6,379	...	
1-2 visits.....	14,239	332	795	1,181	1,381	1,627	2,073	2,463	2,479	1,585	...	323	
3-4 visits.....	27,272	709	1,924	3,320	4,152	5,280	4,932	3,725	2,250	516	...	464	
5-6 visits.....	41,613	1,388	4,517	8,989	9,138	7,275	5,436	3,079	1,109	142	...	540	
7-8 visits.....	46,119	2,308	8,872	11,483	9,776	7,368	3,716	1,623	365	62	...	546	
9-10 visits.....	53,357	4,312	13,344	16,748	10,196	5,188	1,997	705	203	91	...	573	
11-12 visits.....	45,704	6,082	16,641	14,067	5,282	2,078	803	259	94	64	...	334	
13-14 visits.....	15,797	3,218	6,487	3,778	1,357	512	190	58	33	23	...	141	
15-16 visits.....	11,522	2,684	4,352	2,826	996	387	132	35	20	14	...	76	
17-18 visits.....	2,416	532	972	571	178	68	49	12	3	2	...	29	
19 visits or more.....	3,800	1,005	1,373	830	342	151	43	7	5	5	...	39	
Not stated.....	26,130	1,030	1,740	1,768	1,263	855	457	286	173	231	...	18,327	

<sup>1</sup>Includes races other than white and black.

Table 2. Live births by month of pregnancy prenatal care began and race: 42 reporting States and the District of Columbia, 1975

Area and race <sup>1</sup>	Total	Month of pregnancy prenatal care began									
		1st and 2d	3d	4th	5th	6th	7th	8th	9th	No prenatal care	Not stated
All reporting areas.....	2,707,551	1,182,263	696,706	296,107	164,777	100,704	66,558	39,061	15,473	34,720	111,182
White.....	2,194,058	1,023,671	579,008	221,228	114,224	68,322	45,621	27,036	10,581	21,983	82,384
Black.....	442,420	131,407	100,567	66,472	45,094	28,808	18,192	10,115	3,994	11,274	26,497
Arizona.....	39,070	14,180	8,380	4,639	3,035	2,265	1,882	1,459	700	1,020	1,510
White.....	33,350	13,039	7,461	3,927	2,414	1,763	1,444	1,073	472	531	1,226
Black.....	1,532	400	318	212	186	126	104	62	22	36	66
California.....	317,359	148,958	79,064	33,844	19,692	12,093	8,321	4,529	1,701	4,267	4,890
White.....	266,978	127,365	65,813	27,687	16,214	10,082	7,035	3,847	1,456	3,698	3,781
Black.....	32,988	13,835	8,752	4,320	2,415	1,328	831	409	150	383	565
Colorado.....	40,081	19,146	10,302	4,267	2,333	1,392	933	571	224	338	575
White.....	37,442	18,136	9,627	3,946	2,116	1,246	844	508	198	284	537
Black.....	1,784	686	475	226	145	88	60	34	18	26	26
Connecticut.....	35,537	20,009	7,976	2,206	1,214	574	349	229	106	173	2,701
White.....	31,077	18,226	6,943	1,748	900	434	251	167	88	129	2,191
Black.....	4,067	1,565	944	430	302	134	90	62	16	40	484
Delaware.....	8,000	2,942	2,939	817	393	243	148	89	16	46	367
White.....	6,138	2,516	2,267	562	221	143	97	57	12	20	243
Black.....	1,784	391	654	244	166	98	49	32	4	24	122
District of Columbia.....	9,719	2,538	1,537	872	781	408	318	175	106	466	2,518
White.....	1,295	540	219	101	49	36	14	29	22	10	275
Black.....	8,299	1,957	1,291	756	724	370	297	146	82	452	2,224
Florida.....	105,180	34,223	20,897	10,953	6,933	4,587	2,961	1,693	607	1,244	21,282
White.....	77,244	28,731	15,741	6,985	3,917	2,587	1,724	1,112	403	773	15,271
Black.....	26,876	5,214	4,725	3,869	2,943	1,963	1,193	548	195	457	5,769
Georgia.....	79,662	29,879	17,403	8,776	5,031	3,489	2,322	1,530	993	424	9,815
White.....	51,338	22,108	11,404	4,612	2,346	1,602	1,139	758	531	166	6,672
Black.....	27,862	7,608	5,900	4,108	2,649	1,867	1,161	762	458	256	3,093
Hawaii.....	15,711	6,468	4,269	2,024	1,294	666	400	279	115	62	134
White.....	4,309	1,594	1,483	584	320	132	88	51	17	16	24
Black.....	338	94	114	48	30	22	18	2	2	-	8
Illinois.....	169,386	73,233	45,721	20,572	11,849	7,234	4,628	2,495	996	1,939	719
White.....	130,454	61,286	36,673	14,202	7,409	4,424	2,774	1,557	605	948	576
Black.....	35,889	10,607	8,273	6,007	4,205	2,689	1,754	879	374	971	130
Indiana.....	82,403	30,631	20,524	7,670	3,959	2,037	1,284	644	242	598	14,814
White.....	73,216	28,731	18,897	6,595	3,203	1,671	1,060	516	195	442	11,906
Black.....	8,758	1,737	1,529	1,055	730	356	220	122	45	154	2,810
Iowa.....	41,375	21,376	12,375	3,815	1,734	855	492	251	109	137	231
White.....	40,209	20,905	12,066	3,695	1,636	797	456	231	95	131	197
Black.....	840	320	231	92	81	42	18	15	8	4	29
Kansas.....	33,887	15,813	9,924	3,676	1,846	1,020	624	386	138	208	252
White.....	30,835	14,610	9,114	3,276	1,569	890	526	328	122	162	238
Black.....	2,425	974	632	329	219	104	76	40	8	33	10
Kentucky.....	54,590	22,333	12,303	6,035	3,401	2,201	1,412	889	423	593	5,000
White.....	49,682	20,910	11,288	5,301	2,877	1,845	1,185	743	357	492	4,684
Black.....	4,667	1,331	970	708	496	346	219	140	62	97	298
Louisiana.....	67,898	32,464	13,824	6,642	4,198	2,599	1,719	980	430	603	4,439
White.....	40,843	23,627	7,954	2,682	1,344	798	580	335	163	193	3,167
Black.....	26,683	8,668	5,795	3,923	2,831	1,791	1,131	639	258	406	1,241
Maine.....	15,233	6,430	4,630	1,940	848	353	241	118	42	40	591
White.....	15,041	6,354	4,580	1,912	835	343	236	114	40	39	588
Black.....	62	22	13	15	6	5	1	1			

See footnote at end of table.

Table 2. Live births by month of pregnancy prenatal care began and race: 42 reporting States and the District of Columbia, 1975—Con.

Area and race <sup>1</sup>	Total	Month of pregnancy prenatal care began									
		1st and 2d	3d	4th	5th	6th	7th	8th	9th	No prenatal care	Not stated
Maryland.....	52,049	25,524	12,927	4,960	2,732	1,436	807	413	124	433	2,693
White.....	37,011	20,133	9,291	2,830	1,408	696	415	220	50	209	1,759
Black.....	13,948	4,940	3,333	2,023	1,262	690	365	178	68	215	874
Michigan.....	133,934	61,412	38,272	15,351	7,763	4,219	2,460	1,317	458	1,066	1,616
White.....	109,548	52,701	32,281	11,883	5,476	2,840	1,617	861	301	556	1,032
Black.....	23,233	8,228	5,671	3,344	2,195	1,327	814	433	152	503	566
Minnesota.....	56,428	22,641	16,513	7,527	3,033	1,827	1,147	644	294	183	2,619
White.....	53,975	21,966	15,883	7,175	2,833	1,653	1,033	560	256	153	2,463
Black.....	1,116	338	286	154	100	66	46	26	12	6	82
Mississippi.....	43,555	19,250	10,096	5,403	3,223	2,026	1,210	768	279	550	750
White.....	22,489	12,502	5,336	2,041	987	536	346	192	75	150	324
Black.....	20,743	6,643	4,695	3,322	2,211	1,478	852	568	194	388	392
Missouri.....	68,162	33,998	16,499	6,942	4,022	2,321	1,509	907	389	933	642
White.....	56,921	29,850	13,889	5,434	2,881	1,794	1,163	728	312	356	514
Black.....	10,611	3,882	2,446	1,434	1,109	501	313	163	70	573	120
Montana.....	11,974	6,058	3,215	1,209	549	356	230	139	65	93	60
White.....	10,692	5,651	2,922	1,042	430	276	148	87	41	43	52
Black.....	66	32	19	5	5	-	2	1	1	1	-
Nebraska.....	23,666	10,639	6,945	2,754	1,326	722	427	297	131	113	312
White.....	22,236	10,171	6,617	2,535	1,190	631	365	250	102	88	287
Black.....	1,045	371	242	162	107	66	40	26	13	7	11
Nevada.....	9,012	4,134	2,240	1,051	516	342	251	146	74	193	65
White.....	7,633	3,684	1,941	855	384	250	192	104	50	122	51
Black.....	946	304	204	142	78	66	35	26	14	71	6
New Hampshire.....	10,051	4,431	3,359	1,143	461	246	139	87	15	41	129
White.....	9,919	4,383	3,324	1,122	456	237	137	81	14	41	124
Black.....	51	20	10	12	2	2	-	2	1	-	2
New Jersey.....	90,202	36,835	23,659	9,493	5,479	3,655	2,266	1,280	479	933	6,123
White.....	71,891	32,204	19,775	7,064	3,616	2,314	1,460	821	309	443	3,885
Black.....	16,971	4,071	3,522	2,311	1,767	1,281	780	441	164	490	2,144
New York.....	235,605	96,079	58,448	26,834	15,490	10,150	7,255	4,904	1,816	4,772	9,857
White.....	183,214	83,837	47,714	18,466	9,705	6,107	4,269	2,943	1,090	2,336	6,747
Black.....	47,498	10,455	9,496	7,711	5,364	3,794	2,779	1,852	683	2,381	2,983
North Carolina.....	80,247	35,966	21,003	9,943	5,773	3,355	1,975	994	319	713	206
White.....	54,582	28,465	14,585	5,478	2,724	1,477	902	449	151	255	96
Black.....	23,628	6,746	5,867	4,159	2,859	1,767	1,000	514	164	446	106
North Dakota.....	10,594	4,471	3,175	1,316	664	395	244	155	50	82	42
White.....	9,822	4,236	2,981	1,217	604	345	196	123	32	46	42
Black.....	93	18	40	15	8	2	2	4	2	2	-
Ohio.....	158,301	78,804	42,960	16,175	8,523	4,538	2,736	1,246	452	1,091	1,776
White.....	136,289	70,290	37,318	13,039	6,559	3,519	2,092	968	340	755	1,409
Black.....	20,886	7,968	5,360	2,994	1,912	983	618	268	100	330	353
Oklahoma.....	41,653	16,921	10,309	5,241	3,025	2,045	1,532	1,036	413	378	753
White.....	33,744	14,887	8,539	4,016	2,180	1,392	1,032	700	266	245	487
Black.....	4,188	1,075	976	689	484	354	242	164	55	47	102
Oregon.....	33,276	15,570	9,187	3,599	1,887	1,020	720	389	192	304	408
White.....	31,447	14,884	8,707	3,349	1,738	949	660	348	175	270	367
Black.....	759	271	203	109	74	27	22	13	7	6	27
Rhode Island.....	10,261	5,651	2,950	690	324	160	108	35	12	35	296
White.....	9,546	5,320	2,764	623	280	132	96	31	10	34	256
Black.....	587	272	147	53	40	24	9	3	2	1	36

<sup>1</sup>Total for each area includes races other than white and black.

Table 2. Live births by month of pregnancy prenatal care began and race: 42 reporting States and the District of Columbia, 1975—Con.

Area and race <sup>1</sup>	Total	Month of pregnancy prenatal care began									
		1st and 2d	3d	4th	5th	6th	7th	8th	9th	No prenatal care	Not stated
South Carolina.....	46,681	17,374	13,207	6,225	3,640	2,285	1,520	802	312	449	867
White.....	28,035	12,583	8,594	3,144	1,373	831	585	321	121	152	331
Black.....	18,340	4,709	4,522	3,021	2,237	1,438	926	476	188	295	528
South Dakota.....	11,250	3,852	3,327	1,720	852	507	302	268	106	228	88
White.....	9,744	3,577	3,102	1,528	674	359	175	147	61	56	65
Black.....	53	8	10	18	10	-	4	-	-	-	3
Tennessee.....	61,901	25,719	14,899	6,992	3,940	2,739	1,669	882	392	1,043	3,626
White.....	48,109	21,665	11,956	4,918	2,625	1,653	1,072	624	288	485	2,823
Black.....	13,489	3,924	2,882	2,043	1,302	1,072	584	249	100	554	779
Texas.....	215,467	90,160	55,404	23,103	13,563	9,116	6,752	3,923	1,408	7,876	4,162
White.....	181,515	79,998	47,000	17,634	10,153	6,898	5,347	3,230	1,139	6,291	3,825
Black.....	32,314	9,440	7,971	5,310	3,314	2,159	1,329	665	256	1,549	321
Utah.....	31,567	17,027	8,295	2,293	971	382	272	169	48	104	2,006
White.....	30,601	16,640	8,088	2,223	911	351	232	150	38	52	1,916
Black.....	140	54	36	10	10	8	6	2	-	-	14
Vermont.....	6,643	2,333	2,221	980	475	246	177	86	21	30	74
White.....	6,589	2,316	2,205	971	468	245	176	85	21	29	73
Black.....	16	5	3	5	2	-	1	-	-	-	-
Washington.....	50,604	25,191	12,953	5,373	2,595	1,438	856	578	204	248	1,168
White.....	45,988	23,414	11,840	4,773	2,241	1,229	712	468	152	186	973
Black.....	1,875	713	454	287	143	90	42	36	12	9	89
West Virginia.....	27,278	9,179	7,056	4,072	2,446	1,555	1,021	680	276	378	615
White.....	26,107	8,922	6,814	3,889	2,326	1,434	944	619	254	340	565
Black.....	1,065	217	223	162	112	119	71	57	20	38	46
Wisconsin.....	65,167	29,292	23,791	6,222	2,523	1,362	778	501	153	247	298
White.....	60,302	27,671	22,148	5,467	2,210	1,152	652	407	126	214	255
Black.....	3,829	1,276	1,315	615	247	163	87	55	10	23	38
Wyoming.....	6,932	3,129	1,928	748	441	245	161	98	43	46	93
White.....	6,658	3,043	1,864	697	422	229	150	93	31	42	87
Black.....	76	18	18	20	12	2	2	-	4	-	-

<sup>1</sup>Total for each area includes races other than white and black.

Table 3. Live births by number of prenatal visits and race: 38 reporting States and the District of Columbia, 1975

Area and race <sup>1</sup>	Total	Number of prenatal visits											
		None	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19 or more	Not stated
All reporting areas.....	1,792,174	16,747	37,627	77,020	147,270	232,150	382,503	454,510	189,629	105,675	22,295	24,754	101,994
White.....	1,435,771	8,982	20,579	45,281	98,371	176,498	316,720	395,472	168,823	91,124	19,364	20,437	74,120
Black.....	310,506	6,591	14,790	28,302	43,552	48,698	56,857	49,623	16,901	12,560	2,494	3,891	26,247
Arizona.....	38,965	1,010	1,780	2,762	4,311	5,603	7,355	8,043	4,141	2,106	538	584	732
White.....	33,256	523	1,178	1,996	3,314	4,776	6,572	7,421	3,862	1,960	508	564	582
Black.....	1,526	34	88	168	284	243	261	230	96	64	14	14	30
Colorado.....	40,045	330	778	1,702	3,165	5,593	8,769	10,498	4,792	2,426	569	702	721
White.....	37,414	280	675	1,557	2,877	5,161	8,267	9,895	4,513	2,311	536	664	678
Black.....	1,778	24	65	95	189	293	343	410	197	77	25	30	30
Connecticut.....	35,228	172	334	660	1,430	2,737	6,553	11,094	5,152	3,025	490	551	3,030
White.....	30,784	128	220	486	1,112	2,243	5,647	10,106	4,698	2,713	448	465	2,518
Black.....	4,056	40	112	168	304	460	822	840	412	290	38	84	486
Delaware.....	7,807	46	124	246	476	834	1,196	3,549	714	256	34	28	304
White.....	5,957	20	72	134	284	578	896	2,977	558	210	26	22	180
Black.....	1,776	24	52	112	186	246	288	550	144	38	8	6	122
District of Columbia.....	9,434	466	254	442	863	940	1,844	1,469	499	194	44	101	2,318
White.....	1,161	10	18	26	64	136	278	272	99	56	6	16	180
Black.....	8,191	452	234	414	794	790	1,544	1,187	395	138	36	85	2,122
Florida.....	105,138	1,242	2,898	5,151	8,539	10,508	14,916	20,170	9,300	6,702	1,637	1,379	22,696
White.....	77,210	771	1,552	2,739	5,313	7,417	11,392	15,064	8,181	5,834	1,477	1,178	16,292
Black.....	26,868	457	1,306	2,358	3,138	2,980	3,374	4,926	1,020	826	143	191	6,419
Georgia.....	79,643	423	1,800	3,582	6,182	8,313	13,016	16,941	8,512	6,083	1,109	1,106	12,576
White.....	51,326	165	563	1,203	2,579	4,590	8,472	13,360	6,724	4,687	859	840	7,284
Black.....	27,855	256	1,231	2,363	3,581	3,645	4,463	3,487	1,725	1,372	240	264	5,228
Hawaii.....	15,704	62	340	836	1,510	2,503	3,321	3,982	1,708	818	244	242	138
White.....	4,303	16	54	144	334	709	1,041	1,125	508	210	66	64	32
Black.....	338	-	12	26	34	72	80	64	28	14	-	-	8
Illinois.....	169,322	1,936	3,762	8,880	17,873	27,571	41,951	41,267	14,377	7,596	1,293	1,839	977
White.....	130,400	945	2,016	5,028	11,256	19,934	33,694	35,800	12,556	6,116	1,064	1,291	701
Black.....	35,885	971	1,684	3,697	6,267	7,087	7,489	4,781	1,580	1,336	209	525	259
Indiana.....	81,956	597	1,032	1,986	4,475	8,349	17,498	16,939	7,588	4,124	619	842	17,907
White.....	72,773	441	793	1,584	3,839	7,319	15,793	15,809	7,158	3,899	585	794	14,759
Black.....	8,754	154	231	398	612	988	1,608	1,058	382	207	34	48	3,034
Iowa.....	41,365	137	404	918	2,441	5,366	11,783	11,943	4,786	2,331	468	551	237
White.....	40,199	131	358	835	2,315	5,178	11,497	11,695	4,694	2,280	459	538	219
Black.....	840	4	30	63	98	135	200	169	69	40	8	10	14
Kansas.....	33,865	208	469	1,018	2,150	3,882	7,105	11,588	4,322	2,094	486	484	59
White.....	30,817	162	381	845	1,866	3,484	6,503	10,630	4,059	1,943	454	439	51
Black.....	2,421	33	68	130	227	308	480	767	213	128	25	36	6
Kentucky.....	53,743	593	1,432	2,565	4,772	7,499	13,529	11,398	3,600	1,968	466	595	5,326
White.....	48,843	492	1,165	2,123	4,130	6,730	12,496	10,583	3,356	1,792	430	531	5,015
Black.....	4,659	97	259	422	616	715	994	771	234	164	34	62	291
Louisiana.....	67,778	593	2,158	4,062	6,609	7,731	11,043	12,795	6,482	5,539	1,480	1,823	7,463
White.....	40,748	189	519	1,030	1,965	3,280	6,585	9,608	5,308	4,466	1,236	1,332	5,240
Black.....	26,660	400	1,624	3,012	4,617	4,400	4,386	3,103	1,151	1,062	240	485	2,180
Maine.....	15,225	40	169	587	1,248	2,535	3,994	3,796	1,121	616	107	191	821
White.....	15,033	39	165	576	1,225	2,495	3,950	3,760	1,105	610	107	187	814
Black.....	62	-	1	3	5	12	17	11	7	3	-	2	1
Michigan.....	133,252	1,063	2,088	4,914	10,170	16,626	28,815	38,474	15,119	8,737	1,521	2,538	3,187
White.....	108,884	553	1,176	3,019	7,120	12,692	24,113	34,213	13,711	7,376	1,241	1,871	1,799
Black.....	23,220	503	883	1,837	2,944	3,779	4,441	3,954	1,303	1,289	272	653	1,362
Minnesota.....	56,410	183	784	1,963	5,174	9,817	15,157	13,481	4,899	1,748	405	368	2,431
White.....	53,959	153	700	1,763	4,892	9,304	14,618	13,051	4,765	1,667	383	344	2,319
Black.....	1,116	6	24	68	106	220	273	220	60	53	14	18	54
Mississippi.....	43,547	550	1,736	3,358	5,218	5,629	7,963	8,758	3,956	2,822	1,569	1,034	954
White.....	22,483	150	281	628	1,351	2,183	4,327	6,063	2,920	2,051	1,289	762	478
Black.....	20,741	388	1,427	2,710	3,830	3,400	3,561	2,646	1,024	761	278	270	446

<sup>1</sup>Total for each area includes races other than white and black.

Table 3. Live births by number of prenatal visits and race: 38 reporting States and the District of Columbia, 1975-Con.

Area and race <sup>1</sup>	Total	Number of prenatal visits											
		None	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19 or more	Not stated
Missouri.....	68,153	933	1,486	2,598	5,201	8,556	15,067	17,527	8,708	5,170	1,011	1,109	787
White.....	56,915	356	922	1,756	3,802	6,767	12,940	15,632	7,928	4,364	857	905	686
Black.....	10,608	573	549	802	1,322	1,697	1,992	1,741	724	772	151	191	94
Montana.....	11,968	93	204	427	952	1,598	3,207	3,560	931	666	78	110	142
White.....	10,686	43	118	303	741	1,395	2,952	3,373	866	623	71	97	104
Black.....	66	1	2	2	5	6	25	15	5	3	-	1	1
Nebraska.....	23,663	114	313	735	1,824	3,663	6,816	6,079	2,355	1,072	196	204	292
White.....	22,233	89	233	620	1,670	3,444	6,453	5,796	2,262	1,033	185	193	265
Black.....	1,045	7	47	73	107	170	282	213	80	32	11	9	14
Nevada.....	8,908	191	185	355	635	1,042	1,879	2,348	1,106	600	138	236	193
White.....	7,535	120	129	260	507	862	1,573	2,070	981	534	116	218	165
Black.....	940	71	34	63	76	126	202	192	86	46	18	16	10
New Hampshire.....	10,040	39	77	195	620	1,317	2,539	2,657	1,502	683	142	134	135
White.....	9,910	39	76	189	609	1,299	2,509	2,621	1,487	676	139	133	133
Black.....	51	-	1	4	4	5	12	11	7	3	2	1	1
New Jersey.....	88,263	906	1,322	3,170	6,869	12,131	21,719	22,646	8,933	3,888	738	694	5,247
White.....	70,218	434	724	1,840	4,479	8,938	17,962	20,173	8,041	3,466	642	608	2,911
Black.....	16,818	472	592	1,292	2,293	3,055	3,405	2,147	800	376	86	78	2,222
North Carolina.....	80,869	715	2,128	4,327	7,338	10,075	15,645	21,082	10,719	5,936	1,105	1,430	369
White.....	55,016	255	677	1,505	3,174	5,671	10,605	16,750	9,087	4,971	941	1,171	209
Black.....	23,814	448	1,377	2,648	3,846	4,024	4,577	4,001	1,480	868	149	241	155
North Dakota.....	10,589	80	211	774	1,644	1,961	2,470	2,189	800	328	42	50	40
White.....	9,817	44	135	666	1,520	1,828	2,348	2,100	748	306	40	46	36
Black.....	93	2	2	4	6	17	26	20	12	-	2	2	-
Oklahoma.....	41,141	366	1,191	2,257	4,043	6,346	8,542	8,681	4,560	2,811	747	779	818
White.....	33,243	239	672	1,440	2,887	5,029	7,169	7,538	3,947	2,432	658	696	536
Black.....	4,178	43	229	466	643	737	714	616	290	220	57	63	100
Oregon.....	33,203	304	403	993	1,902	3,699	6,901	8,849	5,052	3,163	841	666	430
White.....	31,378	270	348	894	1,744	3,456	6,560	8,462	4,819	3,012	793	631	389
Black.....	759	6	28	44	58	111	129	143	98	75	28	16	23
Rhode Island.....	10,256	33	66	203	588	1,607	2,680	2,760	1,034	640	102	167	376
White.....	9,541	32	54	177	520	1,516	2,522	2,567	974	600	92	159	328
Black.....	587	1	11	23	59	74	125	156	44	35	8	8	43
South Carolina.....	46,663	447	1,271	2,600	4,068	6,515	9,190	12,283	4,860	2,950	774	699	1,006
White.....	28,021	150	340	775	1,431	3,330	5,593	8,758	3,752	2,343	603	524	422
Black.....	18,336	295	928	1,808	2,613	3,140	3,532	3,434	1,074	596	166	174	576
South Dakota.....	11,245	228	456	632	1,352	1,981	2,684	2,443	902	346	71	77	73
White.....	9,739	56	200	429	1,112	1,749	2,487	2,324	869	320	66	76	51
Black.....	53	-	-	-	2	12	14	16	4	2	-	-	3
Tennessee.....	61,918	1,043	1,953	3,526	5,618	7,724	11,963	15,832	5,125	3,458	850	943	3,883
White.....	48,130	485	1,054	1,965	3,566	5,562	9,647	13,622	4,632	3,031	794	769	3,003
Black.....	13,485	554	890	1,545	2,028	2,118	2,258	2,124	467	417	54	173	857
Utah.....	31,557	102	191	499	1,240	2,699	5,554	11,565	5,600	1,258	223	289	2,337
White.....	30,591	50	140	443	1,152	2,599	5,440	11,351	5,450	1,239	219	287	2,221
Black.....	140	-	2	10	10	14	16	42	26	4	-	-	16
Vermont.....	6,607	30	119	297	670	1,227	1,821	1,449	585	254	37	32	86
White.....	6,553	29	118	293	665	1,218	1,803	1,440	582	252	37	32	84
Black.....	16	-	-	1	2	2	7	2	1	1	-	-	-
Virginia.....	69,408	553	1,279	2,522	4,869	7,570	13,813	22,655	8,886	5,630	600	490	541
White.....	52,325	342	718	1,465	2,880	4,876	10,088	18,456	7,662	4,523	511	396	408
Black.....	15,921	204	538	1,018	1,903	2,543	3,466	3,838	1,095	1,032	77	90	117
Washington.....	50,560	246	645	1,344	2,873	5,619	10,359	16,183	6,548	3,645	692	967	1,439
White.....	45,946	184	495	1,065	2,419	4,966	9,465	15,057	6,124	3,412	651	901	1,207
Black.....	1,875	9	50	124	185	294	364	459	172	74	18	22	104
West Virginia.....	26,649	380	972	1,860	3,476	5,173	5,443	4,431	2,224	876	176	90	1,548
White.....	25,477	341	891	1,728	3,291	4,939	5,257	4,302	2,129	855	168	88	1,488
Black.....	1,069	39	77	123	173	217	171	97	87	19	8	-	58

<sup>1</sup>Total for each area includes races other than white and black.

Table 3. Live births by number of prenatal visits and race: 38 reporting States and the District of Columbia, 1975—Con.

Area and race <sup>1</sup>	Total	Number of prenatal visits											
		None	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19 or more	Not stated
Wisconsin .....	65,161	247	681	1,774	4,335	8,498	16,732	21,251	7,465	2,793	590	531	264
White .....	60,295	214	537	1,484	3,847	7,789	15,598	19,833	7,069	2,646	544	506	228
Black .....	3,830	23	98	208	377	543	894	1,166	305	121	41	23	31
Wyoming.....	6,926	46	132	300	547	1,113	1,671	1,855	666	323	63	99	111
White .....	6,652	42	112	268	519	1,056	1,608	1,815	650	315	63	99	105
Black .....	76	-	4	-	8	20	22	16	4	2	-	-	-

<sup>1</sup>Total for each area includes races other than white and black.



# APPENDIX

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## TECHNICAL APPENDIX

### Sources of Data

The data presented in this report were derived from birth certificates filed in each of the registration areas of the United States. The main body of these statistics is published annually by the National Center for Health Statistics in volume I of the *Vital Statistics of the United States*. Additional information is also available in the form of unpublished tabulations. A complete discussion of the generation of birth statistics may be found in the Technical Appendix of these volumes.

### Reporting Areas

The 1968 revision of the U.S. Standard Certificate of Live Birth incorporated two questions concerning prenatal care—the month of pregnancy prenatal care began and the total number of prenatal visits. Statistics on the month of pregnancy prenatal care began were initially published in 1969, when data were available from the birth certificates of 38 States and the District of Columbia. By 1975, the reporting areas for this item had expanded to encompass 42 States and the District of Columbia. Some States are excluded from the reporting area because the data collected on when prenatal care began are not sufficiently detailed. Pennsylvania and Virginia reported the beginning of prenatal care by trimesters rather than by individual months, and Massachusetts collected prenatal care information for only a small sample of births.

Tabulations showing the total number of prenatal visits are available beginning in 1972, when data were available from 36 States and the District of Columbia. In 1973, two additional States joined the reporting area, which remained unchanged in 1974 and 1975. New York State is excluded from the reporting area for total

number of prenatal visits because only the New York City birth certificates included this item.

The composition of the reporting areas for the years 1969-75 is shown in table I. The size of the reporting area is reduced when tables include information on education of mother, legitimacy status of child, and period of gestation. This is because the birth certificates of States that include questions on prenatal care may not also request information for these other variables. Items such as age of mother, birth weight, and birth order are reported by all States. Consequently, the size of the reporting area does not change when these variables are shown.

*Changes in composition of reporting areas.* — Although the trend data presented in this report are based on a varying number of States, it is believed that year-to-year comparisons can be usefully made. During the period covered by this report, changes in the composition of the reporting areas for month of pregnancy prenatal care began and number of prenatal visits have had only a minimal effect on their demographic makeup. The percent distributions of births by age of mother and birth order of child are nearly identical in each year for the actual reporting area and the group of States which reported in all years (constant reporting area). There are relatively minor differences, never exceeding 1 percentage point, between racial distribution in each year.

The availability of tabulations of data by detailed month of pregnancy prenatal care began for individual States made it possible to compare the distribution of births by month of pregnancy prenatal care began in the actual and the constant reporting areas. Differences in each year are very minor. Lack of comparable data by State precluded a similar detailed comparison for number of prenatal visits.

Table I. Areas reporting month of pregnancy prenatal care began, 1969-75, and total number of prenatal visits, 1972-75

[Unless otherwise noted, areas also reported educational attainment of mother, legitimacy status of child, and date of last normal menstrual period]

Area	Month of pregnancy prenatal care began					Total number of prenatal visits		
	1974 and 1975	1973	1972	1970 and 1971	1969	1974 and 1975	1973	1972
Alabama								
Alaska								
Arizona	X	X	X	X	X	X	X	X
Arkansas								
California	1,2X	1,2X	1,2X	1,2X	1,2X			
Colorado	X	X	X	X	X	X	X	X
Connecticut	2,3X	2,3X				2,3X	2,3X	
Delaware	X	X	X			X	X	X
District of Columbia	X	X	1X	1X	1X	X	X	1X
Florida	X	X	X	X		X	X	X
Georgia	2X	2X				2X	2X	
Hawaii	X	X	X	X	X	X	X	X
Idaho								
Illinois	X	X	X	X	X	X	X	X
Indiana	X	X	X	X	X	X	X	X
Iowa	X	X	X	X	X	X	X	X
Kansas	X	X	X	X	X	X	X	X
Kentucky	X	X	X	X	X	X	X	X
Louisiana	X	X	X	X	X	X	X	X
Maine	X	X	X	X	X	X	X	X
Maryland	2X	1,2X	1,2X	1,2X	1,2X			
Massachusetts					2X			
Michigan	X	X	X	X	X	X	X	X
Minnesota	X	X	X	X	X	X	X	X
Mississippi	X	X	X	X	X	X	X	X
Missouri	X	X	X	X	X	X	X	X

See footnotes at end of table.

Table I. Areas reporting month of pregnancy prenatal care began, 1969-75, and total number of prenatal visits, 1972-75—Con.

[Unless otherwise noted, areas also reported educational attainment of mother, legitimacy status of child, and date of last normal menstrual period]

Area	Month of pregnancy prenatal care began					Total number of prenatal visits		
	1974 and 1975	1973	1972	1970 and 1971	1969	1974 and 1975	1973	1972
Montana	2X	2X	2X	2X	2X	2X	2X	2X
Nebraska	X	X	X	X	X	X	X	X
Nevada	2X	2X	2X	X	X	2X	2X	2X
New Hampshire	X	X	X	X	X	X	X	X
New Jersey	X	X	X	X	X	X	X	X
New Mexico								
New York	2X	2X	2X	2X	2X			
North Carolina	X	X	X	X	X	X	X	X
North Dakota	X	X	X	X	X	X	X	X
Ohio	2X	2X	2X	2X	2X			
Oklahoma	X	X	X	X	X	X	X	X
Oregon	X	X	X	X	X	X	X	X
Pennsylvania								
Rhode Island	X	X	X	X	X	X	X	X
South Carolina	X	X	X	X	X	X	X	X
South Dakota	X	X	X	X	X	X	X	X
Tennessee	X	X	X	X	X	X	X	X
Texas	1,3X	1,3X	1,3X	1,3X	1,3X			
Utah	X	X	X	X	X	X	X	X
Vermont	2X	2X	2X	2X	2X	2X	2X	2X
Virginia						3X	3X	3X
Washington	1X	1X	1X	1X	1X	1X	1X	1X
West Virginia	X	X	X	X	X	X	X	X
Wisconsin	3X	3X	3X	3X	3X	3X	3X	3X
Wyoming	X	X	X	X	X	X	X	X

<sup>1</sup> Did not report educational attainment of mother.

<sup>2</sup> Did not report legitimacy status of child.

<sup>3</sup> Did not report date of last menstrual period.

## Sample Size

Birth statistics for the years 1969-71 are based on a 50-percent sample of birth certificates. Data shown in this report for 1972-75 are based on 100 percent of the birth certificates from States participating in the Cooperative Health Statistics System (CHSS) and on a 50-percent sample of births from all other States. Beginning in 1972, States providing data through CHSS were Florida, Maine, Missouri, New Hampshire, Rhode Island, and Vermont. The following States were added in subsequent years: Michigan, Colorado, and New York (excluding New York City) in 1973; Illinois, Iowa, Kansas, Montana, Nebraska, Oregon, and South Carolina in 1974; and Louisiana, Maryland, North Carolina, Oklahoma, Tennessee, Virginia, and Wisconsin in 1975. A discussion of sampling procedures and sampling errors may be found in the Technical Appendix of volume I of *Vital Statistics of the United States* for these years.

## Residence Classification

All tables included in this report are by place of residence. Births to U.S. residents occurring outside this country are not reallocated to the United States. Beginning in 1970, births to non-residents of the United States occurring in the United States have been excluded from tabulations by place of residence. Prior to this year, births occurring in the United States to non-resident mothers were considered as births to residents of the place of occurrence.

Data shown in this report refer only to births occurring within the areas reporting prenatal care information to residents of these areas. For tables showing prenatal care cross-classified by educational attainment of mother, the data are further limited to births occurring in areas reporting both educational attainment and prenatal care to residents of these areas. Similar limitations apply to tables that include information on legitimacy status of child and period of gestation.

## Completeness of Reporting and Reporting Bias

Information on month of pregnancy prenatal care began and total number of prenatal

Table II. Percent of births with prenatal care information missing, by race: Reporting areas, 1969-75

Year	Month of pregnancy prenatal care began		Total number of prenatal visits	
	White	Black	White	Black
1975.....	3.8	6.0	5.2	8.5
1974.....	3.8	5.9	5.0	7.6
1973.....	4.0	6.2	5.3	7.4
1972.....	3.6	5.2	5.0	6.3
1971.....	3.8	5.3	...	...
1970.....	4.1	6.2	...	...
1969.....	4.7	6.5	...	...

visits was more fully reported for white than for black births as shown in table II.

Births for which prenatal care information is missing are excluded in the computation of medians and percents. This procedure implies that such births have the same characteristics as births for which prenatal care information is known. However, comparison of births with prenatal care information missing and births with this information reported shows that for the former there is an excess of out-of-wedlock and fourth and higher order births, and mothers are more apt to have low educational attainment. In addition, there is a higher proportion of teenage mothers. Since these characteristics are associated with fewer prenatal visits and delay in seeking care, estimates of the median number of prenatal visits shown in this report are probably overstated and the percent of women receiving late or no care are understated. However, since the proportion of births with prenatal care information missing is relatively small, the net effect of excluding these births is minimal.

A survey of women having a legitimate live birth in 1972 permitted comparison of the reporting of the number of prenatal visits on birth certificates with information provided by mothers after birth.<sup>18</sup> There was perfect agreement from these two sources of information for only 16 percent of the births. Nearly half of the mothers indicated they had made more visits; for slightly more than one-third of the births,

NOTE: A list of references follows the text.

the birth certificate showed a greater number of prenatal care visits than the mother recalled. Some of these discrepancies may arise because the person completing the birth record may not have knowledge of visits made to other physicians or clinics earlier in the pregnancy. The net effect of such misstatements would be to reduce the average number of prenatal visits and to shift the time of the start of prenatal care toward a later trimester. The exact extent of such bias is unknown.

### Definition of Terms

*Late or no prenatal care.*—For purposes of this report, late or no prenatal care is defined as care that begins in the third trimester of pregnancy or no care during pregnancy.

*Trimester of pregnancy prenatal care began.*—The first trimester of pregnancy encompasses the first, second, and third months of pregnancy; the second trimester, the fourth, fifth, and sixth months of pregnancy; the third trimester, the seventh, eighth, and ninth months of pregnancy.

*Race of child.*—Births are classified according to the race or national origin of the parents: white, black, or other. The category, "white," comprises births reported as white, Mexican, Puerto Rican, and Cuban. The category, "other races," includes American Indian, Chinese, Japanese, Hawaiian and part-Hawaiian, Filipino, and "other" births. Since the race of the mother and child are identical for most births, for ease and clarity in writing this report, the racial identification given to the mother is that of the child. Thus, the term "white mothers" actually refers to white births.

*Metropolitan area of residence.*—Metropolitan areas are composed of the standard metropolitan statistical areas established by the Office of Management and Budget, except in the New England States, where metropolitan areas consist of the metropolitan State economic areas established by the U.S. Bureau of the Census. All areas not designated as metropolitan are classified as nonmetropolitan.

### Standardization of Percent Distribution of Births by Month of Pregnancy Prenatal Care Began

To eliminate the effects of age of mother and birth-order changes between 1969 and 1975 on the distribution of births by month of pregnancy care began, the direct method of standardization was used. The 1969 distributions of births by age of mother and birth order for each racial group were used as the standard populations in this procedure. Standardization for age of mother and birth-order differences was performed separately for each racial group using the following formula:

$$m_1 = \frac{\sum m_a P_a}{P} \times 100$$

where

$m_1$  = standardized percent for given race

$m_a$  = proportion of births in each prenatal care status group, for given race

$P_a$  = standard population in each age-of-mother/birth-order group for given race

$P$  = total standard population for given race



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